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NUVU DEVELOPMENTS LTD

LAND BETWEEN TEN ACRES LANE AND MITCHELL STREET, NEWTON HEATH, MANCHESTER

UPDATED COMBINED PHASE I PHASE II GROUND INVESTIGATION REPORT

OCTOBER 2022

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UPDATED COMBINED PHASE I AND PHASE II GROUND INVESTIGATION REPORT

OCTOBER 2022

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1 EXECUTIVE SUMMARY

1.1.1 A summary of information contained within this report is provided within the table below.

Table 1.1: Executive Summary

Item	Description
Site location	The Site is located at land between Ten Acres Lane and Mitchell Street, Newton Heath, Manchester at National Grid Reference 387599, 400309.
Current Use and History	Since the late 1890's it is understood that the Site historically operated as a brickworks with two large clay extraction pits, which culminated into two large excavations that occupied approximately 85% of the Site area. From the late 1940's onwards the clay extraction pits are indicated to have been infilled and during this period the Site was recorded as both a Historical and Registered Landfill. From the 1990's onwards, the Site has remained largely derelict to the present day. Tree felling and vegetation clearance has recently been undertaken at the site to facilitate site investigations.
Groundwater Vulnerability	Most of the Site is underlain by a superficial Secondary Undifferentiated Aquifer within Glacial Till and a bedrock Principal Aquifer within the Collyhurst Sandstone and Chester Formations. A superficial Secondary A Aquifer encroaches into the westernmost section of the site and a bedrock Secondary B Aquifer is also recorded within this area where the Manchester Marls Formation is recorded to subcrop. The site does not lie within a groundwater source protection zone and there are no potable groundwater abstractions within 2km of the site.
Surface Watercourses	The nearest viable graded surface watercourse is the River Medlock which is located c. 690m south of the site. The nearest surface water feature is the Rochdale Canal, which forms the northern boundary of the site.
Mining	The site was a former brickworks with associated clay extraction pits and lies within a Coal Authority Coal Mining Reporting Area. While historical deep (c. 1000m) coal mine workings are recorded within influencing distance of the site, all significant ground movement associated with these workings should now have ceased. There are no mine entries recorded on-site or within 20m of the site boundary. The presence of unrecorded mine entries, though very unlikely, affecting the site cannot be totally ruled out. Should such features be identified during further investigation work on site, or during site remediation or development, they should be reported for investigation, assessment and mitigation.
Unexploded Ordnance (UXO)	An updated UXO Risk Assessment will be required for any mass earthworks / development works that are to be undertaken at the site.

Table 1.1: Executive Summary	
Item	**Description**
Ground Conditions	Ground conditions are highly variable and comprise significant thicknesses of Made Ground to depths of between 0.3m and up to 14.8m bgl, underlain by between 35m to 45m of predominantly cohesive / low permeability Glacial Till (i.e. a geological barrier), which is in turn underlain by solid geology comprising weathered Sandstone of the Collyhurst Sandstone Formation and Chester Formation.
Groundwater	Shallow perched water strikes within Made Ground were encountered between 0.1m and 8.2m bgl with monitored elevations recorded between 85.18m and 75.49m AOD. Shallow perched groundwater strikes within the underlying natural superficial deposits were encountered between 1.0m and 15.0m bgl with monitored elevations recorded between 83.44m and 63.32m AOD. Monitored elevations of groundwater within bedrock were recorded between 75.76m and 54.39m AOD and are generally indicative of a hydraulic gradient to the west south west.
Contamination Human Health	A range of widespread to isolated exceedances of the initial conservative screening values were recorded for a range of determinands that included metals, PAH's, TPH's, total cyanide, PCB's, SVOC / VOC, PFAS and BTEX. Asbestos was identified in 26 No. samples at concentrations up to 5.11%. For most receptors, hardstanding and clean cover systems in soft landscaping areas will break source-pathway-receptor linkages. Increased risk to construction workers will be mitigated through the use of PPE, AMP etc. Risk from vapours will be assessed further at the DQRA stage.
Contamination Controlled Waters	A range of widespread to isolated exceedances of groundwater screening values within perched groundwaters have been recorded for metals, cyanide, sulphate, TPH, PAH, SVOC / VOC's, phenol, benzene and PFOS / PFOA with the most widespread and elevated exceedances within perched groundwaters within the Made Ground. There are multiple lines of evidence to demonstrate a lack of source-pathway-receptor linkages; most notably that the site is underlain by substantial thicknesses (between c. 35m and 45m) of predominantly cohesive Glacial Till (i.e. a geological barrier) and as such the site is not considered to represent an ongoing or potential future significant risk to controlled waters. As such, the requirement for a DQRA for controlled waters is not considered necessary; subject to agreement with the regulators.
Ground Gas	Ground gas risk assessments indicate Characteristic Situation 2 and that ground gas protection measures will be required. Protection measures are likely to comprise a gas / vapour / organic contaminant resistant membrane and passive subfloor dispersal layer.

Table 1.1: Executive Summary	
Item	**Description**
Waste Materials	Care will need to be taken during earthworks that are undertaken at the site to avoid unnecessarily excavating materials that could be classified as waste. If the landfill materials are to be excavated and reused, they must meet a defined and pre-agreed end-of-waste criteria or be undertaken using a bespoke deposit for recovery permit. There are some areas of the site where it may be possible to reuse site won materials in accordance with the Definition of Waste Code of Practice (DoWCoP) or similar and an accompanying Materials Management Plan (MMP); early engagement and agreement with the regulatory authorities will be required to ascertain if this is an option.
Building Material Assessment	A worst-case Design Sulphate Class (DS) of "DS-2" and an Aggressive Chemical Environment for Concrete (ACEC) of "AC-3Z" has been determined for the Made Ground. For the suspected colliery spoil "DS-4" and "AC-5" is indicated. For the natural strata "DS-1" and "AC-1" is indicated.
Geotechnical Considerations	Several geotechnical abnormal constraints have been identified that include highly variable ground conditions, total settlements that could be ongoing or occur in the future, trafficability, bulking, excavatability, obstructions, buried highwalls, aggressive ground, faulting, unstable excavations, shrink / swell, shallow groundwater, collapse compression, combustion, slag expansion etc. Further details of these can be found in Sections 17 – 19.
Geotechnical Recommendations	Where natural ground is present at shallow depth or where Made Ground can be fully excavated and engineered without restriction, shallow reinforced foundations may be suitable. Where deeper Made Ground is present or where ground improvement is unlikely to be successful, deep trench reinforced foundations, raft foundations or piles are recommended. Suspended floor slabs to mitigate against settlement / differential settlement. Modification / stabilisation and / or ground improvement may be required for Made Ground to achieve good compaction. Possible solutions and mitigating measures for those and other geotechnical considerations are discussed in Sections 17 – 19.
Further Works	Numerous further works are required with the most notable being the requirement for a DQRA for human health, Options Appraisal and Detailed Remediation Strategy. An updated UXO risk assessment will also be required for remedial / construction works along with water supply pipe assessments, foundations works risk assessments, a non-native species management plan, further geotechnical and ground gas testing as part of and following earthworks, as well regulatory requirements (e.g. permits) etc. Other further works are discussed further in Section 19.

2 INTRODUCTION

2.1 Instructions

2.1.1 This report has been prepared in accordance with instructions issued by Nuvu Developments Ltd, c/o Your Housing Group (YHG), Youggle House, 130 Birchwood Boulevard, Birchwood, Warrington, WA3 7QH via email correspondence dated 24th February 2022 and the receipt of a Purchase Order (ref: PO102631,NV01) dated 28th February 2022. The work follows a proposal (JC/MP/LD10385/LET-001) dated 21st February 2022 put forward by Wardell Armstrong LLP (WA).

2.2 Site Location & Description

2.2.1 The site comprises a roughly rectangular area of derelict land between Ten Acres Lane and Mitchell Street, Newton Heath, located approximately 4km to the northeast of Manchester city centre at National Grid Reference 387599, 400309. The site location is presented on Drawing LD10385-001 (1:30,000 scale). A more detailed site location plan / aerial imagery is shown on Drawing LD10385-002 (1:5000 scale).

2.2.2 The site is bound by the Rochdale Canal to the north, Mitchell Street and residential properties to the east, residential properties and a school to the south and Ten Acres Lane and a sports centre to the west. Vegetation clearance has recently been undertaken at the site.

2.3 Proposed Site Use

2.3.1 A hybrid planning application (reference: 133700/FO/2022) has been submitted for the comprehensive redevelopment of the site to create up to 716 residential dwellings, a new secondary school and a community building; all with associated car parking, highways, landscaping and new public realm creation.

2.3.2 Full planning permission was granted on 29 October 2021 for remediation works to the site (reference: 129197/FO/2021) and the above hybrid planning application is pursuant to the completion of these remediation works.

2.4 Scope and Objectives

2.4.1 The purpose of this report is to provide an update to the previous WA Combined Phase I and Phase II Ground Investigation Report (ref: LD10162 RPT-001) dated May 2020 based on up-to-date desk-based information and additional WA intrusive ground

investigations that have since been carried out across the site to address planning conditions imposed by the regulators.

2.4.2 The scope of the additional ground investigation was submitted to the Environment Agency (EA) in a letter dated 13th January 2022 (ref: JC/LD10385/LET-001). The EA responded in a letter dated 16th February 2022 (ref: SO/2020/120757/05-L01) and agreed with the scope and methodologies proposed.

2.4.3 Results of the additional ground investigations have been used alongside the previous WA data to review and revise the Conceptual Site Model (CSM), establish whether the linkages identified previously are still plausible and establish the level of risk associated with the site.

2.4.4 Comparisons have also been drawn from third-party site investigation data, but it is the data from the more recent WA investigations and reports that have been relied upon to assess the current condition of the site and to inform the necessary risk assessments.

2.4.5 The scope of works are as follows:

- A review of past and current uses of the site and surrounding area including the nature of any hazards and physical constraints.
- To provide information in relation to the site's environmental setting including geology, geochemistry, mining, hydrogeology and hydrology based on up-to-date information.
- An up-to-date site walkover of the site identifying key environmental and geotechnical abnormal items.
- To identify any aspect of the current site that would require immediate attention (e.g. unstable buildings, insecure fences, hazardous substances accessible to trespassers or likely to be dispersed by wind or water).
- An updated review to confirm potential contamination sources, pathways, and receptors, including those that could be added in the future, so that an updated preliminary CSM and preliminary risk assessment can be produced. The review is based on all the information that was available at the point of the original WA Combined Phase I and Phase II Ground Investigation report dated May 2020, so that the assessment is consistent with previous reporting and to enable a

comparison to be drawn following the findings of the additional ground investigation.

- To collate the findings and results of the previous phases of WA ground investigation and update ground and groundwater conditions so that an updated generic quantitative risk assessment (GQRA) can be undertaken, using the most up to date and relevant guidance and screening data for identified receptors.
- Using the information from the most recent WA ground investigation produce an updated / revised CSM and undertake an assessment of the geotechnical and geoenvironmental risks in relation to the proposed future development of the site.
- Identify the requirements, or otherwise, for future works and give an early indication of possible remedial requirements.
- Identify, if necessary, the need to involve regulatory bodies in intrusive investigations.

2.4.6 This report has been prepared in accordance with British Standards BS 5930, BS 10175 and Land Contamination: Risk Management (LCRM) guidance.

2.5 Sources of Information

2.5.1 The following primary sources of information have been reviewed:

- An updated Envirocheck Report for the site area prepared by Landmark and dated 26th July 2022, included as Appendix B.
- Historical Ordnance Survey maps, included as Appendix B.
- Historical aerial photography viewed from the Britain from Above website.
- British Geological Survey (BGS) published geological mapping Sheet 85 Manchester (1:50,000 Scale) and the BGS interactive mapping database.
- BGS Geological Memoir 'Geology of the Manchester district: a brief explanation of the geological map Sheet 85'.
- Coal Authority online mapping products and databases.
- Flood maps for planning and long-term flood risk maps.
- EA Catchment Data Explorer.
- Site walkover notes and photographs.

- Other mining archives including the Mining Instability Study of Great Britain prepared by Ove Arup.
- Inhouse WA archives.
- Zetica unexploded ordnance risk map and reports, included as Appendix C.

2.5.2 The site has also been subject to previous investigations and reports that provide information on ground conditions, including a series of phased WA ground investigations, as well as historical third-party reports / investigations. The following reports have been considered:

- WS Atkins Consultants Ltd: "Former Jackson Brickworks, Manchester – Desk Study Report and Preliminary Environmental Liability Assessment" – dated December 2001. It should be noted that this report was not available for review by WA, but its findings were summarised in the Celtic report below.
- Celtic Technologies Ltd: "Desk Study, Ten Acres Lane, Newton Heath, Greater Manchester" (report ref: R1077/06/2958) – dated July 2006.
- Celtic Technologies Ltd: "Interpretative Report, Former Jacksons Brickworks, Ten Acres Lane, Newton Heath, Greater Manchester" (report ref: R1077/08/3328) – dated February 2008.
- WA: "Factual Site Investigation Report, Land Between Ten Acres Lane and Mitchell Street, Newton Heath, Manchester" (report ref: SH12254 RPT-001) – dated July 2019.
- Deloitte Real Estate: "Jacksons Brickworks Remediation Environmental Statement: Volume 1 (Chapter 8 – Ground Conditions)" – dated January 2021.
- WA: "Combined Phase I and Phase II Ground Investigation Report, Land Between Ten Acres Lane and Mitchell Street, Newton Heath, Manchester," (report ref: LD10162 RPT-001) – dated May 2021.
- WA "Ground Investigation Report – Additional Works, Land Between Ten Acres Lane and Mitchell Street, Newton Heath, Manchester" – dated September 2021.
- Deloitte Real Estate: "Jacksons Brickworks Redevelopment: Volume 1 (Chapter 10 – Ground Conditions)" – dated May 2022.

2.6 Limitations of This Report

2.6.1 It is understood that the site is to be redeveloped for a residential end use that also includes a school and community building. Proposed development plans have been produced; however final site levels are not currently known. Following finalisation of any proposed development layouts, detailed design or structural loading assessments, earthworks designs or the findings of any subsequent investigations, this report may require review to ascertain if the assessment remains applicable or requires re-assessment and revision

2.6.2 It should be noted that the interpretation of the results of the ground investigation are based on a limited number of investigation points. The locations and numbers of the investigation points were governed by the physical state of the site and the location of known services at the time of the investigation. Although reasonable inferences have been made during the interpretation, it is possible that variances in the thickness, distribution and physical / chemical characteristics of the strata present will exist and hence the possibility of significant variation in ground conditions existing on site in comparison to those described within this report cannot be discounted.

2.6.3 The findings and recommendations given in the report are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. WA will not be liable if any findings are used by third parties, without the written agreement of the company, or if an interpretation is made and action taken without further consultation.

2.6.4 The report is provided for the stated purpose and for the sole use of the client. It is confidential to the client and their professional advisors. WA accepts no responsibility whatsoever to any person other than the client.

2.6.5 Where data from third parties has been used, such as environmental baseline data from Landmark, exploratory hole logs and laboratory data, WA will not be liable for any errors or omissions within the original data. Additional information may become available in the future which may have a bearing on the conclusions of this report and for which WA LLP cannot be responsible.

2.6.6 The findings of this report will need to be agreed with the regulators (i.e. local council and Environment Agency) as part of the sign off of any planning conditions imposed on the development.

3 BACKGROUND

3.1.1 Numerous site investigation works have been carried out on the Ten Acres site as outlined in 2.5.2. This initially included a detailed site investigation by Celtic Technologies Ltd (report dated February 2008) and site investigation works undertaken by Wardell Armstrong (WA) for Vertase FLI (report dated July 2019).

3.1.2 Following a gap analysis carried out by WA in July 2020 (ref: JC/MP/SH12254/LET-003), further ground investigation was carried out by WA between September and November 2020. The original scope of that investigation was based on a proposal dated 07th August 2020 (ref: JC/SH12254/LET-004) that assumed that de-vegetation and tree feeling would be completed ahead of mobilising to site. However, because of the presence of large stands of Japanese knotweed and tree felling licences not being in place, a significant portion of the site could not be cleared and investigated. Therefore, a reduced scope of ground investigation was completed on the understanding that additional site investigations would be carried out once the above access issues had been dealt with.

3.1.3 A Combined Phase 1 and Phase 2 Ground Investigation Report was produced and was used to support the planning application for the remediation of the site (ref: 129197/FO/2021). Planning consent was subsequently granted, but the planning permission contained a number of conditions imposed by the Environment Agency (EA) and Manchester City Council (MCC).

3.1.4 To address some of the planning conditions, WA provided a proposal in June 2021 (ref: JC/LD10246/LET-001) which included additional ground investigations, as well as outlining future requirements for a Detailed Qualitative Risk Assessment (DQRA), Options Appraisal and Detailed Remediation Strategy. WA were instructed to undertake some of the additional site investigation works, however vegetation clearance had still not been undertaken, so investigations in the areas that were previously inaccessible could still not be undertaken.

3.1.5 WA provided a proposal for the investigation of the inaccessible areas in February 2022 (ref: JC/MP/LD10385/LET-001) and were subsequently instructed on the 24th February 2022. The additional works commenced on the 14th March 2022 with the intrusive work being completed on the 27th April 2022 and the post fieldwork monitoring / sampling being completed 01st August 2022.

3.1.6 This report is a revision / update to the Combined Phase 1 and Phase 2 Ground Investigation Report (ref: LD10162 RPT-001) dated May 2020 and incorporates the findings of those subsequent additional ground investigation works that have been undertake since its completion. This information has then been used to update the CSM and risk assessments.

3.1.7 While the historical third-party investigation data is useful for comparison, given the time that has elapsed and potential for changes to have occurred at the site since it was obtained, the results from the most recent WA investigations have been relied upon to assess the current condition of the site.

4 SITE HISTORY AND CURRENT LAND USE

4.1 Site History

4.1.1 Historical Ordnance Survey (OS) plans dating back to 1848 have been examined and are summarised in Table 4.1. OS historical mapping is contained within Appendix B.

Table 4.1: Summary of Previous Land Use

Date	Site Land Use	Adjacent Land Use
1848	Open fields with field boundaries and possible ponds.	Ten Acres Lane borders the western boundary of the site. Rochdale Canal immediately north of site, with Newton Heath north west of site comprising residential dwellings. Cotton Mill south of the site.
1893	By 1893 brick works constructed in western part of site. A reservoir is located on the northern site boundary, likely associated with the bleach works/mills on adjacent side of Rochdale Canal. The remainder of site is undeveloped.	Expansion of Newton Heath, as well as development of numerous industrial units including Cotton Mills, Bleach Works, Dye Works, and Glass Works to the north of the site. Lancashire & Yorkshire Railway constructed to the north of Newton Heath. Tannery situated directly east of the site. Open fields to the east, south and west of site.
1908-1910	By 1908 additional brick work buildings noted in the eastern section of the site, with excavations nearby. Brick works in west of the site, also with excavation visible nearby.	Further expansion of Newton Heath. Park Engineering Works to the southwest of site.
1923	By 1923 expansion of excavations associated with both brick works towards the centre of the site, but also extending off-site to the south east. No indication of depth. Construction of additional buildings associated with brick works in the east.	Recreation ground bordering the southwestern boundary of the site. Expansion of Park Engineering Works to the southwest.
1931-1933	By 1932 the brick works in the west no longer recorded and a sports ground is now present with former excavations indicated to have been backfilled. Another sports ground is present within the south west. Expansion of excavations from the eastern brick works westwards with ponds indicated.	Residential properties and school now adjacent to southern boundary, partly constructed over off-site extent of clay pit.

Table 4.1: Summary of Previous Land Use		
Date	**Site Land Use**	**Adjacent Land Use**
1949-1951	By 1951 refuse heaps noted in the eastern section of the site with possible deep excavations as indicated by ponds within the excavations. Tramway associated with eastern brick works with reservoirs adjacent to brickworks buildings.	No significant changes.
1956	By 1956 the sports ground in south west of site is no longer recorded.	Further expansion of Engineering Works to the south west, and expansion of residential areas south and east.
1971-1978	By 1971 bowling green, tennis court and pavilion recorded in the west of the site. Reservoir in the north of site no longer present. By 1973 the eastern brick works, and remaining excavations are now listed as disused. Possible infilling of excavations as slopes and ponds no longer shown.	Numerous residential and industrial buildings immediately north of site now demolished.
1982-1983	By 1982 most of the excavations within the east of the site are no longer recorded. A disused pit is still recorded in the central part of the site. By 1983 brickworks buildings in the east are no longer recorded but a possible concrete slab still remains.	Residential housing developed immediately north of the site.
1991-1993	By 1991 excavations, sports ground, bowling green and tennis courts in west no longer recorded.	No significant changes.
1999	No significant changes.	Works to the southwest of site demolished, only one building remaining.
2006	No significant changes.	Makkah Close, and associated residential dwellings, constructed adjacent to site's southwestern boundary.
2020	Aerial photography shows the site as densely vegetated / overgrown with trees and shrubs. Possible concrete slab within the eastern section of the site.	No significant changes.

4.2 Site Use

4.2.1 The most recent site walkover was undertaken on the 18th July 2022 by a WA Engineer. The main observations from the site visit are described below:

- The site comprised derelict land that had recently undergone extensive vegetation clearance / tree felling works; although tree stumps and large stands of Japanese knotweed were noted to remain.
- Vehicular access to the site is via a locked / gated and fenced compound off Ten Acres Lane. Concrete blocks had been placed either side of the compound gates. The remainder of the site is secured by 2.5m high metal mesh security fencing along its boundaries. However, there were areas where fencing panels had been removed / cut allowing trespassers to enter the site.
- An area of concrete hardstanding was situated within the eastern section of the site adjacent to the site's eastern boundary.
- The Rochdale Canal and a series of locks forms the northern boundary of the site with a flow to the west. A footpath is adjacent to the Canal and was well used by members of the public at the time of the walkover. Residential properties are situated on the adjacent side of the canal.
- The eastern boundary of the site is adjacent to Mitchell Street, with residential properties beyond. A soil bund forms the boundary; beyond which is the recently erected security fencing noted above.
- The southern boundary is adjacent to the back gardens of residential properties of Briscoe Lane, as well as Briscoe Lane Academy School.
- The site has variable topography and generally falls from 87m AOD in the north to 78m AOD in the south west as shown in Drawing LD10385-005.
- Various derelict vehicles are located across the site, mostly in the centre. Various fly tipped materials were also noted in the areas adjacent to housing, notably at Mitchell Street and along the southern boundary of the site.
- Several large stands of suspected Japanese Knotweed were noted across the site with the most extensive areas being located within the central southern section of the site.

- Several mounds of soil with various constituents (mostly brick, timber and concrete) were observed in the western section of the site close to the fenced compound in this area and also within the central section of the site.
- No outfalls or discharges were noted from the site to the canal.
- A brick retaining wall forms the site's north westernmost boundary where there is a c. 2m drop from Ten Acres Lane down to the canal footpath. An orange seepage was noted coming from this wall and running onto the canal towpath.
- No services or infrastructure were observed at the site.

4.3 Asbestos

4.3.1 During the site walkover suspected asbestos containing materials (ACM's) were noted in the mounds of soil adjacent to the fenced compound withing the north western section of the site. ACM's and asbestos fibres were also identified during previous investigations at the site and given the sites former use as a landfill from the mid-20th Century onwards, it is likely that further ACMs and / or asbestos fibres may be present in soils on site.

4.3.2 It should be noted that the walkover survey does not constitute an asbestos survey and not all areas of the site may have been visited or made available for inspection.

4.4 Ecology

4.4.1 Although a site visit has been carried out, this was not specifically for ecological purposes and has not been undertaken by a qualified ecologist. Despite the recent vegetation clearance, areas of potential ecological value may still be present, and reference should be made to WA and third-party ecological reports that are available in the public domain under planning application reference: 133700/FO/2022.

4.4.2 A Nitrite Vulnerable Zone is recorded on-site, and an Area of Adopted Green Belt and a Local Nature Reserve are recorded approximately 583m and 603m to the south east of the site respectively. There are no other sensitive land uses indicated from the Envirocheck Report within 2km of the site.

4.4.3 It should be noted that the Rochdale Canal is designated as a Special Area for Conservation (SAC) some 1.2km upstream and to the north east of the site.

4.5 Invasive Plants

4.5.1 Extensive areas of Japanese knotweed were evident across all parts of the site. It should be noted that the survey was not specifically for ecological purposes and was not undertaken by a trained ecologist.

4.5.2 Appropriate mitigation is required to treat or remove invasive plant species and further specialist surveys and advice is recommended. It should be noted that it is an offence under the Wildlife and Countryside Act 1981 to knowingly permit the spread of Japanese knotweed.

4.6 Archaeology

4.6.1 The desk study and site walkover were not undertaken for archaeological purposes. Preliminary examination of historical maps of the site indicates that the site has been occupied by a brick works and clay pit from as early as 1893, however it is envisaged that most archaeological features would have been destroyed by the extensive excavations and subsequent landfilling that is recorded at the site.

4.6.2 Previous archaeological reporting indicates that industrial remains relating to the brickworks (e.g. kilns and processing aeras) are of archaeological interest and a recent planning condition has stipulated that archaeological investigations are required at the site prior to remedial works / development.

4.6.3 No scheduled Monuments or Listed Buildings are recorded on site.

4.7 Environmental Management

4.7.1 On the basis of the desk study assessment and the site walkover survey, the overall condition of the site appears to be poor as there is evidence of extensive fly-tipping on the site.

5 GEOLOGICAL AND HYDROGEOLOGICAL INFORMATION

5.1 Geology

5.1.1 The assessment of the geology of the site is based on the published geological mapping (Sheet 85, Manchester, Bedrock and Superficial Edition, 1:50,000 scale), supplemented by various other geological mapping sheets, geological memoirs, topographical plans, a site visit and previous site investigations. Online data from the BGS has also been researched and borehole records are included at Appendix D.

5.1.2 A summary of the geological information is presented in Table 5.1. This has been supplemented by information contained within the Envirocheck Report contained within Appendix B.

Table 5.1: Summary of Geological Data

Strata / Geohazard	Description
Made Ground	Previous site investigations and reports indicate extensive Made Ground deposits across the site to depths of up to 14.8m bgl that was generally found to be highly variable over small lateral distances and comprised a mixture of predominantly granular and to a lesser extent cohesive soils; all of which included various anthropogenic constituents of varying proportions and quantities (e.g. brick, concrete, timber, ash, clinker, fabrics, glass, metal, slag, plastics, ceramics and tile). Suspected combustion waste, suspected colliery spoil, suspected construction and demolition waste and suspected household wastes were also identified.
Superficial Deposits	Glacial Till is recorded to be present beneath the site. The site lies within a BGS recorded buried glacial valley where thick drift deposits are known to be present and has been proven in nearby BGS and third-party boreholes. Previous site investigations at the site have encountered a firm to stiff, fissured, brown, slightly sandy to sandy, gravelly Clay with occasional lenses of predominantly medium dense, brown / grey, gravelly, clayey Sand to depths of between 15.00m and c. 40m bgl.
Solid Geology	Chester Formation (sandstones with subordinate mudstone beds) and Manchester Marls Formation (calcareous mudstone and siltstone with thin beds of limestone) in the westernmost section of site. Collyhurst Series Sandstone (a soft red sandstone) underlies the remainder of the site. A dip to the south / south west is indicated.
Geological Structures	A fault trending northeast to southwest dissects the westernmost section of the site and downthrows the strata to the south west by an unknown distance.
Natural cavities	No hazard.

Table 5.1: Summary of Geological Data	
Strata / Geohazard	**Description**
Landslides	Very low risk indicated.
Collapsible deposits	Very low risk indicated.
Compressible deposits	Moderate risk indicated for most of the site. Very low risk indicated in the western section of site.
Ground dissolution	No hazard.
Running sands	Very low risk indicated.
Shrinkage/swelling clay	Very low risk indicated.

5.1.3 There are several freely available BGS boreholes and recent third-party boreholes in the vicinity of the site that indicate predominantly cohesive Glacial Till to depths of up to 40m bgl, where rockhead was encountered as follows:

- SD80SE76 located 440m north east of the site recorded rockhead at 35.05m bgl (53.34m AOD) overlain by mostly superficial strata comprising clay.
- TRC RC01A located 442m south west recorded rockhead at 39.50m bgl (29.50m AOD) overlain by mostly superficial strata comprising clay and to a lesser extent sand.
- SD80SE78 located 560m north west of the site recorded rockhead at 33.52m bgl (41.18m AOD) overlain by mostly superficial strata comprising clay and to a lesser extent sand.
- SD80SE94 located 720m north east of the site recorded rockhead at 34.13m bgl (53.87m AOD) overlain by mostly superficial strata comprising clay and to a lesser extent silt and sand with fine gravel.
- SJ89NE469 located 730m south west of the site recorded rockhead at 32m bgl (31.50m AOD) overlain by mostly superficial strata comprising clay and to a lesser extent sand.
- SJ89NE93 located 736m south east of the site recorded rockhead at 12.19m bgl (45.71m AOD) overlain by mostly superficial strata comprising clay.

5.1.4 There are also several other BGS boreholes that indicate significant thicknesses of Glacial Till to depths of between at least 22m bgl and 36m bgl (full thickness not proven).

5.1.5 Further information regarding ground and groundwater conditions from previous site investigations at the site are included in Section 8.

5.2 Hydrogeology

5.2.1 Hydrogeology information indicates that most of the site is underlain by natural superficial deposits, which are classified as a Secondary Undifferentiated Aquifer and bedrock, which is classified as a Principal Aquifer. However, a superficial Secondary A Aquifer encroaches into the westernmost section of the site and a bedrock Secondary B Aquifer is recorded within the westernmost section of the site.

5.2.2 The site lies within the Manchester and East Cheshire Permo-Triassic Sandstone Aquifers Water Body (EA Catchment Data reference – GB41201G101100) which was given an overall classification of Poor. The reason for not achieving "Good" status is under investigation and / or due to saline or other intrusions.

5.2.3 There are 22 No. groundwater abstraction licences within 2km of the site. The nearest is located 643m northwest of site and is used for cooling and manufacturing purposes.

5.2.4 There are no potable groundwater abstractions within 2km of the site and the site does not lie within a Source Protection Zone.

5.3 Soil Vulnerability Classification

5.3.1 The site's groundwater vulnerability is recorded as Low. These are areas that provide the greatest protection to groundwater from pollution, likely characterised by low leaching soils and / or the presence of low permeability superficial deposits as supported by the previous investigations and nearby off-site BGS boreholes.

5.4 Hydrology

5.4.1 The site is located within the Irwell Management Catchment and falls within the Roch Irk Medlock operational catchment.

5.4.2 The River Medlock (a graded watercourse) is located 690m south of the site, downgradient, and flows to the west. Under the Water Framework Directive, the section of the River Medlock (Lumb Brook to Irwell, Water Body ID – GB112069061152) was assigned an overall classification of 'Moderate' in 2019 with a 'Fail' Chemical Rating, and 'Moderate' Ecological rating. The reasons for not achieving 'Good' status include sewage discharges, urbanisation, barriers and other.

5.4.3 The nearest surface water feature is the Rochdale Canal (Water Framework Directive Water Body ID – GB71210517) adjacent to the northern boundary of the site. The Canal flows from northeast to southwest and was assigned an overall classification of 'Moderate' in 2019 with a 'Fail' Chemical Rating, and 'Moderate' Ecological rating.

5.4.4 The nearest graded watercourse is Moston Brook located 675m to the north east of the site, but on the other side of the Rochdale Canal. The brook flows westwards and feeds into the River Irk and becomes culverted immediately west of the location noted above. The EA has not assigned a classification for Moston Brook but the River Irk was assigned an overall classification of 'Moderate' in 2019 with a 'Fail' Chemical Rating, and 'Moderate' Ecological rating in 2019. The reasons for not achieving 'Good' status include sewage discharges, contaminated land, landfill leaching, urbanisation etc.

5.4.5 There are fourteen surface water abstraction licences within 2km of the site. The nearest is located 322m southwest of the site at the Rochdale Canal where water is abstracted for boiler feed & manufacturing purposes. Most abstractions are for non-sensitive industrial purposes.

5.5 Flooding

5.5.1 To assess the potential flood risk at the site, reference has been made to the flood map for planning and the long-term flood risk information on the Gov.uk website. The site is located within a Flood Zone 1 and has a low probability of flooding (less than 1 in 1000 annual probability). According to the long-term flood risk map, the site is located within a very low risk flood area where the chance of flooding each year is less 0.1%.

5.5.2 The flood risk from surface water for the majority of site is considered to be very low, where the chance of flooding from surface water is less than 0.1%. However, there are small areas within the north eastern and western sections of the site classed as low to high risk where the chances of surface water flooding are between 0.1% and <3.3%.

5.5.3 The BGS Groundwater Flooding Susceptibility Map shows that most of the site is located in an area where there is limited potential for groundwater flooding to occur. However, the westernmost parts of the site are recorded as having the potential for groundwater flooding to occur to property situated below ground level. Previous investigations at the site have noted a localised groundwater seepage at the site's southern boundary between Hallam Road and Briscoe Lane Primary School.

5.5.4 As the site is greater than one hectare in size, a site-specific flood risk assessment will be required in accordance with Chapter 10 of the National Planning Policy Framework.

6 MINING AND QUARRYING

6.1.1 Research of the mining setting is based on examination of the published topographical, historical, and geological information as described in Section 4 and 5 of this report along with other mining archive information.

6.2 Coal Mining

6.2.1 Published information from the Coal Authority (CA) indicates that the site is located within a coal mining reporting area but is not located within a Development High Risk Area. No coal mine shafts, or adits were recorded on, or within 20m of, the site.

6.2.2 BGS geological mapping and boreholes from within the site indicate that the Coal Measures strata underlie the site at depths greater than 200m bgl. A historical CA mining report was obtained by WS Atkins (presumably dated December 2001) and they stated that the site is within the zone of influence from workings in one coal seam at a depth of 1,040m, which was last worked in 1954. This report states that ground movement from the workings should have ceased.

6.2.3 Consequently, the site is considered highly unlikely to be subjected to any future ground instability or any other impacts resulting from coal mining activities.

6.3 Other Mining

6.3.1 The site is not recorded to lie within a BGS Non-Coal Mining Area. However, there are two BGS Recorded Mineral Sites on site, both of which were opencast brick works which have now ceased operation. Mitchell Street Brickworks was situated in the east of the site and worked the Glacial Till. The Newton Brickworks in the west of the site worked the Manchester Marls Formation.

6.3.2 A further six BGS Recorded Mineral Sites are recorded within 2.0km of the site, all of which pertain to clay extraction and have now ceased operation.

7 ENVIRONMENTAL SETTING

7.1 Contaminated Land Register Entries and Notices

7.1.1 The site, or an area within 500m of the site has not been identified as potentially contaminated by the Manchester City Council under the Part IIA of the Environmental Protection Act 1990.

7.2 Landfills

7.2.1 A single historical landfill is recorded across much of the site (the exception being the north western section of the site) and was active from May 1973 to December 1984. Deposited waste types included inert, commercial and household waste.

7.2.2 A single registered landfill site is recorded on-site (extents similar to the historical landfill) which was active from July 1978. The last input date is not recorded, but the current status is recorded as licensed lapsed, cancelled, defunct, not applicable, surrendered / cancelled. Between 75,000 and 250,000 tonnes of construction and demolition waste, including industrial non-hazardous waste, slag and boiler flue cleanings, and foundry sand were deposited per year. Liquid and sludge wastes were prohibited.

7.2.3 There are a further eleven historical landfill sites, two registered landfill sites and a single BGS recorded landfill within 1km of the site. The nearest one is located 527m to the south east of the site at Clayton Vale. The first reported input date is 31st December 1901, and the last recorded input date is 31st December 1980. Deposited waste is reported to include inert and industrial waste.

7.2.4 There are also features on historical maps and areas of potentially infilled land, which may indicate the presence of unrecorded landfilling activities on-site and within influencing distance of the site. The on-site features appear to correlate with the clay pit extents recorded on historical mapping. Off-site examples include an area of infilled land immediately adjacent to the south eastern section of the site.

7.3 Waste Management

7.3.1 A single Licensed Waste Management Facility and Registered Waste Transfer Site is located 233m to the north east of the site. The types of waste processed include household, commercial and industrial waste.

7.3.2 A single Registered Waste Transfer Site is located 237m to the north east of the site that processes between 25,000 and 75,000 tonnes of various waste types (includes commercial, industrial, decomposable waste, scrap rubber, scrap machinery and asbestos mixed wastes).

7.3.3 There are no other Integrated Pollution and Control Waste Sites, Licensed Waste Management Facilities, Registered Waste Transfer Sites or Registered Waste Treatment or Disposal Sites within the immediately surrounding area that are likely to impact upon the site.

7.4 Environmental Issues

7.4.1 The environmental issues for the site and adjacent land have been reviewed from the Envirocheck Report, and those of potential significance to the site are highlighted below:

- There is a single Pollution Incident to Controlled Waters recorded 28m to the north east of the site pertaining to the Rochdale Canal that was classified as a Category 3 (minor incident). However, the source or type of pollutants were unknown.
- There are five Local Authority Pollution Prevention Controls (Part B) of relevance within 250m of the site. The nearest is located 94m to the south west of the site and pertains to iron, steel and non-ferrous metal foundry processes. A petrol filling station is located 131m to the east and further iron, steel and non-ferrous metal foundry processes are located 220m to the south west.
- There is a single fuel station entry located 115m east of the site that pertains to Briscoe Lane Service Station, which is currently operational.

7.4.2 Several industrial land uses are also recorded within 250m of the site and include garages, brewery supplies, damp and dry rot control, furniture manufacturers, chemists and pharmacist, domestic general servicing, carpet and upholstery cleaners, road haulage services, tyre dealers, tanks etc.

7.4.3 Examination of the available Envirocheck data for the site and surrounding areas has not shown any other Agency or Hydrological or Hazardous Substance Sites that are likely to impact upon the site.

7.4.4 The environmental issues identified above are not likely to have impacted the site in the past or significantly impact future development.

7.5 Radon

7.5.1 The Envirocheck report indicates that the site is in a Lower (less than 1% of homes estimated to be at or above the Action Level) to Intermediate (1 to 3% of homes estimated to be at or above the Action Level) probability radon area. No radon protective measures are indicated for the construction of new dwellings or extensions.

7.6 Unexploded Ordnance

7.6.1 A Zetica regional unexploded ordnance (UXO) risk map has been reviewed. The map indicates that the site is located within an area which is classed as Moderate risk. Several bomb strikes are also recorded within the surrounding area and the former Parks Engineering Works (located approximately 0.1km to the south west of the site and a strategic target) is indicated to have been manufacturing military aircraft and parts and also possibly producing munitions during both wars.

7.6.2 Consequently, a UXO Risk Assessment was carried out for the site in 2020 by Zetica. An overall low UXO hazard was indicated, and no additional measures were considered necessary to reduce the UXO risk on the site to As Low As is Reasonably Practicable (ALARP). However, this assessment was based on the proposed site investigation works and future bulk excavations of parts of the site. A reassessment will be required for the remedial works / bulk earthworks and any piled foundations that would need to be undertaken as part of the development of the site, to establish if any mitigation is required.

8 PREVIOUS THIRD-PARTY REPORTS

8.1.1 Numerous third-party investigations have been undertaken at the site and these are summarised below and have been used to inform the preliminary CSM for the site. The findings of the previous and most recent WA site investigation have been summarised in Section 11 and all the data has been combined so that an assessment of the full WA dataset can be undertaken.

8.2 WS Atkins Consultants Ltd: "Former Jackson Brickworks, Manchester – Desk Study Report and Preliminary Environmental Liability Assessment" – December 2001

8.2.1 This report was reviewed by Celtic (not seen by WA) in the report described at 8.3 below, and they stated that it included references to several other previous investigative reports produced for the site prior to 2001. However, it is understood that these earlier reports are no longer available for review.

8.2.2 Celtic stated that ground conditions included significant thicknesses of Made Ground (up to 14.8m in the central part of the site; although only 8.0m was proved in the Atkins investigation itself) comprising ash, clinker, brick, concrete rubble, timber, rags, glass, metal, plastic and limited amounts of bonded asbestos sheeting. 'Domestic type putrescible' waste was also recorded in some trial pits. 18m of 'Boulder Clay' was encountered beneath the Made Ground but it is not known if this was the recorded thickness or the depth that this material was proved to. Bedrock was not encountered.

8.2.3 Celtic stated that trial pits in the western part of the site recorded perched water at depths of between 2.0 and 3.0m below ground level (bgl).

8.2.4 Celtic stated that chemical analysis of the soil recorded elevated concentrations of contaminants including zinc, copper, phenol, and sulphate. Analysis of perched water indicated levels of elevated BOD, COD, ammonia, metals and sulphate.

8.2.5 Celtic stated that monitoring of ground gases recorded elevated concentrations of methane and carbon dioxide (although concentrations were not reported by Celtic), although gas exit velocities appeared to be low (<0.1 m/s).

8.3 Celtic Technologies Ltd: "Desk Study, Ten Acres Lane, Newton Heath, Greater Manchester" (report ref: R1077/06/2958) – July 2006

8.3.1 The main contaminants of concern from the desk study were identified as arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc,

cyanide, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAH), phenols, asbestos and ground gases (methane and carbon dioxide) that had been attributed to the infilling operations of the clay pits excavated during the sites operation as a brickworks between 1894 and 1966. Evidence indicated that waste disposal within the clay pits was known to cover approximately 85% of the site area and was carried out between 1949 and 1990.

8.3.2 Risks to human health included trespassers encountering potentially contaminated materials at the site surface (low risk), potential for off-site migration of ground gases (high risk) and from a variety of pathways should the site be redeveloped (medium to high risk).

8.3.3 Risks to Controlled Waters included discharge of perched waters to Rochdale Canal (medium risk) and migration of perched waters to true groundwater within the underlying Principal Aquifer (high risk).

8.3.4 Further site investigation works were recommended as the risks posed by the site were considered to be high.

8.4 **Celtic Technologies Ltd: "Interpretative Report, Former Jacksons Brickworks, Ten Acres Lane, Newton Heath, Greater Manchester" (report ref: R1077/08/3328) – February 2008.**

8.4.1 Celtic were commissioned to undertake an assessment of the site to support a future residential development. A desk-based assessment of the site was undertaken, followed by an intrusive ground investigation that included 72 No. trial pits, 22 No. windowless sample boreholes, 20 No. cable percussion boreholes and 6 No. rotary open hole boreholes, as well as geophysical survey.

8.4.2 Soil and groundwater samples were also obtained for environmental and geotechnical laboratory testing and 3 No. ground gas / groundwater monitoring rounds, that incorporated 39 No. monitoring installations, were undertaken between 26th June and 18th July 2007.

Ground Conditions

8.4.3 Ground conditions included significant thicknesses of variable Made Ground (dominated by the following fill types; ash fill, clinker waste, landfill waste and brick waste) between 0.5m to >10m bgl, underlain by Glacial Till comprising firm to stiff, locally soft to firm, slightly sandy, gravelly Clay and to a lesser extent yellow and grey,

gravelly, coarse Sand to depths of between 16.5m and >22m bgl, which were in turn underlain by solid geology comprising weathered mudstone and sandstone to depths of between 25m and 27m bgl. It should be noted that the solid geology recorded by Celtic has since been proven to be Glacial Till.

Groundwater Conditions

8.4.4 Groundwater was encountered at shallow depths between 0.2m and 4.9m bgl within the Made Ground and at depths of between 1.1m and 8.2m bgl within the Glacial Deposits. Celtic stated that the groundwater was likely laterally confined perched water. Deeper groundwater was also encountered in what Celtic had interpreted as bedrock (now proven to be Glacial Till) where groundwater levels were recorded to have risen to between 0.7 m bgl to 5.5m bgl within monitoring wells. Celtic suggested that this was indicative of confined conditions.

8.4.5 Groundwater monitoring indicated that shallow perched waters within Made Ground and underlying shallow Glacial Till were at depths of between 0.4m and 7.1m bgl (between 84.69 and 71.12m AOD) and Celtic stated that these elevations were indicative of a hydraulic gradient to the south west. Deeper groundwater within what Celtic were calling bedrock (now proven to be Glacial Till) was recorded at depths of between 0.7m and 5.5m bgl (between 79.86m and 74.28m AOD) and Celtic stated that these elevations were generally indicative of a hydraulic gradient to the south west.

8.4.1 Celtic noted that certain areas of the site were prone to small-scale flooding events during periods of heavy rainfall. A high-water table in the south west of the site was noted to be consistent with local marshy ground conditions and growth of indigenous plant species in waterlogged soils.

Visual and Olfactory Evidence of Contamination

8.4.2 Visual and olfactory evidence of contamination was recorded in several areas of the site within Made Ground. This included frequent hydrocarbon odours and sheens, occasional iridescent sheens, rare / isolated putrid, chemical, solvent, sulphurous and organic odours, along with rare / isolated red dye and yellow dye staining. Celtic noted a significant ‘plume’ in the southwest of the site, with black staining on soils and hydrocarbon sheens on water. Three other contaminant plumes were identified across the site, with hydrocarbon odours / sheens in the soil and water.

8.4.3 Celtic state that non-aqueous phase liquid (NAPL) was not encountered during the fieldwork.

Contamination Assessment – Soils

8.4.4 Celtic obtained 146 No. soil samples from across the site that were tested for potential contaminants of concern. An independent review of the laboratory results against current screening criteria for a residential land use with plant uptake was undertaken (assuming 1% SOM for the reasons outlined in Section 13) and exceedences are summarised in Table 8.1, but further details can be found in the detailed exceedence tables contained within Appendix I.

Table 8.1: Summary of Celtic 2007 Contaminant Exceedances in Soil

Contaminant	Min. Recorded (mg/kg)	Max. Recorded (mg/kg)	GAC (mg/kg)	No. of Exceedances MG	No. of Exceedances NG
Metals					
Arsenic	<3	190	37[1]	21	2
Lead	5	4,300	200[1]	24	2
Nickel	6	360	130	2	-
Inorganics					
Total Cyanide	<1	920	20[2]	4	1
TPH					
Aromatics > EC16-EC21	0.29	890	260	4	-
Aromatics > EC21-EC35	4.10	8,300	1,100	3	-
Polycyclic Aromatic Hydrocarbons (PAH)					
Naphthalene	<0.013	30	2.3	6	3
Acenaphthene	<0.014	230	210	-	1
Fluorene	0.015	200	170	-	1
Phenanthrene	0.049	590	95	-	1
Benz(a)anthracene	0.017	31	7.2	6	1
Chrysene	<0.100	33	15	4	-
Benzo(b)fluoranthene	<0.016	24	2.6	11	3
Benzo(a)pyrene	<0.012	22	2.2	11	2
Dibenzo(a,h)anthracene	<0.008	3.5	0.24	13	2
Semi Volatile Organic Compounds (SVOC) and Volatile Organic Compounds (VOC)					
Dibenzofuran	<0.1	81	4.8[4]	3	1
Carbazole	<0.1	70	6.7[4]	1	1
2-Methylnaphthalene	<0.1	180	10[4]	2	1

Table 8.1: Summary of Celtic 2007 Contaminant Exceedances in Soil					
Contaminant	**Min. Recorded (mg/kg)**	**Max. Recorded (mg/kg)**	**GAC (mg/kg)**	**No. of Exceedances MG**	**No. of Exceedances NG**
2,4-Dinitrotoluene	<0.1	13	1.5[3]	1	-
Chloromethane	<0.007	0.013	0.0083[3]	1	-
Trichloroethene	<0.009	0.06	0.0093[1]	1	-
2,4-Dimethylphenol	<0.1	27	19	1	-
Notes: MG = Made Ground, NG = Natural Ground Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels. [2] Value for thiocyanate. [3] EIC/AGS/CL:AIRE Soil GAC for Human Health Assessment (January 2010). [4] Wardell Armstrong derived GAC.					

8.4.5 Celtic state that contamination within soils was generally found in shallow Made Ground within hotspot areas, however some hotspots extended deeper into the Made Ground. Minimal contamination impacts were found within the deeper natural ground. Asbestos was not identified in any of the thirty samples screened. However, analytical techniques at the time of testing were not as accurate / advanced as they are currently, so asbestos fibres may have been present.

Groundwater Assessment – Waters

8.4.6 Celtic obtained 12 No. groundwater samples from across the site that were tested for potential contaminants. An independent review has been undertaken with results screened against UK Drinking Water Standards (DWS) or equivalent values, as the site is underlain by a Principal Aquifer. The exceedences are summarised in Table 8.2 , but further details can be found in the detailed exceedence tables contained within Appendix I.

Table 8.2: Summary of Celtic 2007 Contaminant Exceedances in Groundwater						
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**GAC[1] (µg/l)**	**No. of Ex. MG**	**No. of Ex. GT**	**No. of Ex. BR***
Metals						
Arsenic	<1	11	10	1	-	-
Boron	86	6,100	1000	2	3	1
Manganese	<1	3,100	50	4	6	2
Selenium	<1	29	10	-	-	1
Iron	50	1,200	200	2	3	-

Table 8.2: Summary of Celtic 2007 Contaminant Exceedances in Groundwater						
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**GAC[1] (µg/l)**	**No. of Ex. MG**	**No. of Ex. GT**	**No. of Ex. BR***
Other						
Sulphate	26,000	520,000	250	-	3	1
Total Ammonium NH_4	<200	9,400	0.5	4	2	3
Phenol						
Phenol	<1	3	0.5	-	-	1
Phenol Monohydric	<10	50	0.5	2	1	1
Total Petroleum Hydrocarbons (TPH)						
Total Aliphatics & Aromatics >C5-35	<10	97	10[2]	1	-	-

Notes:
[1] UK Drinking Water Standard (2016) values as used by Celtic in their assessment unless noted.
[2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.
Ex = Exceedences, MG = Perched Groundwater within Made Ground, GT = Perched Groundwater within Glacial Till and BR = Groundwater within "Bedrock".
* It should be noted that what Celtic interpreted as "bedrock" groundwaters have since been proven to be perched groundwater within Glacial Till.

8.4.7 Celtic stated that low concentrations of contaminants in perched waters demonstrated low leaching potential of solid phase contaminants in Made Ground. Notably, levels of contaminants observed within Made Ground were not reflected within shallow or deep natural deposits suggesting that contaminants were relatively immobile within Made Ground and that the overlying clay deposits did not provide an active pollutant pathway linkage to deeper natural deposits.

Groundwater Assessment – Leachates

8.4.8 Celtic also obtained 10 No. soil samples from across the site for leachate analysis to assess the potential risks to controlled waters from impacted soils. The results have also been independently screened against Environmental Quality Standards (EQS) and DWS values and the exceedences are summarised in Table 8.3.

Table 8.3: Summary of Celtic 2007 Contaminant Exceedances in Leachate						
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**DWS (µg/l)**	**EQS (µg/l)**	**No. of Ex. DWS**	**No. of Ex. EQS**
Metals						
Nickel	<1	56	20	4[1]	1	2
Sulphate	4,000	1,000,000	250,000	-	2	-
Chromium	<1	13	-	4.7	-	2
Lead	<1	3	-	1.2[1]	-	2
Zinc	<3	110	-	10.9[1]	-	2
Copper	<1	7	-	1[1]	-	9
Phenol						
Phenols Monohydric	<10	20	0.5	7.7	1	1
PAH						
Anthracene	0.015	0.14	-	0.1	-	2
Benzo(b)fluoranthene	0.023	0.16	0.1	-	1	-
Benzo(a)pyrene	0.009	0.15	0.01	0.00017	4	4
Indeno(123cd)pyrene	0.014	0.19	0.1	-	1	-
Benzo(ghi)perylene	0.016	0.39	0.1	-	1	-
Fluoranthene	0.017	0.26	-	0.0063	-	10

Notes:
[1] Parameters not obtained at the time to allow for an MBAT calculation to be undertaken so bioavailable screening criteria used.
Ex = Exceedences

8.4.9 Further details can be found in the detailed exceedence tables contained within Appendix I.

Groundwater Assessment – Surface Waters

8.4.10 Celtic obtained 2 No. surface water samples from the Rochdale Canal (sample references Canal A and Canal B, taken upstream and downstream, respectively) to assess the potential risks to the canal. The results have also been independently screened against EQS values and the exceedences are summarised in Table 8.5.

Table 8.5: Summary of Exceedences in Surface Water				
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**GAC[1] (µg/l)**	**Number of GAC Exceedances**
Metals				
Lead	3	4	1.2	2
Copper	6	9	1[2]	2
Nickel	<1	4	4[2]	1

Notes:

[1] Environmental Quality Standards (2015) values unless noted.

[2] Parameters not obtained at the time to allow for an MBAT calculation to be undertaken so bioavailable screening criteria used.

8.4.11 A tentative review of the limited dataset indicates that concentrations of the above contaminants were slightly elevated at the downstream sampling location. Further details can be found in the detailed exceedence tables contained within Appendix I.

Ground Gas Assessment

8.4.12 Gas monitoring was undertaken between 27th June 2007 to 23rd July 2007 and recorded concentrations of carbon dioxide between <0.1% and 14.3% (typically between <0.1% and 9.8%), methane concentrations up to 30.5% (typically <0.1%) and gas flow rates of up to 2.3 l/hr.

8.4.13 Celtic undertook a risk assessment in accordance with recommendations documented in CIRIA 659 and concluded that for carbon dioxide a ground gas screening value (GSV) of 0.225 l/hr was indicated, which characterised the site as 'Amber 1' in the 'Traffic Light' risk derived system. Based on the highest recorded methane concentration and the maximum flow rates, a worst case GSV of 0.704 l/hr was indicated for methane, which characterised the site as 'Amber 2'.

Vapour

8.4.14 It should be noted that the Celtic data is over 15 years old at the time of writing and due to the volatile nature of the contaminants of concern, their vapour assessment is not reflective of the current site situation and a betterment is envisaged. However, it is useful to review their assessment, so that comparisons can be drawn.

8.4.15 Celtic stated that the outcome of the CLEA UK simulation modelling undertaken showed that there was no risk to critical receptors from indoor or outdoor vapour exposure from soil sources. However, this model was based upon the risk derived from

ground below a minimum depth of 200 mm and a maximum depth of 600 mm capping of clean soils across the site. They also assumed that a capping layer, including topsoil in soft cover / garden areas, would be incorporated as part of any future development.

Geotechnical Testing

8.4.16 Geotechnical testing undertaken as part of the Celtic site investigation included regular standard penetration testing within boreholes and laboratory testing that included 11 No. moisture content tests, 6 No. Atterberg Limit tests, 6 No particle size distribution tests, 3 No. laboratory California Bearing Ratio tests, 4 No undrained shear strength in triaxial compression tests and 15 No. BRE SD1 Concrete Suites.

8.4.17 To avoid repetition, these results are discussed in more detail in Section 12 as they have been used to supplement the geotechnical testing undertaken as part of the WA site investigations.

8.5 Previous WA Investigations (2019 – 2022)

8.5.1 To avoid repetition, these works, and their findings, are discussed in Section 10 onwards and have been combined with the most recent WA site investigation data, to ensure that a full assessment of all the data is undertaken. Reference should be made to the original reports outlined in Section 1.5.2 for the independent findings and assessments undertaken as part of these investigations. Independent contamination results from the WA 2020 site investigation can be found in the detailed exceedence tables contained within Appendix I.

9 PRELIMINARY CONCEPTUAL SITE MODEL

9.1 Background

9.1.1 Following a review of the information presented in this updated report a preliminary CSM has been prepared to show the characteristics of the site and the relationships between possible contaminants, pathways, and receptors.

9.1.2 This updated preliminary CSM is based upon an assumed residential end use and considers all the information available at the point of the original WA Combined Phase I and Phase II Ground Investigation report dated May 2020. This is to ensure that the preliminary CSM is consistent with previous reporting in the public domain enabling a comparison to be drawn following the findings of the additional site investigation works and the subsequent revised CSM.

9.2 Potential Sources of Contamination On-Site

- Made Ground associated with the site's former use as a historical and registered landfill. A significant thickness of Made Ground was encountered across the site during previous phases of ground investigation (up to 14.8m bgl) with widespread to localised / isolated exceedences of metals (arsenic, lead, nickel, copper, zinc), total cyanide, inorganics, TPH, PAH, BTEX (benzene, toluene, ethylbenzene and xylene), asbestos, polychlorinated biphenyls (PCB's), SVOC and VOC above screening values indicated. Elevated concentrations of ground gases were also noted that were indicative of Characteristic Situation 2 and a worst-case possible scenario of CS4.

- In soil leachate there are widespread exceedences of the DWS and EQS screening values for metals (nickel, chromium VI, cadmium, chromium, copper, zinc, arsenic, and lead) and PAH and localised / isolated exceedences of TPH, total cyanide, phenol, and sulphate.

- In perched groundwater within the Made Ground there were widespread exceedances of the DWS or equivalent screening values for metals (arsenic, boron, cadmium, manganese, nickel, and iron), relatively widespread exceedances for PAH and TPH, relatively isolated exceedances for phenol and benzene and an isolated exceedance for cyanide. Exceedences of 1,4-Dichlorobenzene, Chlorobenzene and 1,2-Dichlorobenzene were also recorded from the

groundwater seepage within the southern section of the site (also from perched waters within the Made Ground).

- In perched groundwater sampled from response zones that screened Glacial Till there were relatively widespread exceedances of the DWS or equivalent screening values for metals (arsenic, boron, manganese, selenium and iron), relatively widespread exceedances for PAH and TPH and isolated exceedances of phenol and benzene.
- In perched groundwater within bedrock there were exceedances of the screening values for metals (manganese, selenium and iron), PAH compounds, TPH and sulphate.
- In surface water samples taken from the Rochdale Canal from upstream, midstream and downstream, there were exceedances of DWS equivalent screening values for chromium, lead, nickel, copper, TPH and PAH compounds (benzo(a)pyrene and fluoranthene).
- During the WA 2020 investigation water levels were measured using a product / water interface probe. No free phase product was detected. Celtic also state that no non-aqueous phase liquid (NAPL) was encountered during their fieldwork. However, hydrocarbon sheens were occasionally observed to shallow perched groundwaters mostly within the north western section of the site during trial pitting.
- Historic brickworks that were present on-site. Possible contaminants include metals, metalloids and their compounds; acids / bases; asbestos; solvents; PCB's and hydrocarbons (fuels).
- Fly-tipped materials. Possible contaminants include asbestos, metals and metalloids, fuel oils etc.
- The former reservoir (possibly infilled and within the central northern section of the site) and could constitute a ground gas source if infilled with Made Ground.

9.3 Potential Sources of Contamination Off-Site

- Surrounding historical industrial uses within the immediately surrounding area that includes the Park Engineering Works, Avro Works, Brickworks and associated clay pits, Ten Acres Mill, Bleach Works, Livingston Mills (cotton), Galvanising Works, Glass Works, Dye Works, Tannery, Laundry, Timber Yard; most of which

are located to the north of the site on the opposite bank of the Rochdale Canal. Moderate to high contaminative potential indicated.

- Surrounding current industrial land uses and fuel stations within the immediately surrounding area. For most current sources the contaminative potential is reduced due to modern working practices and extensive areas of hardstanding materials.
- Surrounding historical landfills and areas of potentially infilled ground (e.g. ponds and excavations).
- Cemetery.

9.4 Potential Pathways

- Human health – inhalation of soil dust and vapours / ground gas, dermal contact and ingestion of soils, dust, and waters. Possible consumption of homegrown vegetables and ingestion of soil attached to vegetables following development of the site.
- Controlled waters – vertical and lateral migration of leached / dissolved contaminants in groundwater through the ground via permeable strata, discontinuities, or man-made features (e.g. foundations and service trenches) and surface water run-off / overland flow over low permeability strata at the surface.
- Ground gas – migration, ingress, and accumulation with both vertical and lateral migration via permeable strata and man-made features (e.g. foundations and services) and lateral migration via groundwater.
- Buildings/infrastructure – direct contact of contaminated soils / groundwater with building materials and ground gas ingress / accumulation.
- Flora and Fauna – ingestion and root uptake.

9.5 Potential Receptors

- Human health – current site users, future site users / occupiers, construction workers, and the general public / adjacent site users (includes residential properties and the school to the south).
- Controlled waters – groundwater within superficial Secondary A and Secondary Undifferentiated Aquifers, groundwaters within bedrock Principal Aquifer and Secondary B Aquifer and surface waters (Rochdale Canal and River Medlock). Groundwater within the deeper Principal Aquifer is considered to be the most

sensitive groundwater receptor. Moston Brook has been discounted on the basis that it lies on the other side of the Rochdale Canal, is mostly culverted and is not located within influencing distance of the site.

- Buildings / infrastructure (existing and proposed).

9.5.1 For further details about pathways, receptors etc. please refer to the WA Combined Phase I & Phase II Ground Investigation Report dated May 2020. To avoid repetition the pathways, receptors and identified contaminant linkages are also discussed in further detail in the revised CSM undertaken in Section 16.

9.6 Preliminary Environmental Risk Assessment

9.6.1 In accordance with the EA Land Contamination: Risk Management June 2019 (LCRM) guidance, the information gathered throughout this report has been used to carry out a Preliminary Risk Assessment.

9.6.2 The CIRIA document Contaminated Land Risk Assessment – A Guide to Good Practice C552, 2001 defines the 'Consequence of Risk', 'Probability of Risk Being Realised' and 'Risk Classification Definition'. These definitions are provided in Appendix E and are used to provide a preliminary qualitative risk assessment for each identified source, pathway, receptor linkage.

9.6.3 The combined CSM and preliminary qualitative risk assessment for each identified source, pathway, receptor linkage can be found in the Table 9.1.

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
Contamination in soil/shallow perched groundwater noted in the CSM originating from the following on-site sources: 1. Made Ground associated with site's former historic uses. 2. Site's former use as brickworks with clay extraction pits. 3. Site's former uses as historic	Human Health (inhalation, dermal contact and ingestion).	Future site users	Moderate	Likely	Moderate (Low with mitigation)	The most sensitive receptor in this scenario would be a child. Hardstanding in the form of roads and pavements will be present across most of the site, reducing the potential for most pathways to be present. However, pathways could still be present in gardens and areas of soft landscaping. Remediation and mitigating measures will be required to protect future site users, and this would likely include clean cover systems within private gardens / areas of soft landscaping. Following remediation, the consequence of any risk being realised would be reduced.
		Current site users	Medium	Low	Low to Moderate	The site is derelict and has infrequent use (e.g. trespassers, dog walkers). Fly tipped materials are present, but pathways and long-term exposure are limited.
		Construction workers	Medium	Likely	Moderate (Low with mitigation)	Less sensitive receptor in this instance (adult). Increased risk to construction workers due to acute interaction with soils. Asbestos fibres have been recorded within soils above the threshold for human health and airborne fibres could be generated. No acute GAC exceedences noted. Risk to construction workers can be managed through the

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
and registered landfill. 4. Former reservoir (possibly infilled) 5. Perched groundwater within the made ground / landfill. 6. Fly tipped materials & bund along the site's eastern boundary						use of appropriate and safe working procedures, the use of appropriate PPE and suitable mitigating measures to deal with asbestos fibres.
		Adjacent site users	Medium	High Likelihood	High (Low with mitigation)	The most sensitive receptor is a child. Contaminated shallow perched groundwaters have been historically observed seeping out of the ground and migrating to sensitive off-site receptors following heavy rainfall. However, an impermeable bund and drainage channel has since been installed to divert these waters back onto the site and away from off-site receptors. During development of the site contaminated soils and shallow perched groundwaters will likely be exposed and the risk of migration to off-site receptors (e.g. windblown soils or surface water run-off) would be increased. However, it is unlikely that contaminants from on-site would migrate off-site in large quantities or at the concentrations recorded on-site. Risks could be reduced by undertaking development works in accordance with a CEMP. Some form of leachate / shallow perched groundwater mitigation may be required to prevent future groundwater seepage to off-site receptors.

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
	Controlled waters (migration of groundwater through the ground and surface water run-off / overland flow).	Bedrock Principal Aquifer	Medium/Severe	Unlikely	Low	Increased risk to the Principal Aquifer due to it sensitivity. However, there are no sensitive licenced groundwater abstractions within 1km of the site and the site does not lie within an SPZ. A substantial covering thickness of low-permeability cohesive Glacial Till (i.e. a geological barrier) is indicated from BGS data with previous WA site investigation data also indicating a substantial thicknesses of Glacial Till (between 25m and 40m thick) that confines the underlying Principal Aquifer.
		Bedrock Secondary B Aquifer	Mild	Unlikely	Very Low	The bedrock Secondary B Aquifer is not considered to be overly sensitive and is likely acting as a barrier to groundwater flow for the Principal Aquifer. As outlined above, it is also covered by a substantial thickness of predominantly low permeability Glacial Till (i.e. a geological barrier).
		Superficial Secondary Undifferentiated Aquifer	Mild	Low	Low	The superficial Secondary Undifferentiated aquifer is not considered to be overly sensitive and typically comprises low permeability Glacial Till. However, pathways do exist in places from the landfill to sand and gravel lenses within the till, where these directly underlie the landfill, and

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
						exceedences of contaminants have been recorded but the levels of contaminants observed within Made Ground were generally not reflected within shallow or deep natural deposits. Furthermore, the granular lenses are indicated to be discontinuous and not in continuity with other groundwater or surface water bodies, so the overall impact is indicated to be relatively localised.
		Superficial Secondary A Aquifer	Medium	Unlikely	Low	The superficial Secondary A Aquifer encroaches slightly into the north western section of the site and is likely to be of limited extent. Pathways are considered unlikely for the reasons outlined above for the Secondary Undifferentiated Aquifer.
		Rochdale Canal	Medium	Low	Low to Moderate (Low with mitigation)	The Rochdale Canal is moderately sensitive (WFD Cycle 2 2019 Overall Classification: Moderate) but is assumed to be clay lined and natural glacial clays are indicated along the northern boundary of the site negating most lateral migration pathways of groundwater from the site. No outfalls are recorded from the site to the canal. However, the site is slightly elevated from the canal along its northern boundary so surface waters and very shallow perched groundwater with leached contaminants could

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
						migrate to the canal at this location. Elsewhere, surface waters will migrate downgradient to the south west. Furthermore, significant leaching is unlikely to occur as any waters are likely to migrate to the canal fairly quickly. While groundwater flooding has not been observed adjacent to the canal there is a possibility that this could occur, but this is considered relatively unlikely as perched groundwater is indicated to be migrating away from the canal. Increased risks to the canal are envisaged during development of the site, but this could be mitigated through the use of a CEMP.
		River Medlock	Mild	Unlikely	Very Low	The River Medlock is not overly sensitive (WFD Cycle 2 2019 Overall Classification: Moderate), and pathways are limited due to the distance to the receptors, the presence of predominantly low permeability Glacial Till between the site and the river and in some instance's barriers to surface water runoff / overland flow. While granular lenses are present within the Glacial Till, the ground model for the site indicates that these are relatively isolated, and continuity is not indicated over such a large distance.

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
	Buildings / Infrastructure (Direct contact)	Future and existing buildings and water pipes	Mild	Likely	Low to Moderate (Low with mitigation)	Elevated and widespread concentrations of aggressive contaminants (e.g. sulphates and PAH) are widespread and would have the ability to degrade concrete or water pipes. Mitigating measures could include concrete design to withstand chemical attack and barrier pipe / ductile pipes for water supply pipes.
	Flora and Fauna	Existing vegetation and potential fauna on site and future vegetation	Minor	Likely	Low	Vegetation clearance has recently been undertaken but grasses, shrubs and tree stumps etc. still remain that have developed within contaminated soils. Future vegetation may be planted at the site and may come into contact with contaminated soils.
On-site ground gas sources and vapour sources including Made Ground / landfill, former infilled reservoir and groundwaters.	Buildings (gas / vapour migration, ingress and accumulation). Human Health (inhalation)	Future site users	Severe	Likely	High (Low with mitigation)	Significant thicknesses of Made Ground (up to 14.8m) have been identified within the historical landfill with abundant degradable constituents. A moderate ground gas generation potential is envisaged, based on the age of the landfill and the recorded waste types. Elevated ground gas concentrations and flow rates have been recorded and previous WA monitoring visits are generally indicative of CS2 and a worst-case possible scenario of CS4. Previous WA data also indicates that there is a risk vapours could be generated from soils and
		Future on-site buildings	Severe	Likely	High (Low with mitigation)	

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
						groundwater. SVOC/VOC concentrations were also noted from the groundwater seepage sample from the perched groundwaters within the Made Ground. Ground gas and vapour protection are envisaged for new buildings on-site and this could mitigate the risk.
		Current site users	Mild	Unlikely	Very low	Current site users are infrequent (e.g. trespassers, dog walkers) and activities are undertaken in open atmosphere so the risk to current site users is very low.
		Adjacent site users	Severe	Unlikely	Low to Moderate (Low with mitigation)	Based on previous and more recent site investigations, pathways to off-site receptors are considered unlikely due to the natural clay deposits that are indicated along the site's boundaries. Possible pathways are indicated within the south easternmost corner of the site where historic excavations appear to have extended off-site. However, these are indicated to be relatively isolated from the main excavations that occurred on-site, and recent data indicates that only low gas concentrations have been recorded in this area. Mitigation measures could include gas venting trenches along site boundaries to reduce the risk.
		Adjacent buildings	Severe	Unlikely	Low to Moderate (Low with mitigation)	

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
Off-site historic and current sources as outlined in the CSM.	Inhalation, dermal contact and ingestion	Future site users	Medium	Low	Low to Moderate (Low with mitigation)	It is unlikely that soil bound contaminants from off-site (unless fully exposed) have made their way to site in large quantities. However, contamination from historic surrounding land uses may have been landfilled at the site. Most of the surrounding area is also developed, so any significant sources of contamination are likely to have been removed or covered thereby breaking the pollutant pathway linkage.
		Current site users	Medium	Low	Low to Moderate (Low with mitigation)	
		Construction workers	Medium	Low	Low to Moderate (Low with mitigation)	
	Migration of groundwater through the ground and surface water run-off / overland	Bedrock Principal Aquifer	Medium/Severe	Unlikely	Low	In most cases migration of contaminants to the site via surface water / overland flow is unlikely due to the distance of the sources from the site, the presence of physical barriers and that interception by local drainage in developed areas is likely to occur. Migration of groundwater through the ground is unlikely due to the
		Bedrock Secondary B Aquifer	Mild	Unlikely	Very Low	

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
	flow to those receptors beneath the site	Superficial Secondary A Aquifer	Medium	Unlikely	Low	predominantly low permeability of the surrounding Glacial Till (i.e. a geological barrier). High permeability is envisaged for the Principal Aquifer, but a significant cover of low permeability Glacial Till is present. The geological fault and Manchester Marls could also be acting as a geological barrier to lateral groundwater flow for deep groundwater within bedrock. While outfalls to the canal may be present from off-site sources, continuity between the groundwater beneath the site and the Rochdale Canal is not indicated.
		Superficial Secondary Undifferentiated Aquifer	Mild	Unlikely	Very Low	
		Rochdale Canal	Medium	Unlikely	Low	
	Direct contact	Existing and future buildings and water pipes	Mild	Unlikely	Very Low	See previous sections regarding the contaminative potential for off-site sources and the potential pathways for soils and groundwater that may be aggressive to buildings and water pipes.
Other off-site ground gas and vapour sources including: 1. Potential areas of infilled land	Gas migration, ingress, and accumulation	Future site users	Medium	Unlikely	Low (Very low with mitigation)	These sources are anticipated to have a low to moderate ground gas generation potential, so the consequence is reduced. However, pathways to the site are unlikely due to the predominantly low permeability of the surrounding Glacial Till. Gas concentrations recorded for those monitoring wells adjacent to the site's south eastern boundary are relatively low and indicate that the
		Current site users	Medium	Unlikely	Low	

Table 9.1: Combined CSM & Preliminary Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
2. Historic landfills 3. Cemetery					(Very low with mitigation)	potential for ground gas generation / migration from the infilled ground adjacent to the site's south eastern boundary is limited. Ground gas protection is likely to be required to mitigate the ground gas risk from on-site sources so this will further reduce the risk from off-site sources.
		Existing and future buildings	Medium	Unlikely	Low (Very low with mitigation)	
Notes *[1] Considers both the potential severity of the hazard and the sensitivity of the receptor. Where applicable, the most sensitive receptor / hazard has been used for the overall assessment. *[2] Considers both the presence of the hazard and the integrity of the pathway. Where applicable, the most likely hazard / pathways have been used for the overall assessment.						

10 GROUND INVESTIGATION DETAILS

10.1 Introduction

10.1.1 In addition to historical third-party investigations as outlined in Section 8, WA has now undertaken four phases of investigation at the site. Each phase of WA investigation is summarised below. Although the historical third-party investigation data is useful for comparison, given the time that has elapsed and potential changes which have occurred at the site since it was undertaken, the results from the recent WA investigations have been relied upon to assess the current condition of the site.

10.1.2 Drawing LD10385-003 shows the most recent and previous WA exploratory hole locations, as well as the third-party exploratory hole locations.

10.2 2019 WA Ground Investigation

10.2.1 WA were commissioned by Vertase FLI Ltd (Vertase) to undertake a ground investigation at the site to assess the geotechnical nature of the ground, investigate the depth / nature of the Made Ground, and confirm the findings of previous site investigation works. Briefly, the works comprised:

- Investigation works were carried out between the 19th to 28th June 2019.
- Excavation of 35 No. trial pits to depths of between 0.80m and 6.70m bgl (TP01, TP03-04, TP06-07, TP09, TP12, TP14-19, TP22-27, TP29-30, TP34-36, TP38-41, TP44-46, TP49, TP53-54 and TP58).
- Drilling of 6 No. cable percussion boreholes to depths of between 5.70m and 11.50m bgl (BH01 to BH06).
- Drilling of 3 No. windowless sample boreholes to depths of between 2.00m and 8.00m bgl (WS01 to WS03).
- Installation of 4 No. monitoring wells (BH02, BH04, BH05 and BH06) for future groundwater and gas monitoring / sampling.
- 4 No. soil samples and 2 No. groundwater samples were obtained from site and delivered to an independent UK Accreditation Services (UKAS) accredited laboratory under the instruction of Vertase FLI.

10.2.2 For further details please refer to the WA “Factual Site Investigation Report” dated July 2019.

10.3 2020 WA Ground Investigation

10.3.1 WA were commissioned by YHG to undertake a comprehensive ground investigation at the site to address specific items identified from a gap analysis undertaken in June 2020 and to undertake a qualitative risk assessment and identify the potential geo-environmental risks and liabilities associated with the site. Briefly, the works comprised:

- Investigation works were carried out between the 5th October and 6th November 2020.
- Excavation of 50 No. trial pits to depths of between 1.2m and 5.4m bgl (TP101-150).
- Drilling of 19 No. cable percussion boreholes to depths of between 8.0m and 20.4m bgl (CP101-110, CP112-114 and including four predrills for RH103, RH108-110).
- Drilling of 7 No. rotary open hole and cored boreholes to depths of between 19.5m and 45m bgl (RH101-103, RH106 and RH108-110).
- Drilling of 14 No. windowless sample boreholes to depths of between 4.45m and 5.45m bgl (WS101-109, WS111-113 and WS119-120).
- Excavation of 5 No. trial pits for soakaway testing purposes to depths of between 1.70m and 2.00m bgl (SA01-05).
- Installation of 25 No. monitoring wells for future groundwater and gas monitoring / sampling.
- 91 No. soil samples, 14 No. groundwater samples (following development and purging), 3 No. surface water samples and a single “groundwater seepage” sample were obtained from site and delivered to an independent UK Accreditation Services (UKAS) accredited laboratory for a standard suite of brownfield determinands, as well as likely contaminants of concern (CoC) identified in previous site investigation reports.
- Regular samples were screened on site for the presence of ionisable volatile organic compounds using a photo-ionisation detector (PID) with a 10.6 eV lamp.

- In-situ testing that included regular hand shear vane and Standard Penetration Testing (SPT) with sampling and subsequent geotechnical laboratory testing of the underlying natural superficial deposits and Made Ground.
- 9 No. Post fieldwork ground gas and groundwater monitoring visits were carried out between the 30th November 2020 and 25th March 2021.
- During the ground investigation works many of the originally planned investigation positions had to be altered or were terminated due to areas being inaccessible (mostly due to dense vegetation, ecological constraints, or the presence of Japanese knotweed) and to take account of changes to the ground model as the works progressed.

10.3.2 For further details, including those other works that were undertaken (e.g. mitigation measures for ecology), please refer to the WA "Combined Phase I and Phase II Ground Investigation Report" dated May 2021.

10.4 2021 WA Ground Investigation

10.4.1 WA were commissioned by YHG to undertake additional site investigation works that had been conditioned by the regulators to address information gaps associated with the delineation of previously identified "free phase" products at the site. Briefly, the works comprised:

- Investigation works were carried out between the 2nd and 6th August 2021.
- 48 No. Optical Interface Probing (OIP) tests and 12 No. Membrane Interface Profiling tool (MIP) tests between ground level and 10.2m bgl. These tests were undertaken using a 20-tonne tracked CPT crawler rig.

10.4.2 For further details, please refer to the WA "Ground Investigation Report" dated September 2021.

10.5 2022 WA Ground Investigation

10.5.1 The most recent ground investigation commissioned by YHG was carried out by WA between 14th March and 9th May 2022 and comprised additional site investigation works to address planning conditions imposed by the regulators. The investigation was designed to take account of previous third party and WA investigation information and the investigation points were positioned to primarily target those areas that were previously inaccessible during previous phases of site investigation.

10.5.2 The scope of the works was submitted to the EA in a letter dated 13th January 2022 (ref: JC/LD10385/LET-001) to which they responded in a letter dated 16th February 2022 (ref: SO/2020/120757/05-L01) agreeing with the scope and investigation methodologies proposed for the works.

10.5.3 The investigation, including sampling techniques, were carried out in general accordance with BS5930:2015, Code of Practice for Ground Investigations, BS10175: 2017 Investigation of Potentially Contaminated Sites and the investigation methodologies agreed with the EA as outlined above.

Pre-ground Investigation Works

10.5.4 Pre-ground investigation works were undertaken at the site early March 2022 and the scope of these works were generally as follows:

- Production of Risk Assessments and Method Statements (RAMS) and Construction Design and Management (CDM) documentation to ensure compliance with CDM Regulations 2015. The main drilling contractor (Geotron UK Limited) adopted the role of Principal Contractor and undertook all the necessary duties and produced the relevant documentation to comply with CDM 2015 Regulations.
- Vertase FLI provided a document "Japanese Knotweed Control Measures to Prevent the Spread of JKW" for working within the areas where JKW was known to be present and provided a JKW Specialist for the duration of the ground investigation works. All the JKW elements associated with the additional ground investigation works were the responsibility of Vertase FLI.
- Surveying of all exploratory hole positions by GPS with utility clearance that was undertaken by appropriately qualified third-party surveyors.
- Vegetation clearance was undertaken by a third party, but these works were ongoing at the time of the additional site investigation. While most areas where accessible there were some areas that could not be accessed at various points during the investigation and some positions had to be relocated as outlined in 10.5.8.

Ground Investigation Works

10.5.5 The ground investigation was undertaken at the site between the 14th March and 09th May 2022 and the scope of these works was generally as follows:

- 58 No. trial pit excavations to depths of between 0.60m and 5.50m bgl using a tracked excavator and a JCB 3CX, to further establish the thickness, extent, and characteristics of the underlying Made Ground within those areas that were inaccessible during previous investigations and to identify / delineate buried highwalls.
- 10 No. cable percussion boreholes to depths of between 14.95m and 20.10m bgl to prove the depth of the Made Ground in areas that were inaccessible during the previous stages of investigation and to further establish the characteristics of the underlying natural superficial deposits. Groundwater monitoring installations, with response zones at various depths, were constructed within these boreholes.
- 6 No. rotary boreholes to depths of between 41.50m and 50.30m bgl to validate the depth to rockhead and increase confidence in the superficial thickness model. Groundwater monitoring installations, with response zones at various depths within the underlying Principal Aquifer, were constructed within these boreholes. Cable percussion drilling was used to drill through the landfill materials and upon encountering the natural superficial deposits, rotary coring commenced primarily using water flush and Geobore S (i.e. wireline drilling) to recover high quality core samples from the natural superficial deposits and solid geological strata. This method also enabled the borehole to be fully cased at all times to optimise stability in areas of weak geology and minimised the transmission of pollutants while drilling.
- 18 No. windowless sample boreholes to depths of between 2.45m and 5.45m bgl to enable the installation of new groundwater monitoring wells with response zones within the shallow perched groundwater within Made Ground. A series of windowless sample boreholes were also drilled in the vicinity of the groundwater seepage and along the site's southern boundary to further quantify the risks in this area.
- Installation of 34 No. groundwater and ground gas monitoring wells within boreholes and windowless sampling holes (50mm diameter standpipe installations) with response zones intersecting either perched waters within Made Ground, perched waters within the natural superficial deposits or groundwater within the underlying Principal Bedrock Aquifer.

- Environmental sampling of soils from exploratory hole positions to enable laboratory analysis to be carried out to inform the assessment of the contamination within those areas that have previously not been investigated, enabling the risks to human health and controlled waters to be further quantified. 90 No. Samples were obtained in accordance with best practice and / or in line with the general guidance outlined within WA and Vertase FLI investigation methodologies that were enclosed with the scope of works submitted to the EA prior to the commencement of the works.
- In-situ testing (e.g. hand shear vane and SPT), sampling and subsequent geotechnical laboratory testing was also undertaken to obtain further geotechnical parameters to inform foundation design, road design, earthworks and to provide outline assessments for any ground related risks. SPT calibration certificates are included within Appendix P.
- Full time supervision by suitably qualified and experienced WA geoenvironmental / geological engineers.
- Provision of full-time security (day and night) for the duration of the works.
- Supervision and documentation by a suitably qualified Japanese knotweed Specialist for those exploratory hole positions and works that were to be undertaken within areas where Japanese knotweed was present.

10.5.6 The investigation was carried out in accordance with the Construction Design and Management (CDM) Regulations 2015, a WA site-specific Health & Safety Plan and Geotron's Construction Phase Plan.

10.5.7 Immediately prior to the commencement of intrusive works the exploratory hole locations were scanned using a calibrated Cable Avoidance Tool (CAT) and service inspection pits were hand excavated to 1.20m bgl.

10.5.8 During the site investigation works many of the original positions had to be altered slightly because the areas were inaccessible due to the vegetation clearance not having been completed for all areas of the site (i.e. they were ongoing while the site investigation works progressed) and due to constraints associated with the larger stands of Japanese Knotweed. Notable changes (relocation greater than 10m from the original position) are as follows:

- CP201 had to be relocated c. 45m north east since the original position was inaccessible.
- TP201 had to be relocated c. 12m north east since the original position was inaccessible.
- TP202 had to be relocated c. 35m south since the original position was inaccessible.
- TP211 had to be relocated c. 27m south east since the original position was inaccessible.
- TP218 had to be relocated c. 23m north west since the original position was inaccessible.
- TP219 had to be relocated c. 17m west since the original position was inaccessible.
- TP220 had to be relocated c. 15m north east since the original position was inaccessible.
- TP225 had to be relocated c. 15m east since the original position was inaccessible.
- TP225 had to be relocated c. 15m east since the original position was inaccessible.
- TP230 had to be relocated c. 25m west since the original position was on the main haul road that led from the compound area.
- TP234 had to be relocated c. 20m west since the original position was inaccessible.
- TP256 had to be relocated c. 10m south since the original position was inaccessible.
- WS304 had to be relocated c. 10m north east since the original position was inaccessible.
- WS308 had to be relocated c. 45m south east since the original position was inaccessible.
- WS313 had to be relocated c. 35m south east since the original position was inaccessible.

Post Ground Investigation Works

10.5.9 Post fieldwork activities included the following.

- 6 No. post fieldwork groundwater monitoring visits between the 5th May 2022 and 1st August 2022. Groundwater level monitoring was undertaken using a Solinst interface meter.
- Well development was undertaken between the 5th and 6th May 2022 using an inertial pumping system comprising high flow inertial HDPE pump tubing and foot valves operated by a Waterra Groundwater Sampling Pump System. Due to the depth of the monitoring installations within the rotary boreholes these were developed using air-lifting techniques. Development records are contained within Appendix K.
- 2 No. rounds of groundwater sampling have been undertaken. The first round of groundwater sampling was undertaken on the 19th May 2022 and the second round was undertaken between the 15th and 22nd June 2022. In all instances, monitoring wells were purged before sampling. Low flow sampling, using a peristaltic pump was undertaken for shallow monitoring wells and those monitoring wells where samples were to be obtained for PFAS laboratory analysis. For the deeper monitoring wells samples were obtained using the previously mentioned Waterra Pump System. In both instances, parameters were measured using an Aquaread Probe. Purging records are contained within Appendix K.

10.6 Laboratory Testing

10.6.1 Details of the sampling and laboratory testing carried out across all four phases of WA investigations are summarised in Table 10.1.

Environmental / Chemical Laboratory Testing

10.6.2 Soil samples were submitted for laboratory analyses to establish the type, level and distribution of the possible contaminants that may be present on the site. Samples were obtained at regular depths, changes in strata, where visual and / or olfactory evidence of contamination was encountered and at other discrete horizons recognised as having a high potential to retain contaminants.

10.6.3 Samples were also selected to provide sufficient data to facilitate a quantitative human health risk assessment, inform controlled waters risk assessment and to provide an early indication of potential remedial requirements.

10.6.4 The schedule of samples obtained by WA and analysed for each stage of ground investigation is presented below in Tables 10.1 and 10.2.

Table 10.1: Summary of Soil Chemical Analysis 2020	
Substances	**No. Soil Samples**
General inorganics	56
Cyanide	69
Asbestos ID	56
Total Phenols	79
Speciated PAHs and Total PAHs	75
Metals/Metalloids	56
Total Petroleum Hydrocarbons (TPH)	71
Soil Organic Matter (SOM)	56
Benzene, Toluene, Ethylbenzene and Xylene (BTEX)	68
Methyl Tertiary Butyl Ether (MTBE)	68
Semi Volatile Organic Compounds (SVOC)	15
Volatile Organic Compounds (VOC)	13
Polychlorinated Biphenyls (PCB)	21
Leachate	9

Table 10.2: Summary of Soil Chemical Analysis 2022	
Substances	**No. Soil Samples**
General inorganics	65
Cyanide	65
Asbestos ID	73
Total Phenols	65
Speciated PAHs and Total PAHs	65
Metals/Metalloids	65
T Total Petroleum Hydrocarbons (TPH CWG)	78
Soil Organic Matter (SOM)	65
Benzene, Toluene, Ethylbenzene and Xylene (BTEX)	78
Methyl Tertiary Butyl Ether (MTBE)	79
Semi Volatile Organic Compounds (SVOC)	77
Volatile Organic Compounds (VOC)	77
Polychlorinated Biphenyls (PCB)	65
PFAS	19
PFAS (Post Oxidation)	4

10.6.5 All soil chemical analysis were undertaken by ALS Environmental in their UKAS and MCERTs accredited laboratory. The results of the soil chemical analyses are attached at Appendix H.

Chemical Analysis of Waters

10.6.6 During the 2020 WA site investigation, a total of 14 No. groundwater samples, 3 No. surface water samples and a single groundwater seepage sample were submitted for environmental laboratory analyses to establish the type, level and distribution of the possible harmful contaminants that may be present within groundwater and surface waters.

10.6.7 Samples were obtained following purging with sampling being undertaken using an inertial pumping system comprising high flow inertial HDPE pump tubing and foot valves operated by a Waterra Groundwater Sampling Pump System as previously described.

10.6.8 The schedule of samples obtained by WA and analysed during the 2020 ground investigation are presented below in Table 10.3 .

Table 10.3: Summary of Groundwater / Surface Water Chemical Analysis Schedule 2020

Substances	No. Samples
General Parameters and Inorganics	15
Total Phenols	15
Speciated PAHs	15
Metals/Metalloids	15
TPH CWG	15
SVOC	15
VOC	15

10.6.9 During the 2022 WA site investigation, a total of 20 No. groundwater samples and three surface water samples were submitted for environmental laboratory analyses to establish the type, level and distribution of the possible harmful contaminants that may be present within groundwater and surface waters.

10.6.10 Samples were obtained following purging and using a mixture of low flow sampling techniques and an inertial pump system as outlined previously.

10.6.11 The schedule of samples obtained by WA and analysed during the 2020 ground investigation are presented below in Table 10.4 .

Table 10.4: Summary of Groundwater / Surface Water Chemical Analysis Schedule 2022	
Substances	**No. Samples**
General Parameters and Inorganics	20
Total Phenols	20
Speciated PAHs	20
Metals/Metalloids	20
TPH CWH	15
SVOC	20
VOC	20
PFAS	9
PFAS (Post Oxidation)	7

10.6.12 All tests were performed in UKAS accredited laboratories. The results of the groundwater chemical analyses are attached at Appendix H.

10.7 Geotechnical Laboratory Testing

10.7.1 During the 2020 WA site investigation, samples were submitted to Professional Soils Laboratory (PSL) for geotechnical testing. All the tests were performed in accordance with BS1377:1990 'Soils for Civil Engineering Purposes'.

10.7.2 A summary of the geotechnical testing undertaken during the 2020 WA site investigation is presented in Table 10.5 .

Table 10.5: Summary of Geotechnical Laboratory Testing 2020	
Geotechnical Test	**No. of Tests**
Natural moisture content	19
Particle size distribution (PSD)	13
PSD sedimentation	12
Atterberg limits	17
Compaction (2.5kg rammer)	18
One Dimensional Consolidation Test	7
Unconsolidated Undrained Triaxial Compression	12
BRE full suite	13
Calorific value	3
Determination of the potential expansion of steel slags	3

10.7.3 During the 2022 WA site investigation, samples were submitted to Professional Soils Laboratory (PSL) for geotechnical testing. All the tests were performed in accordance

with BS1377:1990 'Soils for Civil Engineering Purposes'.

10.7.4 A summary of the geotechnical testing undertaken during the 2022 WA site investigation is presented in Table 10.6 .

Table 10.6: Summary of Geotechnical Laboratory Testing 2022

Geotechnical Test	No. of Tests
Natural moisture content	41
Particle Density	21
Particle size distribution (PSD)	41
PSD sedimentation	13
Atterberg limits	14
Compaction (2.5kg rammer)	29
One Dimensional Consolidation Test	5
Unconsolidated Undrained Triaxial Compression	5
BRE full suite	32
Organic matter	23
Determination of the potential expansion of steel slags	4

10.7.5 All tests were performed in accredited geotechnical and geochemical laboratories, in accordance with the appropriate British Standard.

10.7.6 For both the 2020 and 2022 WA site investigations, additional moisture content, organic matter and sulphate tests were undertaken as part of the environmental laboratory testing.

10.7.7 The results of the geotechnical and geochemical analyses are attached at Appendix M.

10.8 Quality Assurance (QA) and Quality Control (QC)

10.8.1 The soil samples were collected, transferred to the laboratory under chain of custody and analysed to ensure traceability and reliability of analytical results. All testing was undertaken in approved Environment Agency Monitoring Certification Scheme (MCERTS) and UK Accreditation Services (UKAS) accredited laboratories. Based on the laboratory QA data, the analytical results are considered acceptable for interpretative use unless this has otherwise been stated.

11 GROUND AND GROUNDWATER CONDITIONS

11.1 General

11.1.1 The ground and groundwater conditions encountered at the site are discussed in the sections below and are based on information obtained from the various WA site investigations undertaken between 2019 and 2022. Ground and groundwater conditions from the Celtic 2007 site investigation are summarised in Section 8 and where relevant, further details have been included below.

11.1.2 For detailed descriptions please refer to the exploratory logs contained within Appendix F. Cross sections are included within Appendix N and an overall 3D Ground Model is shown in Drawings LD10385-010 to LD10385-014.

11.2 Topsoil Fill

11.2.1 Topsoil fill occurred across most of the site and typically comprised a soft to firm, brown, slightly sandy to sandy, slightly gravelly to gravelly Clay with frequent rootlets and occasional cobble sized fragments of red brick and concrete, that was on average 0.2m thick. Gravel sized constituents mainly included red brick and to a lesser extent concrete, timber, suspected slag / clinker, ceramic and glass. Other anthropogenic constituents were encountered locally, and this included plastic, timber, coal, slate, suspected ACM, fabric and wire.

11.3 Concrete

11.3.1 An in-situ concrete slab was encountered within the eastern section of the site at the location of the eastern historical brickworks. The slab was present from ground level to a maximum depth of 0.2m bgl and is estimated to occupy an area of approximately 900m^2.

11.4 Made Ground

11.4.1 Made Ground was encountered across the entire site and was proven to a maximum depth of 13.85m bgl within the central south western section of the site, although Made Ground up to 14.8m bgl was proven during previous investigations. An indicative Made Ground Contour Plan is shown in Drawing LD10385-006.

11.4.2 The Made Ground has been segregated into four distinct strata based on field descriptions; suspected colliery spoil, suspected construction and demolition waste, suspected combustion waste and suspected household waste. Made Ground that did

not clearly fit into one of these distinct strata was logged either cohesive or granular Made Ground depending on its engineering behaviour and was generally found to be intermixed with the above.

11.4.3 The spatial distribution of the various distinct Made Ground types is shown in Drawing LD10385-021. Typical descriptions of the Made Ground, and depths encountered, are summarised below.

Cohesive and Granular Made Ground

11.4.4 Cohesive Made Ground was encountered across the entire site from between ground level and 8.9m bgl to a depth of between 0.3m and 10.4m bgl. The material was generally intermixed with those other types of Made Ground and was typically recovered as a soft to firm, stiff in places, brown, slightly sandy (ashy in places), slightly gravelly Clay with frequent cobble and occasional boulder sized constituents. In order of decreasing abundance, the very coarse and gravel sized constituents mainly comprised red brick, sandstone, concrete and to a lesser extent suspected clinker, plastic, glass, timber, mudstone, suspected slag, ceramics, metal, coal and slate. Exotic anthropogenic constituents such as plastic bags, plastic sheeting, fabric etc. were encountered locally. Hydrocarbon / organic odours were occasionally encountered.

11.4.5 Granular Made Ground was encountered across the site from between ground level and 9.00m bgl to depths of between 0.10m and 12.70m bgl. The material was generally intermixed with those other types of Made Ground and was typically recovered as a brown, sandy (ashy in places), clayey Gravel with frequent cobble and occasional boulder sized constituents. In order of decreasing abundance, the very coarse and gravel sized constituents mainly comprised red brick, concrete, plastic, timber, glass, sandstone, suspected slag, suspected clinker, ceramics, slate, mudstone, coal and tile. Exotic anthropogenic constituents including plastic sheeting, plastic bags, fabric, coils of wire, metal, glass bottles, rolls of carpet, polystyrene, rubber, hardboard, leather, electronic boards, tyres etc. were occasionally encountered. Hydrocarbon odours / staining were encountered locally.

Made Ground – Suspected Combustion Waste

11.4.6 Suspected combustion type wastes were mainly encountered within the north western and to a lesser extent the south western, south eastern and north easternmost sections of the site (see Drawing LD10385-021). They generally correlate

with the recorded extents of the smaller clay pit excavation within the north western section of the site and to a lesser extent the south easternmost extent of the larger clay pit excavation that occupies the remainder of the site. The exceptions being the north westernmost, south western, north easternmost and south easternmost sections of the site, where these materials were encountered outside the recorded extents of the former clay pit excavations. This material was also intermixed with other material types at isolated locations within the central section of the site.

11.4.7 The material was recorded from between ground level and 6.0m bgl to depths of between 0.4m bgl and 8.0m bgl (between 0.1m and 4.8m thick). Within the south western section of the site these materials were of a limited thickness (on average 0.50m thick) and occurred as a thin veneer over natural ground. This material was typically recovered as a black to brown, very sandy / ashy Gravel with frequent cobble sized constituents. In order of decreasing abundance, the very coarse and gravel sized constituents mainly comprised suspected slag and clinker, red brick, timber and to a much lesser extent inclusions of clay, glass, concrete, metal, ceramics, slate, mudstone, sandstone, tile etc. Other anthropogenic constituents such as acetate flakes, plastic bags / sheeting, white paste etc. were also noted at isolated locations.

11.4.8 Celtic also encountered this material within similar locations to that noted above to depths of between 0.8m and 4.2m bgl. The material was typically logged as a brown to black, sandy / ashy, clayey Gravel of clinker and brick. Cobbles comprised brick and concrete.

11.4.9 Visual and olfactory evidence of contamination such as hydrocarbon odours, hydrocarbon staining to soils, iridescent sheens on groundwater, red dye and tar were occasionally noted, mostly within the north western section of the site.

Made Ground – Suspected Construction and Demolition Waste

11.4.10 Suspected construction and demolition type wastes were mainly encountered within the central section of the site and corresponded with the recorded extents of the larger clay pit excavation within this area (see Drawing LD10385-021).

11.4.11 This material was generally recorded from between ground level and 9.0mbgl to depths of between 0.35m and 13.85m bgl (between 0.1m and 5.3m thick). It was typically recovered as cobble to boulder sized constituents of red brick, concrete, metal and timber in a matrix of brown, sandy, clayey Gravel or very gravelly, clayey

Sand. In order of decreasing abundance, the very coarse to gravel sized constituents included glass, sandstone, slate, suspected slag, ash, mudstone, pipe fragments and tile etc. Exotic anthropogenic constituents, in order of decreasing abundance, included plastic bags / sheeting, glass bottles, bundles of fabric, rubber, polystyrene, plastic wrappers, bundles of wire and rare tyres, paint tins, cement bags, rope etc.

11.4.12 Celtic also encountered this material at similar locations and to depths of between 4.8m and >10.1m bgl. However, it was more widespread and generally mixed with other wastes types. The material was typically described as brown, clayey, sandy Gravels and Cobbles of brick, concrete, timber, glass, pottery and plastic.

11.4.13 Visual and olfactory evidence of contamination such as hydrocarbon odours, hydrocarbon staining to soils and acrid odours were occasionally noted.

Made Ground – Suspected Colliery Spoil

11.4.14 Suspected colliery spoil type materials occurred locally and were largely restricted to the north eastern section of the site and corresponds with the north eastern section of the larger clay pit excavation that occupied the central and eastern sections of the site (see Drawing LD10385-021) and is generally delineated by a slightly raised plateau that is present within this area of the site (see Drawing LD10385-005).

11.4.15 The material was generally recorded from between 0.15m bgl and 2.70m bgl to depths of between 0.6m bgl and 6.8m bgl (between 0.20m and 6.20m thick) and was typically recovered as a grey, weathered orangish brown in places, sandy, clayey Gravel with frequent cobble and boulder sized constituents. Gravel and cobble sized fragments mainly comprised mudstone and siltstone and to a lesser extent coal, sandstone, ironstone and brick. Ash, suspected slag and suspected clinker gravel were also intermittently encountered at some of the positions.

11.4.16 Suspected colliery spoil was encountered by Celtic in 2007 within seven exploratory holes. Strata descriptions are of limited detail, but the material was typically logged as a sandy, occasionally ashy, Gravel of mudstone and was proven to a maximum depth of 7.9m bgl.

Made Ground – Suspected Household Waste

11.4.17 The suspected household type wastes were typically recorded within the central south western part of the site, but also generally intermixed with the suspected construction and demolition type wastes within the central north western and central eastern parts

of the site (see Drawing LD10385-021). They also generally correspond to the deeper areas of Made Ground as shown in Drawing LD10385-006.

11.4.18 The material was encountered between ground level and 8.0m bgl to depths of between 0.2m and 9.0m bgl (between 0.1m and 3.8m thick) and was typically recovered as cobble to boulder sized constituents in a matrix of brown, sandy, very clayey Gravel or very gravelly, very clayey Sand. Various anthropogenic constituents were noted, and in order of decreasing abundance, included red bricks, plastic bags / sheeting, timber, glass, metal, bundles of fabric, concrete, glass bottles, rolls of carpet, ceramic, suspected slag / clinker, ash, pipe fragments, slate and rare cardboard, containers / drums, hardboard, wire, rope, flooring, polystyrene, rubber, disposable cups, toys etc.

11.4.19 Visual and olfactory evidence of contamination such as hydrocarbon odours, hydrocarbon staining to soils and water and putrid odours from shallow perched waters were noted.

11.5 Glacial Till Deposits

11.5.1 Glacial Till deposits were encountered across the site and were encountered from between ground level and 13.85m bgl to proven depths of between 34.8m and 44.5m bgl. This stratum predominantly comprised cohesive and to a lesser extent contained intermittent and laterally impersistent granular lenses as described below.

11.5.2 The cohesive Glacial Till deposits predominantly comprised firm to stiff (locally soft), brown, slightly gravelly, slightly sandy Clay with variable cobble and boulder content. Relatively isolated / localised lenses of a firm to stiff, laminated, brown, silty Clay were also encountered at varying depths.

11.5.3 The granular Glacial Till deposits predominantly comprised medium dense, brown, gravelly, clayey Sand and locally as medium dense brown, sandy Gravel; both of which were locally water bearing. It was generally encountered within cohesive Glacial Till as intermittent / discontinuous lenses that varied in thickness between 0.05m and 12m thick (on average 2.4m thick). These lenses were generally encountered within the eastern section of the site as shown in the cross sections contained with Appendix N and the 3D model screenshots in Drawings LD10385-010 to 014.

11.5.4 Site investigation works undertaken by Celtic identified the Glacial Till as firm to stiff, locally soft, brown, slightly sandy to sandy, gravelly Clay and to a lesser extent yellow

/ grey, gravelly coarse Sand. The granular materials were also encountered within cohesive Glacial Till as intermittent / discontinuous lenses that were proven between 0.4m and 13.8m in thickness. It should be noted that the solid geology recorded by Celtic has since been proven to be Glacial Till and corrections have been made to identify the above trends.

11.6 **Bedrock – Collyhurst Sandstone Formation and Chester Formation**

11.6.1 During the WA 2020 and 2022 site investigation, bedrock was encountered in eight of the rotary boreholes from between 38.5m and 48.51 bgl and proven to depths of between at least 40.0m and 50.3m bgl. The full depth or thickness of bedrock was not proven during these site investigation works. However, the depth to rockhead is generally indicated to increase to the south west as illustrated in Drawing LD10385-008 and 009.

11.6.2 Bedrock of the Collyhurst Sandstone Formation was encountered in seven of the rotary boreholes and where intact core was recovered it typically comprised extremely weak to weak, laminated, reddish brown, fine to coarse grained Sandstone with well-rounded “millet seed” grains. Where core was non-intact it was typically recovered as a damp, reddish brown, gravelly Sand with well-rounded “millet seed” grains and to a lesser extent reddish brown, angular, fine to coarse GRAVEL of extremely weak, reddish-brown sandstone.

11.6.3 Bedrock of the Chester Formation was encountered in a single rotary borehole (RH206) within the north westernmost section of the site. No core could be recovered, but material from the flush returns it comprised reddish brown, fine to medium Sand with black, red, white and green grains and rare angular, fine, black gravel.

11.6.4 In both instances; where core was non-intact, this has been attributed to weaker / weathered material at rockhead and possibly scrubbing of the poorly cemented sandstone by the drill bit. In all such instances drillers noted that sandstone had been encountered and / or that drilling resistance had increased significantly.

Changes between WA 2020 and 2022 Site Investigations

Following the completion of the WA 2020 site investigations, a third-party site investigation was undertaken in December 2021 for the land immediately to the west of the site (former Mathers Foundry and Park Work). Several deep boreholes were

undertaken that indicated bedrock at c. 40m bgl as shown in Drawing LD10385-008 and 009.

In light of this additional information, these boreholes, and other surrounding BGS boreholes were reviewed. A bedrock contour was produced from this data, and it was evident that there were some anomalies in the WA 2020 dataset; most notably RH101 where the drillers had noted Mudstone at 15.0m bgl.

During the 2022 WA site investigation, another borehole (RH206) was drilled c. 8m east of RH101 and, upon encountering natural strata, was continuously rotary cored using Geobore – S drilling techniques. Solid core comprising cohesive Glacial Till and to a lesser extent non-intact core recovered as granular Glacial Till was encountered to a depth of 45m bgl, where sandstone bedrock was indicated. This was consistent with the local boreholes, the Site's geological setting and the surrounding glacial landforms from BGS records (e.g. Buried Glacial Valley). Consequently, the "Mudstone" recorded at RH101 must have been stiff, overconsolidated, cohesive Glacial Till and this borehole log has since been corrected. Furthermore, a distinctive cobble layer comprising a variety of different rock types was often encountered directly overlying bedrock and this was absent at RH101.

Following the drilling of the 2022 rotary boreholes, RH108 and RH110 from the WA 2020 site investigation were also reviewed and for the same reasons as outlined above (including the absence of distinctive cobble layer) these logs have since been corrected to granular Glacial Till.

Comparisons with Celtic Site Investigation

11.6.5 During the 2007 Celtic investigation, bedrock comprising weathered mudstone and sandstone was encountered at depths of between 16.6m and 21.5m bgl and comprised beds of brown and yellow sandstone and brown mudstone. However, this information was based on rotary open hole information and no coring was undertaken.

11.6.6 Rotary coring was regularly undertaken during the WA 2020 site investigation and continuous rotary coring using Geobore – S drilling techniques was undertaken during the WA 2022 site investigation. The information collected from these boreholes, which were often in close proximity to the Celtic boreholes (e.g. RH106 was located

30m north of R1), and the multiple lines of evidence outlined above, have definitely proven the Celtic information to be incorrect.

11.7 Obstructions and Voids

11.7.1 Concrete and brick obstructions (including an above ground concrete slab) were occasional noted within the easternmost and north westernmost sections of the site where the former brick works buildings were located. Further unrecorded obstructions such as foundations and below ground infrastructure associated with the former brick works buildings may also be present.

11.7.2 Abundant cobble to large boulder sized constituents were also present within the various Made Ground types. Occasional obstructions in the form of natural cobbles and boulders were also encountered at varying depths within the Glacial Till Deposits.

11.7.3 No voids were encountered during the various stages of site investigation works that were undertaken. However, unrecorded voids may be present, possibly associated with poorly graded and compacted landfill materials, hollow anthropogenic materials or possible unrecorded basements beneath the former brickwork's buildings.

11.8 Groundwater

Water Strikes

11.8.1 During the WA 2019, 2020 and 2022 site investigations numerous shallow perched waters were encountered within Made Ground during the drilling of exploratory holes at depths of between 0.1m and 8.2m bgl (between 85.15m and 73.27m AOD). Shallow to deep perched groundwater strikes within the underlying natural superficial deposits were also encountered between 1.00m and 15.00m bgl (between 85.70m and 64.73m AOD). Water strikes within bedrock are suspected to have been encountered, but this could not be accurately determined due to the rotary drilling techniques used. Water strike elevations are shown in Drawing LD10385-017 and further details can be found within the exploratory hole logs contained within Appendix F.

11.8.2 During the 2007 Celtic site investigations numerous shallow perched waters were encountered within Made Ground during the construction of exploratory holes at depths of between 0.2m and 4.9m bgl. Shallow perched groundwater strikes within the underlying natural superficial deposits were also encountered between 1.1m and 8.2m bgl. Refer to Section 8 for further details.

Groundwater Monitoring

11.8.3 10 No. groundwater monitoring visits were undertaken by WA between November 2020 and March 2021 with a further 6 No. monitoring visits undertaken between May 2022 and August 2022.

11.8.4 Perched / shallow groundwater elevations within Made Ground were recorded between 85.11m and 75.43m AOD. Hydraulic gradients were variable but were generally noted to flow towards the deepest parts of the former clay pit excavations as shown in Drawing LD10385-019. For those wells where monitoring was undertaken during both periods of WA monitoring, elevations recorded from the 2022 dataset were generally noted to have dropped by between 0.23m and 1.15m (on average 0.50m). This is most likely due to seasonal variation, as the second round of monitoring was undertaken during late spring / early summer, while the former was undertaken during the autumn / winter period.

11.8.5 Perched groundwater elevations within Glacial Till were recorded between 83.25m and 63.32m AOD with variable hydraulic gradients being indicated (likely due to the isolated nature of these perched groundwaters) as shown in Drawing LD10385-020. For those wells where monitoring was undertaken during both periods of WA monitoring, elevations recorded from the 2022 dataset were generally noted to have dropped by between 0.46m and 2.06m (on average 1.35m). This is most likely due to seasonal variation, as the second round of monitoring was undertaken during late spring / early summer, while the former was undertaken during the autumn / winter period. The exception being CP113 where groundwater levels were noted to have risen by 1.23m.

11.8.6 Groundwater elevations within bedrock were recorded between 75.76m and 54.38m AOD and are generally indicative of a hydraulic gradient to the west south west as shown in Drawing LD10385-015; although it appears that the fault may be influencing the groundwater flow directions within the north westernmost section of the site.

11.8.7 Groundwater monitoring undertaken as part of the 2007 Celtic investigation indicates that shallow perched waters within Made Ground and underlying shallow Glacial Till were encountered at elevations of between 84.69 and 71.12m AOD. Celtic stated that these elevations were indicative of a hydraulic gradient to the south west. Deeper groundwaters within Glacial Till were recorded at elevations of between 79.86m and 74.28m AOD. Celtic stated that these elevations were generally indicative of a

hydraulic gradient to the south west and to a lesser extent the south east. For further details refer to Section 8.

11.8.8 During the WA 2020 and 2022 groundwater monitoring rounds, water levels were measured using a product / water interface probe. No free phase product was detected. Celtic also state that non-aqueous phase liquid (NAPL) was not encountered during the fieldwork and that no visual or olfactory evidence of contamination was noted.

11.8.9 The results from the groundwater monitoring that has been undertaken at the site from the WA 2020 and 2022 monitoring periods are summarised in Table 11.1 and 11.2. For further details refer to the groundwater monitoring results attached within Appendix J.

Table 11.1: Groundwater Elevations (m AOD) WA 2020 Dataset												
Position	Dates										Response Zone Depths	Strata Screened
	09-11/11/20	30/11/20	14/12/20	06/01/21	21/01/21	01/02/21	16/02/21	25/02/21	08/03/21	25/03/21		
CP103a	80.56	80.71	80.84	81.18	81.5	81.48	81.33	81.27	81.16	80.93	8m to 10m	GT
CP103b	80.62	80.72	80.87	81.19	81.54	81.41	81.35	81.27	81.14	78.77	2m to 6m	MG
CP107	80.24	80.12	80.35	80.6	81.03	80.81	80.76	80.76	80.7	-	5m to 9m	MG
CP108	76.16	76.59	72.88	76.24	76.62	76.42	76.23	76.19	76.15	80.64	2m to 5m	MG
CP109	80.18	80.23	80.42	80.61	80.97	80.73	80.7	80.69	80.64	-	9m to 13m	MG
CP110	77.8	77.82	77.88	77.94	78.03	77.94	77.93	77.96	77.92	-	1m to 4m	MG
CP112/ RH103	76.76	69.99	76.08	80.52	80.99	80.75	80.59	80.5	80.48	77.71	27m to 30m	GT
CP113	79.38	79.16	Dry	79.49	80.03	79.84	79.58	79.78	79.35	-	2m to 3m	GT
RH101	67.3	74.58	75.04	74.86	75.38	75.28	75.15	74.97	74.9	80.47	17m to 20m	GT
RH102	79.95	80.01	80.1	80.28	80.78	80.49	80.46	80.42	80.27	80.93	12m to 13.5m	GT
RH106	54.75	54.1	54.31	-	-	-	-	-	-	-	39m to 42m	BR
CP114/ RH108	76.81	76.71	-	76.92	-	-	-	-	-	-	26m to 28m	GT
CP101/ RH109a	75.81	-	73.19	74.48	75.29	76.35	76.57	76.63	76.68	76.72	18m to 22m	GT
CP101/ RH109b	76.38	74.42	76.48	-	-	-	-	-	-	75.05	40m to 42.5m	BR
CP102/ RH110	62.24	62.7	-	-	-	-	-	-	-	66.13	35m to 39m	GT

Table 11.1: Groundwater Elevations (m AOD) WA 2020 Dataset												
Position	Dates										Response Zone Depths	Strata Screened
	09-11/11/20	30/11/20	14/12/20	06/01/21	21/01/21	01/02/21	16/02/21	25/02/21	08/03/21	25/03/21		
WS101	83.13	83.57	83.57	83.57	83.57	83.57	81.94	83.57	83.57	-	1m to 2m	MG
WS102	83.45	83.36	83.72	83.49	83.86	83.65	83.38	83.38	83.33	75.35	1m to 2m	MG
WS103	75.85	75.8	75.91	75.96	76.22	76.08	75.6	75.83	75.81		1m to 2m	MG
WS104	79.5	79.57	79.86	79.91	80.23	80.21	80.04	79.92	79.79	79.89	1m to 2m	MG
WS105	80.44	80.48	80.56	80.81	81.19	81	81	80.91	80.89	78.82	1m to 2m	MG
WS106	78.98	78.91	79.3	79.02	79.62	79.33	79.12	79.26	78.73	84.33	1m to 2m	GT
WS107	85.44	85.41	85.69	85.38	85.69	85.53	85.39	85.47	85.23	84.53	1m to 2m	MG
WS108	83.53	-	-	85	85.05	85.01	84.99	85	84.87	77.15	1m to 2m	MG
WS109	Dry	Dry	Dry	Dry	77.06	76.44	76.25	76.24	76.21	Dry	1m to 2m	MG
WS111	78.75	78.85	79.2	79.2	79.2	79.2	79.2	79.2	78.98	79.16	1m to 2m	GT
WS112	Dry	Dry	Dry	Dry	78.4	78.14	78	Dry	Dry	Dry	1m to 2m	MG
WS113	82.65	82.66	83.97	84.11	84.09	84.12	84.6	84.12	84.1	-	1m to 2m	MG
WS119	Dry	Dry	Dry	82.88	83.05	83.05	82.84	82.87	82.85	80.32	1m to 2m	MG
WS120	80.77	80.77	80.93	80.76	81.15	80.94	80.77	80.7	80.71	83.19	1m to 2m	MG
BH04	-	81.64	81.68	81.67	81.01	81.81	81.73	81.7	81.67	-	3m to 5m	MG
BH06	-	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	2m to 4m	MG
Notes: MG = Made Ground, GT = Glacial Till & BR = Bedrock												

Table 11.2: Groundwater Elevations (m AOD) WA 2022 Dataset											
Position	Dates									Response Zone Depths	Strata Screened
	05/05/2022	19/05/22	15/06/22	16/06/22	20/06/22	22/06/22	07/07/22	18/07/22	01/08/22		
CP101/ RH109	-	-	-	-	-	-	-	-	-	40m to 42.5m	BR
RH106	-	-	-	-	dry	-	dry	-	dry	39m to 42m	BR
RH201	-	-	-	56.722	-	56.802	56.662	56.802	56.822	39.5m to 41.5m	BR
RH202	-	54.637	-		-	-	-	-	54.607	46m to 50m	BR
RH203	-	-	-	54.562	-	-	54.392	54.232	54.322	47m to 50m	BR
RH204	-	54.593	-		-	-	54.513	54.383	-	45m to 46m	BR
RH205	-	-	54.759	54.759	54.759	-	54.649	54.759	54.759	48.1m to 49.6m	BR
RH206	-	54.962	-		-	-	55.242	54.922	54.972	45m to 48.1m	BR
CP201	80.546	79.946	-	79.946	-	-	79.526	79.366	79.456	2m to 7m	MG
CP202A	80.33	-	-	79.98	-	-	79.81	79.93	79.74	13m to 15m	GT
CP203	81.681	-	-	-	79.931	-	79.851	79.781	79.681	4.5 to 7.5m	GT
CP204	84.156	-	-	-	76.606	-	76.556	-	76.456	12m to 17m	GT
CP205	-	-	-	-	-	79.833	79.633	79.603	79.483	1m to 7m	MG
CP206	85.762	-	-	-	-	82.722	82.662	82.612	82.512	5m to 15m	GT
CP207	76.67	-	-	75.47	-	-	75.33	75.39	75.27	17.5m to 19m	GT
CP208	80.538	-	-	-	80.538	-	80.138	79.928	80.008	9m to 12m	GT
CP209	74.89	74.94	-	-	-	-	74.53	74.35	74.53	5m to 7m	GT
CP210	84.903	-	-	-	-	76.803	76.463	76.283	76.443	10m to 17m	GT
WS301	80.056	-	-	-	-	79.816	79.486	79.466	79.386	1m to 3m	MG

Table 11.2: Groundwater Elevations (m AOD) WA 2022 Dataset											
Position	Dates									Response Zone Depths	Strata Screened
	05/05/2022	19/05/22	15/06/22	16/06/22	20/06/22	22/06/22	07/07/22	18/07/22	01/08/22		
WS302	79.133	-	-	-	79.233	-	79.273	79.173	79.183	1.5m to 5.45m	GT
WS303	80.445	-	-	-	79.895	-	79.865	79.845	79.795	1.5m to 5.45m	MG
WS304	dry	-	-	-	dry	-	dry	dry	80.602	1m to 4m	MG
WS305	-	-	-	-	75.974	-	75.614	75.444	75.504	2.5m to 4.45m	MG/GT
WS306	79.102	-	-	79.802	-	-	79.752	79.702	79.642	1m to 5m	MG
WS307	79.987	-	-	-	79.837	-	79.787	79.737	79.687	1.5m to 3.45m	MG
WS308	83.803	-	-	-	82.153	-	82.073	82.043	81.953	1m to 4m	MG
WS309	dry	-	-	-	77.562	-	77.552	77.562		2.5m to 4.45m	MG/GT
WS310	79.047	-	-	79.697	-	-	79.627	79.647	79.547	1.5m to 4.45m	MG
WS311	Dry	-	-	-	-	-	dry	dry	dry	1.5m to 2.45m	MG
WS312	83.984	-	-	-	84.064	-	83.964	83.934	83.834	2.5m to 5.45m	MG
WS313	Dry	-	-	-	-	Dry	Dry	Dry	dry	1m to 4m	MG
WS314	Dry	-	-	-	dry	-	Dry	Dry	dry	1.5m to 4.45m	MG
WS315	80.911	-	-	79.961	-	-	79.521	79.361	79.441	1m to 4m	MG
WS316	78.092	-	-	-	77.242	-	76.792	76.642	76.622	2.5m to 4.45m	MG/GT
WS317	77.939	-	-	-	-	76.639	76.779	-	76.609	1.5m to 3.5m	MG
WS318	-	75.891	-	-	-	-	75.381	75.201	75.261	2.5m to 5.45m	MG/GT
CP103a	-	-	-	-	-	-	-	-	81.10	8m to 10m	GT
CP103b	-	-	-	-	-	-	-	-	80.89	2m to 6m	MG
CP107	-	-	-	-	-	-	80.1	79.98	80.50	5m to 9m	MG

Table 11.2: Groundwater Elevations (m AOD) WA 2022 Dataset											
Position	Dates									Response Zone Depths	Strata Screened
	05/05/2022	19/05/22	15/06/22	16/06/22	20/06/22	22/06/22	07/07/22	18/07/22	01/08/22		
CP108	-	-	-	-	75.83	-	-	75.57	76.25	2m to 5m	MG
CP109	-	-	-	80.22	-	-	80.1	80.05	80.50	9m to 13m	MG
CP110	-	-	-	-	-	-	-	-	77.91	1m to 4m	MG
CP112/ RH103	-	-	-	-	-	-	76.38	76.35	77.96	27m to 30m	GT
CP113	-	-	-	-	-	-	80.81	-	79.71	2m to 3m	GT
RH101	-	-	-	-	-	-	73.82	73.72	74.54	17m to 20m	GT
RH102	-	-	-	-	-	-			80.31	12m to 13.5m	GT
CP114/ RH108	-	-	-	dry	-	-	dry	76.35	76.70	26m to 28m	GT
CP101/ RH109a	-	-	-	-	-	-	-	-	75.75	18m to 22m	GT
CP101/ RH109b	-	-	-	-	-	-	-	-	75.05	40m to 42.5m	SST
CP102/ RH110	-	-	-	62.22	-	-	dry	dry	63.32	35m to 39m	GT
WS101	-	-	-	-	-	-	-	-	83.34	1m to 2m	MG
WS102	-	-	-	-	-	-	-	-	82.70	1m to 2m	MG
WS103	-	-	-	-	-	-	75.5	75.2	75.77	1m to 2m	MG
WS104	-	-	-	-	-	-	79.35		79.84	1m to 2m	MG

Table 11.2: Groundwater Elevations (m AOD) WA 2022 Dataset											
Position	Dates									Response Zone Depths	Strata Screened
	05/05/2022	19/05/22	15/06/22	16/06/22	20/06/22	22/06/22	07/07/22	18/07/22	01/08/22		
WS105	-	-	-	-	80.42	-	80.31	80.29	80.53	1m to 2m	MG
WS106	-	-	-	-	77.99	-	DRY		79.51	1m to 2m	GT
WS107	-	-	-	-	-	-	84.32	84.1	85.11	1m to 2m	MG
WS108	-	-	-	-	-	-	dry	dry	83.83	1m to 2m	MG
WS109	-	-	-	-	-	-	dry	dry	76.44	1m to 2m	MG
WS111	-	-	-	-	-	-	DRY	dry	79.09	1m to 2m	Cohesive GT
WS112	-	-	-	-	-	-	77.84	-	78.10	1m to 2m	MG
WS113	-	-	-	-	-	-	83.59	83.5	83.74	1m to 2m	MG
WS119	-	-	-	-	-	-	-	-	82.55	1m to 2m	MG
WS120	-	-	-	-	-	-	80.77	dry	81.04	1m to 2m	MG
BH04	-	-	-						81.61	3m to 5m	MG
BH06	-	-	-						dry	2m to 4m	MG
	Notes: MG = Made Ground, GT = Glacial Till & BR = Bedrock										

11.9 Ground Gas

11.9.1 Nine ground gas monitoring rounds were undertaken for the site between 30th November 2020 and 25th March 2021 with a further two ground gas monitoring rounds being undertaken between 19th May 2022 and 18th June 2022; both using a GFM436 gas analyser.

11.9.2 Gas monitoring was undertaken in line with guidance contained within BS8485 and during varying atmospheric pressure conditions, including falling pressure as a worst-case scenario. The results of the ground gas monitoring are presented in Appendix J and are summarised below:

- Atmospheric pressure readings, taken during the bulk ground gas monitoring, varied between 966, and 1016mb;
- Measured peak methane concentrations ranged from 0.0% to 6.0% v/v (WS311);
- Measured peak carbon dioxide concentrations ranged from 0.0 % v/v to 20.2% v/v (WS107);
- Measured steady state flow rates ranged from -3.7 l/hr (WS111) to 20.9 l/hr (RH108).

11.9.3 The gas monitoring from the Celtic 2007 investigation undertaken between 27th June 2007 to 23rd July 2007 recorded concentrations of carbon dioxide between <0.1% and 14.3% (typically between <0.1% and 9.8%), methane concentrations up to 30.5% (typically <0.1%) and gas flow rates of up to 2.3 l/hr.

11.10 Observations of contamination

11.10.1 Visual and olfactory evidence of contamination within soils was recorded in several areas of the site within Made Ground and generally included the following:

- Frequent / widespread hydrocarbon odours and staining within the north western and south eastern sections of the site. More localised occurrences were noted within the north eastern and central south western sections of the site.
- Occasional / localised organic odours within the south eastern, north eastern, central northern, central south western and to a lesser extent the north westernmost sections of the site.
- Occasional / localised acrid odours within the central and south eastern sections of the site.

- Occasional / localised putrid odours within the central south eastern and central northern sections of the site. Rare / isolated occurrences were also noted in the north western and central western sections of the site.
- Occasional / localised sulphurous odours within the central south western section of the site.
- Occasional / localised chemical odours within the central south western and to a lesser extent the north western section of the site.
- Rare / isolated white spirit odours, stagnant odours, solvent odours and red / yellow dye staining were also noted in places.

11.10.2 Visual and olfactory evidence of contamination within waters was recorded in several areas of the site within the perched groundwaters within Made Ground and included

- Frequent hydrocarbon odours and iridescent sheens were noted within the north western and south eastern sections of the site. More localised occurrences were noted within the north eastern, central south western, central eastern and central northern sections of the site.
- Occasional white spirit odours, rare chemical / solvent and sulphurous odours were also noted in places.

11.10.3 During development and sampling of the groundwater monitoring installations undertaken as part of the WA 2020 and 2022 site investigations, the following visual and olfactory evidence of contamination was also noted:

- Sulphurous odours were noted at the locations of RH102, CP103A&B, CP109 and CP112.
- Grey silty water was noted at the location of CP109.
- Brown silty water was noted at the location of CP113.
- Putrid and solvent odours at the location of WS307. The odours became stronger as development progressed.
- Hydrocarbon odours at the locations of WS303, WS306 and WS310.
- Iridescent sheens / black oily water at the locations of WS301, WS306, WS308, WS316 and WS318
- Strong putrid odour with white froth at the location of CP202.
- Putrid odours at the locations of CP201, CP203, WS303, WS306 and WS310.

11.10.4 The notes from the development of the boreholes can be found in Appendix K

12 GEOTECHNICAL MATERIAL PROPERTIES

12.1 General

12.1.1 The ground conditions encountered at the site are summarised in Section 11. The material properties for the various strata encountered across the site during the WA 2019, 2020 and 2022 ground investigations, as well as the Celtic ground investigation in 2007, are outlined in the sections below.

12.1.2 Due to the high degree of variability that was encountered within the various Made Ground strata they have been divided into either cohesive or granular (including suspected construction and demolition waste and suspected household waste where the matrix was predominantly granular) based on their engineering behaviour and a range of material properties have been provided. The exception being those distinctive Made Ground strata that were relatively consistent and / or that occurred within certain sections of the site (e.g. suspected combustion type wastes or colliery spoil) and these have been separated out and the material properties discussed independently.

12.1.3 The geotechnical laboratory results are contained within Appendix M and the in-situ results are presented on the exploratory hole logs contained within Appendix F. Standard Penetration Test (SPT) plots can be found in Appendix O.

12.2 Cohesive Made Ground

12.2.1 In-situ and geotechnical / geochemical laboratory tests results undertaken on the Cohesive Made Ground are summarised in Table 12.1:

Table 12.1: Summary of Testing in Cohesive Made Ground

Type of Test	No. of Tests	Results
In-Situ Tests:		
Standard Penetration Tests (SPT)	91	N-Value: 0– 50+ (mean: 12) N60 Value: 0 – 60 (mean: 11)[1]
Hand Shear Vane Test	24	3 – 140kN/m2 (75kN/m2)
Laboratory:		
Moisture Content	67	0.8 – 56% (mean 23%)
Particle Size Distribution (PSD)	5	Fines: 18 - 70% (mean: 42%) Clay: 30% Silt: 40% Sand: 21 - 56% (mean: 32%)

Table 12.1: Summary of Testing in Cohesive Made Ground		
Type of Test	**No. of Tests**	**Results**
		Gravel: 8 - 33% (mean: 18%) Cobbles: 0 - 25% (mean: 8%)
Liquid Limit	9	36 – 90% (mean: 48%)
Plastic Limit	9	18 – 38% (mean: 23%)
Plasticity Index	9	17 – 52% (mean: 26%)
Weighted Plasticity Index	9	1122 – 4836% (1953%)
Laboratory Hand Vane	3	Peak: 40 – 71kN/m2 (mean: 59kN/m2) Residual: 17 - 41kN/m2 (mean: 28kN/m2)
Optimum Moisture Content	7	17 - 41% (mean: 22%)
CBR	1	4.5%
pH	59	5.86 – 12.8 (mean: 7.79)
Water Soluble SO4	46	4 – 1500mg/l (mean: 242mg/l)
Organic Matter	29	0.7 – 32.8 (mean: 7.87%)
Triaxial Tests	1	104kN/m2
Notes: [1] Correction for SPT hammer energy efficiency after Skempton (1986); Seed et al (1985). WA data only. Unable to calculate for Celtic data due to lack of SPT certificates. SPT refusals (50+) have been excluded for the mean calculations, corrections and correlations as they are deemed unrepresentative due to very coarse constituents that were frequently encountered within this stratum. It is possible that some of the higher N-Values recorded are also due to obstructions or oversized constituents. Any subsequent correlations need to be used with caution.		

12.2.2 Relationships between Plasticity Index (PI) and SPT N60 values (cu = α'N60, Salgado 2008; α'= 0.0475 for a PI of 25%) for the Cohesive Made Ground indicates undrained shear strength values of between 0 and 276kN/m² (average of 48kN/m²), which is indicative of extremely low strength to very high strength materials (on average medium strength).

12.2.3 Undrained shear strength values from hand shear vane testing indicate the Cohesive Made Ground materials to be of extremely low to high strength (generally medium strength). No significant relationship between undrained shear strength and depth is indicated. However, hand shear vane tests were only undertaken at shallow depth.

12.2.4 The results from the Atterberg Limit tests indicate materials of intermediate to extremely high plasticity (typically intermediate plasticity), with the plasticity index results indicating materials of low to high shrinkage potential (typically medium

shrinkage potential). The weighted plasticity index results indicate materials of very low to high volume change potential (typically low volume change potential).

12.2.5 Relationships between PI and angle of friction (Gibson 1953) for the Cohesive Made Ground indicates an angle of friction of between 25° and 32° (average of 30°).

12.2.6 Drained stiffness (E') for the Cohesive Made Ground has been derived from SPT N60 values after Stroud 1989, which indicates values of between 0 and 52 MN/m2 (average of 9 MN/m2).

12.2.7 Undrained stiffness (E_u) for the Cohesive Made Ground has been derived from SPT N60 values after Butler, 1975, which indicates values of between 0 and 58 MN/m^2 with a mean of 10 MN/m^2.

1.3.1 Coefficient of volume compressibility (mv) for the Cohesive Made Ground has been derived based on relationships with plasticity and SPT N60 values (mv = 1/f2N, Stroud 1975; f2=0.496 for PI of 25%) with values ranging from 0.035 – 2.407 m2/MN (very low to very high compressibility) with an average of 0.44 m2/MN (high compressibility).

1.3.2 Generally, the PSD results for the cohesive materials indicated a slightly sandy to sandy, slightly gravelly to gravelly Clay with medium cobble content, which is in line with the field descriptions. Higher sand and gravel contents and were noted in some samples, but again this is in keeping with the field descriptions.

12.2.8 The range of compaction tests and natural moisture content tests for the cohesive materials indicate that these materials are generally very slightly wet of their optimum moisture contents.

12.3 Granular Made Ground

12.3.1 In-situ and geotechnical / geochemical laboratory tests results undertaken on the Granular Made Ground (includes suspected construction and demolition type wastes and the suspected household wastes where the matrix was predominantly granular) are summarised in Table 12.2:

Table 12.2: Summary of Testing on Granular Made Ground		
Type of Test	**No. of Tests**	**Results**
In-Situ Tests:		
Standard Penetration Tests (SPT)	108	N-Value: 0 – 50+ (mean: 15) N160 Value: 0 – 77 (mean: 19)[1&2]
Laboratory Tests:		
Moisture Content	123	0 – 40% (mean 18.5%)
Particle Size Distribution (PSD)	10	Fines: 6 - 34% (mean: 15%) Sand: 24 - 51% (mean: 37%) Gravel: 24 - 61% (mean: 41%) Cobbles: 0 - 32% (mean: 6%)
Liquid Limit	2	-
Plastic Limit	2	Non-Plastic
Plasticity Index	2	-
Optimum Moisture Content	11	15 – 21% (mean: 18%)
pH	100	6.19 – 10.6 (mean: 8.1)
Water Soluble SO4	80	6 – 1974mg/l (mean: 442mg/l)
Organic Matter	60	0.4 - 46.9% (mean: 6.5%)
Calorific Value	4	1.4 – 7.1MJ/kg (mean: 3.55MJ/kg)

Notes:
[1] Correction for SPT hammer energy efficiency after Skempton (1986); Seed et al (1985).
[2] Correction for (N1)60 value for effective overburden pressure after Liao and Whitman (1986).
WA data only. Unable to calculate for Celtic data due to lack of SPT certificates.
SPT refusals (50+) have been excluded for the mean calculations, corrections and correlations as they are deemed unrepresentative due to very coarse constituents that were frequently encountered within this stratum. It is possible that some of the higher N-Values recorded are also due to obstructions or oversized constituents. Any subsequent correlations need to be used with caution.

12.3.2 SPT N160 values indicate very loose to very dense materials (typically medium dense) and correlations for angle of friction (after Peck et al 1964) recorded values of between 27° and 53° (typically 33°).

12.3.3 Drained stiffness (E') for the granular materials has been derived from SPT N160 values after AASHTO 2004, which indicates values of between 0 and 88 MN/m² (on average 21 MN/m²).

12.3.4 The PSD results for the granular materials indicated a very sandy, clayey Gravel with medium cobble content. This differs from the field descriptions where cobble sized constituents predominated, and this fraction has likely been underestimated due to

sampling restrictions (i.e. it is generally not practicable to sample cobbles and boulder sized constituents for testing).

12.3.5 The range of compaction tests and natural moisture content tests for the granular materials indicate that these materials are around their optimum moisture contents.

12.4 Suspected Combustion Type Waste Made

12.4.1 In-situ and geotechnical / geochemical laboratory tests results undertaken on the suspected combustion type wastes are summarised in Table 12.3:

Table 12.3: Summary of Testing on Combustion Type Waste

Type of Test	No. of Tests	Results
In-Situ Tests:		
Standard Penetration Tests (SPT)	22	N-Value: 0 – 32 (mean: 6) N160 Value: 0 – 36 (mean: 8)[1&2]
Laboratory Tests		
Moisture Content	88	8.7 – 42% (mean 23%)
Particle Size Distribution (PSD)	5	Fines: 11 - 24% (mean: 15%) Sand: 27 - 57% (mean: 42%) Gravel: 32 - 60% (mean: 43%) Cobbles: 0%
Liquid Limit	1	-
Plastic Limit	1	Non-Plastic
Plasticity Index	1	-
Weighted Plasticity Index	1	-
Optimum Moisture Content	5	21 – 27% (mean: 23%)
CBR	2	0.73 – 1.7%
pH	48	5.72 – 11.90 (mean: 8.19)
Water Soluble SO4	39	16.2 – 1598mg/l (mean: 285mg/l)
Organic Matter	29	2.2 – 82.9% (mean: 25.7%)
Calorific Content	5	0.51 – 6.6 MJ/kg
Emery Expansion Tests	6	Change in Height: 0.22 – 1.97mm (1.16mm)

Notes:

[1] Correction for SPT hammer energy efficiency after Skempton (1986); Seed et al (1985).

[2] Correction for (N1)60 value for effective overburden pressure after Liao and Whitman (1986).

WA data only. Unable to calculate for Celtic data due to lack of SPT certificates.

SPT refusals (50+) have been excluded for the mean calculations, corrections and correlations as they are deemed unrepresentative due to very coarse constituents that were frequently encountered within this stratum. It is possible that some of the higher N-Values recorded are also due to obstructions or oversized constituents. Any subsequent correlations need to be used with caution.

12.4.1 SPT N160 values indicate very loose to dense materials (typically loose) and correlations for angle of friction (after Peck et al 1964) recorded values of between 27° and 53° (typically 33°).

12.4.2 Drained stiffness (E') for the granular materials has been derived from SPT N160 values after AASHTO 2004, which indicates values of between 0 and 42 MN/m² (on average 9 MN/m²).

12.4.3 The PSD results for these materials indicated a clayey / silty, very sandy Gravel. This differs slightly from the field descriptions which indicated high cobble content. It is likely that the cobble sized constituents have been underestimated due to sampling restrictions (i.e. it is generally not practicable to sample cobbles and boulder sized constituents for testing).

12.4.4 The range of compaction tests and natural moisture content tests for these materials indicate that these materials are generally at their optimum moisture contents.

12.5 Suspected Colliery Spoil

12.5.1 In-situ and geotechnical / geochemical laboratory tests results undertaken on the suspected colliery spoil are summarised in Table 12.4:

Table 12.4: Summary of Testing on Colliery Spoil

Type of Test	No. of Tests	Results
In-Situ Tests:		
Standard Penetration Tests (SPT)	12	N-Value: 3 – 20 (mean: 13) N160 Value: 5 – 27 (mean: 16)[1&2]
Hand Shear Vane Test	1	140kN/m2
Laboratory Tests:		
Moisture Content	18	7.1 – 21 (mean 13.6%)
Particle Size Distribution (PSD)	5	Fines: 7 – 50% (mean: 27%) Sand: 11 - 42% (mean 22%) Gravel: 38 - 63% (mean 48%) Cobbles: 0 - 19% (mean 4%)
Optimum Moisture Content	6	11 – 17% (15%)
pH	10	5.04 – 8.8 (mean: 7.2)
Water Soluble SO4	8	59 – 1965mg/l (mean: 363mg/l)
Organic Matter	3	3.9 – 33.3% (mean: 14%)
Calorific Content	6	<2 – 9 MJ/kg

Notes:
[1] Correction for SPT hammer energy efficiency after Skempton (1986); Seed et al (1985).

Table 12.4: Summary of Testing on Colliery Spoil		
Type of Test	**No. of Tests**	**Results**
[2] Correction for (N1)60 value for effective overburden pressure after Liao and Whitman (1986). WA data only. Unable to calculate for Celtic data due to lack of SPT certificates. SPT refusals (50+) have been excluded for the mean calculations, corrections and correlations as they are deemed unrepresentative due to very coarse constituents that were frequently encountered within this stratum. It is possible that some of the higher N-Values recorded are also due to obstructions or oversized constituents. Any subsequent correlations need to be used with caution.		

12.5.2 SPT N160 values indicate loose to medium dense materials (typically medium dense) and correlations for angle of friction (after Peck et al 1964) recorded values of between 29° and 36° (typically 32°).

12.5.3 Drained stiffness (E') for the granular materials has been derived from SPT N160 values after AASHTO 2004, which indicates values of between 6 and 31 MN/m² (on average 18 MN/m²).

12.5.1 The PSD results for these materials indicated a very sandy, very clayey / silty Gravel with low cobble content which is generally in line with the field descriptions. Cobble and boulder content in the field where higher but it is likely that the cobble sized constituents have been underestimated due to sampling restrictions (i.e. it is generally not practicable to sample cobbles and boulder sized constituents for testing).

12.5.2 The range of compaction tests and natural moisture content tests for these materials indicate that these materials were generally slightly dry of their optimum moisture contents.

12.6 Glacial Deposits

12.6.1 In-situ and geotechnical / geochemical laboratory tests results undertaken on the cohesive and granular Glacial Deposits are summarised in Table 12.5:

Table 12.5: Summary of Testing on Glacial Deposits		
Type of Test	**No. of Tests**	**Results**
Cohesive Glacial Till		
In-Situ Tests:		
Standard Penetration Tests (SPT)	126	N-Value: 0 – 50+ (mean: 21) N60 Value: 0 – 59 (mean: 23)[1]
Hand Shear Vane Tests	73	22 – 120kN/m2 (mean: 78kN/m2)

Table 12.5: Summary of Testing on Glacial Deposits		
Type of Test	**No. of Tests**	**Results**
Laboratory Tests:		
Moisture Content	183	7.7 – 42% (mean: 17.5%)
Particle Size Distribution (PSD)	20	Fines: 52 – 85% (mean: 74%) Clay: 24 - 38% (mean 33%) Silt: 28 - 48% (mean 40%) Sand: 12 - 48% (mean 21%) Gravel: 0 - 10% (mean 4.65%) Cobbles: 0%
Liquid Limit	26	27 – 48% (37%)
Plastic Limit	26	15 – 25% (18.6%)
Plasticity Index	26	12 – 23% (18%)
Weighted Plasticity Index	26	980 – 2139% (1654%)
Optimum Moisture Content	13	13 – 24% (16.7%)
Laboratory Hand Vane	4	Peak: 133 – 191kN/m2 (mean: 162kN/m2 Residual: 23 - 58kN/m2 (mean: 44kN/m2)
Undrained Triaxial Tests	20	22 – 226kN/m2 (mean: 103kN/m2)
Oedometer / Consolidation	12	Applied Pressure Range: 50 – 3200kPa Mv: 0.0095 – 0.37Mv (mean: 0.093Mv) Cv (t90): 0.43 – 34 (mean: 4.46m2/yr)
Organic Matter	26	0.35 – 15.5% (mean: 2.5%)
pH	50	5.63 – 8.93 (mean: 7.9)
Water Soluble SO4	47	11.6 – 739mg/l (mean: 110mg/l)
Granular Glacial Till		
In-Situ Tests:		
Standard Penetration Tests (SPT)	33	N-Value: 5 – 50+ (mean: 22) N160 Value: 7 – 47 (mean: 21)[1&2]
Laboratory Tests:		
Moisture Content	13	9.6 – 23% (mean: 17%)
Particle Size Distribution (PSD)	4	Fines: 2– 48% (mean: 35%) Sand: 29 - 98% (mean 54%) Gravel: 0 - 23% (mean 11%) Cobbles: 0%
Optimum Moisture Content	2	14 – 19% (mean: 16.5%)
Organic Matter	4	0.96 – 1.52% (mean: 1.2%)
pH	14	3.5 – 8.48 (mean: 7.94)
Water Soluble SO4	6	23 – 295mg/l (mean: 146mg/l)
Notes:		

Table 12.5: Summary of Testing on Glacial Deposits		
Type of Test	**No. of Tests**	**Results**
[1] Correction for SPT hammer energy efficiency after Skempton (1986); Seed et al (1985). [2] Correction for (N1)60 value for effective overburden pressure after Liao and Whitman (1986). WA data only. Unable to calculate for Celtic data due to lack of SPT certificates. SPT refusals (50+) have been excluded for the mean calculations, corrections and correlations as they are deemed unrepresentative due to very coarse constituents that were frequently encountered within this stratum. It is possible that some of the higher N-Values recorded are also due to obstructions or oversized constituents. Any subsequent correlations need to be used with caution.		

12.6.2 Relationships between Plasticity Index (PI) and SPT N60 values (cu = α'N60, Salgado 2008; α'= 0.0599 for a PI of 18.11%) for the Cohesive Glacial Till indicates undrained shear strength values of between 0 and 351kN/m² (average of 123kN/m²), which is indicative of extremely low strength to very high strength materials (on average high strength).

12.6.3 Similarly, the undrained shear strength values from in-situ hand shear vane, undrained triaxial tests and laboratory vane tests indicate cohesive Glacial Till undrained shear strength values of between 22 and 226kN/m² (average of 133kN/m²), which is indicative of low to very high strength (generally high strength).

12.6.4 The results from the Atterberg Limit tests for the cohesive Glacial Till indicates materials of low to intermediate plasticity (typically intermediate plasticity), with the plasticity index results indicating materials of low to medium shrinkage potential (generally low shrinkage potential). The weighted plasticity index results indicate materials of very low to low volume change potential (generally low volume change potential).

12.6.5 Relationships between PI and angle of friction (Gibson 1953) for the Cohesive Made Ground indicates an angle of friction of between 30° and 33° (average of 31°).

12.6.6 Drained stiffness (E') for the Cohesive Glacial Till has been derived from SPT N60 values after Stroud 1989, which indicates values of between 0 and 53 MN/m2 with a mean of 19 MN/m2.

12.6.7 Undrained stiffness (Eu) for the Cohesive Glacial Till has been derived from SPT N60 values after Butler, 1975, which indicates values of between 0 and 59 MN/m2 with a mean of 21 MN/m2.

1.3.3 Coefficient of volume compressibility (mv) for the Cohesive Made Ground has been derived based on relationships with plasticity and SPT N60 values (mv = 1/f2N, Stroud 1975; f2=0.576 for PI of 18.11%) with values ranging from 0.03 – 2.13 m^2/MN (very low to very high compressibility) with an average of 0.14 m^2/MN (medium compressibility). The mv from the laboratory consolidation testing recorded values ranging from 0.0095 – 0.37 m^2/MN (very low to high compressibility) with an average of 0.093 m^2/MN, which is indicative of low compressibility. The laboratory consolidation tests are considered to be more accurate.

12.6.8 The PSD results for these materials indicated a slightly sandy, slightly gravelly Clay which is generally in line with the field descriptions. High silt contents were noted but this is not uncommon with overconsolidated Glacial Till, and the clay fraction was noted to dominate the engineering behaviour of these soils.

12.6.9 The range of compaction tests and natural moisture content tests for these materials indicate that these materials are generally slightly wet of their optimum moisture contents. However, only those materials at shallow depth would need to be considered as part of any earthworks exercise at the site.

12.6.10 SPT N160 values indicate loose to dense materials (typically medium dense) and correlations for angle of friction (after Peck et al 1964) recorded values of between 29° and 42° (typically 34°).

12.6.11 Drained stiffness (E') for the granular materials has been derived from SPT N160 values after AASHTO 2004, which indicates values of between 7 and 45 MN/m² (on average 20 MN/m²).

12.6.12 The PSD results for these materials indicated a gravelly, clayey / silty Sand which is generally in line with the field descriptions.

12.6.13 The range of compaction tests and natural moisture content tests for these materials indicates that these materials were normally wet (generally only slightly) of their optimum moisture contents.

12.7 Geotechnical Design Parameters

12.7.1 Geotechnical design parameters for the principal ground conditions encountered at the site are outlined in Table 12.6. Due to the high degree of variability exhibited by the Made Ground and that the site is a historic landfill, characteristic design values

have not been provided for the Made Ground types and reference should be made to the range of results noted above.

12.7.2 The geotechnical design parameters tabulated in Table 12.6 and any correlations should be used with caution and should not be relied upon in isolation without considering the reporting in full.

Table 12.6: Summary of Geotechnical Design Parameters

Stratum	Material Parameter	Range of Results (Average)	Characteristic Value	Rationale
Cohesive Glacial Deposits	Bulk Unit Weight (kN/m3)	-	22	Literature value, based on descriptions
	Undrained Shear Strength (kN/m²)	5 – 351 (120)	60 – 100	Cautious estimate from empirical relationship with SPT N60 (Salgado 2008) hand shear vane tests, laboratory tests and field descriptions.
	Angle of Friction ϕ' (°)	30 – 33 (31)	31	Cautious estimate from empirical relationship with plasticity index (Gibson 1953)

Table 12.6: Summary of Geotechnical Design Parameters				
Stratum	**Material Parameter**	**Range of Results (Average)**	**Characteristic Value**	**Rationale**
	Drained Stiffness (E') (MN/m2)	0 – 53 (19)	19	Cautious estimate from empirical relationship with SPT N (Stroud 1989)
	Undrained Stiffness (Eu) (MN/m²)	0 – 59 (21)	21	Cautious estimate from empirical relationship with SPT N (Butler 1975)
	Coefficient of volume compressibility mv	0.0095 – 2.13 (0.12)	0.10 – 0.15	Cautious estimate from empirical relationship with SPT N60 (Stroud and Butler 1975) and laboratory testing.
Granular Glacial Deposits	Bulk Unit Weight (kN/m3)	-	20	Literature value, based on descriptions
	Angle of Friction ϕ' (°)	29 – 42 (34)	31 - 34	Cautious estimate from empirical relationship with SPT N160 (Peck et al 1974)
	Drained Stiffness (E') (MN/m2)	7 – 45 (20)	14	Cautious estimate from empirical relationship with SPT N160 (AASHTO 2004)

Table 12.6: Summary of Geotechnical Design Parameters				
Stratum	**Material Parameter**	**Range of Results (Average)**	**Characteristic Value**	**Rationale**
Collyhurst Sandstone Formation & Chester Formation	Bulk Unit Weight (kN/m3)	-	22 - 25	Cautious estimate from literature data
	Rock Quality Designation	0 – 30% (9%)	0 – 10%	Rock Quality Designation from core logging.

13 GENERIC QUANTITATIVE RISK ASSESSMENT – HUMAN HEALTH

13.1 General

13.1.1 A total of 181 No. samples were taken from across the site and tested for potential contaminants appropriate to the site's current and former land uses. This included 91 No. samples from the WA 2020 investigation and 90 No. samples from the WA 2022 site investigation. 146 No. soil samples from across the site were also tested as part of the Celtic 2007 investigation.

13.1.2 The WA samples taken were tested for potential contaminants appropriate to the site's current and former land uses. As the receptor is human health, the most relevant risk assessment model for the assessment of human health is the CLEA model. The model estimates child and adult exposures to soil contaminants via dermal, ingestion and inhalation pathways for those potentially living, working and / or playing on contaminated sites over long time periods and has been used to derive Generic Assessment Criteria (GAC) for those commonly encountered contaminants in UK soils.

13.1.3 For the purposes of this updated Generic Quantitative Risk Assessment (GQRA) contaminant concentrations recorded from the WA 2020 and 2022 WA site investigations have been compared with GAC's for a residential end use with private gardens, as most of the site is being considered for residential development and this also provides an initial conservative assessment for the proposed school. This first tier of assessment determines if the concentrations recorded have the potential to adversely impact those human health receptors identified within the CSM.

13.1.4 The Celtic data has been reviewed independently from the more recent WA dataset and these findings are outlined in Section 8. Comparisons have been made between the datasets where relevant, but it is the WA data that has primarily been relied upon to undertake the updated assessments, as this information is reflective of current site conditions.

13.2 Assessment Criteria

13.2.1 The GAC considered appropriate for GQRA and used in this assessment, in general order of preference, in accordance with the EA Land Contamination Risk Management (LCRM) guidance, include:

- Category 4 Screening Levels (C4SL), screening values for chronic exposure to soil contamination published by DEFRA, 2014;
- Suitable for Use Levels (S4UL), screening values for chronic exposure to soil contamination published by LQM/CIEH, 2015;
- Acute Generic Assessment Criteria (AGAC), screening values for acute exposure to soil contamination published by SoBRA, 2020; and
- Generic Assessment Criteria for Assessing Vapour Risks (GACgwvap), screening values for chronic exposure to groundwater contamination published by SoBRA, 2017.

13.2.2 Potential for contaminants to be dissolved in groundwater at the site has also been identified in the CSM. This contamination has the potential to volatilise and affect human health through inhalation of vapours indoors and outdoors. Work has been undertaken by the Society of Brownfield Risk Assessment (SoBRA) to produce a series of screening values to assess the potential significance of dissolved contaminants in groundwater beneath a site.

13.2.3 SoBRA have also produced useful assessment criteria for a number of potential contaminants which consider risk to human health from acute (short term) exposure. While risk to human health is usually more sensitive to chronic exposure to potential contaminants (and therefore assessment using criteria which are protective against chronic exposure will also be protective against acute exposure), where acute exposure is considered the most sensitive route appropriate criteria are employed.

13.2.4 The soil samples obtained for subsequent chemical analysis have not been sampled on a systematic basis and, as such, the dataset is not suitable for statistical analysis in accordance with CL:AIRE (2020) Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration.

13.2.5 Generally, only soils and groundwater within the top c. 1.0m are considered for site users, as the probability of human exposure via the direct contact pathways are significantly reduced, leaving inhalation of volatile compounds as the dominant pathway with regard to human health risks. However, the final depth below the proposed development levels is unknown at this stage and as earthworks and cut and fill are likely to be undertaken at the site, as part of the proposed development,

consideration has also been given to deeper soils and groundwaters at this GQRA stage.

13.2.6 The geometric mean soil organic matter (SOM) content for all the Made Ground strata at the site is 13.2%. However, organic materials that are not degradable (e.g. ash and coal) were noted within all the Made Ground strata and these could have resulted in high total organic carbon contents that are not indicative of SOM. Consequently, a conservative approach has been adopted and GAC values have been derived using 1% SOM. The pH of these soils ranged from 5.43 in TP227 at 1.0m to 12.8 in TP139 at 1.50m.

13.2.7 The mean SOM content for those natural soils at the site is 2.4%. However, GAC values derived using the 1% SOM have been selected in the first instance, so that a conservative assessment can be undertaken. The pH of these soils ranged from 5.63 in TP136 at 0.8m bgl to 8.93 in RH205 between 11.0m and 12.0m bgl.

13.2.8 Any exceedance of the adopted GAC value for a particular Contaminant of Concern (CoC) may indicate that additional risk assessment is necessary or that some sort of remediation may be required.

13.3 Screening of Soils

13.3.1 A summary of the exceedences of the GAC for a residential end use with private gardens from both the 2020 and 2022 WA datasets are presented in Table 13.1. A summary of exceedences from the 2007 Celtic dataset are summarised separately in Table 8.1. A summary of the exceedences in relation to each strata type is outlined further in Section 16.

13.3.2 Specific details regarding the location, depth, contaminant concentrations and strata for each exceedance are included within Appendix I and the analytical laboratory results of the soil and groundwater chemical analyses are attached at Appendix H.

Table 13.1: Summary of Contaminant Exceedances (WA 2020 & 2022)

Contaminant	Min. Recorded (mg/kg)	Max. Recorded (mg/kg)	GAC (mg/kg)	No. of Exceedances MG	No. of Exceedances NG
Metals					
Chromium VI	<0.6	26	21[1]	1	0
Arsenic	2.16	1,930	37[1]	19	1
Beryllium	0.213	4.87	1.7	10	0

Table 13.1: Summary of Contaminant Exceedances (WA 2020 & 2022)					
Contaminant	**Min. Recorded (mg/kg)**	**Max. Recorded (mg/kg)**	**GAC (mg/kg)**	**No. of Exceedances MG**	**No. of Exceedances NG**
Cadmium	<0.02	37.4	22	1	0
Copper	6.9	9,990	2400	3	0
Lead	4.98	28,700	200[1]	53	1
Nickel	2	535	130	10	0
Zinc	15.7	7290	3700	3	0
Inorganics					
Total Cyanide	<1	499	20[2]	10	0
TPH including BTEX					
Aliphatics >C8-C10	<0.01	703	27	1	0
Aromatics >EC8-EC10	<0.01	469	34	1	0
Aromatics > EC10-EC12	<1	6,110	74	3	0
Aromatics > EC12-EC16	<1	5,210	140	6	0
Aromatics > EC16-EC21	<1	10,900	260	9	0
Aromatics > EC21-EC35	<1	17,800	1,100	6	0
Aromatics > EC35-EC44	<1	1,680	1,100	1	0
Benzene	<0.009	2.74	0.0087	1	0
p/m-Xylene	<0.01	219	56	1	0
o-Xylene	<0.01	114	60	1	0
PAH					
Naphthalene	<0.009	13,100	2.3	27	1
Acenaphthylene	<0.012	315	170	1	0
Acenaphthene	<0.008	341	210	1	0
Fluorene	<0.01	656	170	2	0
Phenanthrene	<0.015	1550	95	6	0
Fluoranthene	<0.017	1290	280	5	0
Pyrene	<0.015	1120	620	1	0
Benz(a)anthracene	<0.014	432	7.2	31	2
Chrysene	<0.01	432	15	15	0
Benzo(b)fluoranthene	<0.015	461	2.6	56	2
Benzo(k)fluoranthene	<0.014	173	77	3	0
Benzo(a)pyrene	<0.015	376	2.2	67	2
Indeno(1,2,3-cd)pyrene	<0.018	255	27	7	0
Dibenzo(a,h)anthracene	<0.023	51.6	0.24	60	2
SVOC and VOC					
Pentachlorophenol	<0.1	<5	0.22	1	0
Dibenzofuran	<0.1	114	4.8[4]	3	0

Table 13.1: Summary of Contaminant Exceedances (WA 2020 & 2022)					
Contaminant	**Min. Recorded (mg/kg)**	**Max. Recorded (mg/kg)**	**GAC (mg/kg)**	**No. of Exceedances MG**	**No. of Exceedances NG**
Carbazole	<0.1	64.8	6.7[4]	2	0
2-Methylnaphthalene	<0.1	97.4	10[4]	1	0
1,2,4-Trimethylbenzene	<0.009	1.8	0.35[3]	2	0
Trichloroethene	<0.009	1.8	0.016[1]	1	0
PCB's					
PCB congener 28	<0.003	0.388	0.008[5]	6	0
PCB congener 52	<0.003	0.492	0.008[5]	7	0
PCB congener 101	<0.003	0.523	0.008[5]	6	0
PCB congener 118	<0.003	0.275	0.008[5]	6	0
PCB congener 138	<0.003	0.298	0.008[5]	6	0
PCB congener 153	<0.003	0.224	0.008[5]	5	0
PCB congener 180	<0.003	<0.150	0.008[5]	3	0
Asbestos					
Positive Asbestos ID	-	-	-	21	2
Asbestos Quantification	<0.001%	5.11%	0.001%	11	1

Notes:
MG = Made Ground, NG = Natural Ground
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014). [2] Value for thiocyanate [3] EIC/AGS/CL:AIRE Soil GAC for Human Health Assessment (January 2010). [4] Wardell Armstrong derived GAC. [5] Environment Agency Soil Guideline Values for dioxins, furans and dioxin-like PCBs in soil.

13.3.3 Most of the recorded concentrations for those other SVOC's and VOCs were either at concentrations that were below their respective screening criteria and / or were recorded at concentrations below the limits of detection (LOD). While the screening values for some of the contaminants were below the LOD (which was raised in some samples), in the absence of any positive concentrations above the screening value, the concentrations (if present) are likely to be low and not pose an unacceptable risk.

13.3.4 Exceedences of 2,4-Dinitrotoluene, Chloromethane and 2,4-Dimethylphenol were noted within the 2007 Celtic dataset, but due to their volatile nature and the absence of these contaminants above the screening values and / or below the LOD in the more recent WA dataset, these concentrations are not considered to be reflective of current site conditions.

Metals and Metalloids

13.3.5 Lead exceedences are indicated to be widespread across the site and are predominantly associated with the shallow (<3.0m bgl) suspected combustion type wastes and suspected construction and demolition type wastes. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 7 No. samples recorded concentrations at one order of magnitude greater than the screening value and 2 No. samples (TP114 at 3.4m and TP242 at 2.5m) recorded concentrations at two orders of magnitude above the screening value.

13.3.6 Arsenic exceedences are indicated to be localised to within the north western, south western, and south eastern sections of the site, but also at relatively isolated locations within the north eastern section of the site. They are predominantly associated with the shallow (<3.0m bgl) suspected combustion type wastes. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 3 No. samples (TP108 at 2.3m, TP128 at 3.6m and TP139 at 1.5m) were recorded at one order of magnitude greater than the screening value and a single sample (TP126 at 0.5m) was recorded at two orders of magnitude above the screening value.

13.3.7 Beryllium exceedences are indicated to be localised to within the north western section of the site and to a lesser extent at isolated locations within the central and north eastern sections of the site. They are predominantly associated with the shallow (<3.0m bgl) suspected combustion type wastes. Concentrations were recorded at the same order of magnitude as the screening value.

13.3.8 Nickel exceedences are indicated to be localised to within the central western section of the site and to a lesser extent to isolated locations within the north western section of the site. They are predominantly associated with the shallow (<3.0m bgl) suspected construction and demolition type wastes. Concentrations were recorded at the same order of magnitude as the screening value.

13.3.9 Copper exceedences are indicated to be relatively localised to within the central southern section of the site and at an isolated location within the north western section of the site. They are predominantly associated with the shallow (<3.0m bgl) suspected construction and demolition type wastes. Concentrations were recorded at the same order of magnitude as the screening value.

13.3.10 Zinc exceedences are indicated to be relatively localised to within the central southern section of the site and are predominantly associated with the shallow (<3.0m bgl) suspected construction and demolition type wastes. Concentrations were recorded at the same order of magnitude as the screening value.

13.3.11 Chromium VI and cadmium exceedences are restricted to individual locations (CP106 at 1.8m and TP231 at 0.6m) within suspected combustion waste and cohesive Made Ground, respectively. Concentrations were recorded at the same order of magnitude as the screening value.

13.3.12 Arsenic and lead exceedences were also restricted to a single location within natural cohesive strata / possibly reworked natural ground (WS102 at 2.8m). Concentrations were only marginally above the screening values.

13.3.13 Multiple exceedances of arsenic and lead and rare exceedences of nickel where noted within the Made Ground from the Celtic 2007 dataset. For these determinands similar trends were observed, except that the arsenic and lead exceedences were predominantly associated with cohesive Made Ground. Rather than being localised, nickel was restricted to isolated locations within the central north eastern section of the site.

Cyanide

13.3.14 Cyanide (total cyanide) exceedances are indicated to be relatively localised to within the north western section of the site, but also occurs at relatively isolated locations within the central section of the site. It is predominantly associated with the shallow (<3.0m bgl) suspected combustion wastes and the cohesive Made Ground. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 2 No. samples (TP108 at 2.3m and TP139 at 2.4m) were recorded at one order of magnitude above the screening value.

A reduced number of total cyanide exceedences within Made Ground where noted from the Celtic 2007 dataset. Similar trends were observed, except that there was a single exceedence recorded in one sample from natural cohesive strata (possibly reworked ground).

Total Petroleum Hydrocarbons

13.3.15 Aromatics > EC16-EC21 are indicated to be relatively localised to within the north western section of the site, but also occur at relatively isolated locations within the

south western and easternmost sections of the site. They are predominantly associated with the shallow (<3.0m bgl) cohesive Made Ground. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 2 No, samples (TP126 at 0.5m and TP139 at 2.4m) were recorded at one order of magnitude above the screening value and a single sample (WS309 at 3.2m) was recorded at two orders of magnitude above the screening value.

13.3.16 Aromatics > EC21-EC35 are indicated to be relatively isolated to within the western and eastern sections of the site and are predominantly associated with the shallow to intermediate (<4.2m bgl) suspected combustion wastes, suspected construction and demolition waste and the cohesive Made Ground. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 2 No. samples (WS309 at 3.2m and TP117 at 4.2m) were recorded at one order of magnitude above the screening value.

13.3.17 Aromatics > EC12-EC16 are indicated to be relatively isolated within the western and north eastern sections of the site and are predominantly associated with the shallow to intermediate (<4.2m bgl) cohesive Made Ground and the suspected combustion wastes. Concentrations were typically recorded at the same order of magnitude as the screening value. However, 2 No. samples (TP117 at 4.2m and TP139 at 2.4m) were recorded at one order of magnitude above the screening value.

13.3.18 Aromatics > EC10-EC12 are indicated to be restricted to isolated locations within the western and north eastern sections of the site and are predominantly associated with the shallow to intermediate (<4.2m bgl) suspected combustion wastes, cohesive Made Ground and suspected construction and demolition waste. Concentrations ranged from the same order of magnitude as the screening value at WS309 to two orders of magnitude above the screening value at TP139.

13.3.19 The other TPH fractions (aliphatic >C8-C10, aromatic <EC8-10 and aromatic EC35-44) are restricted to individual locations (TP139 at 2.4m and WS309 at 3.2m) within the north western sections of the site and are predominantly associated with the shallow suspected combustion waste. Aliphatic >C8-C10 and aromatic <EC8-10 were recorded at one order of magnitude above the screening value. Aromatic > EC35-EC44 was recorded at the same order of magnitude as the screening value.

13.3.20 A reduced number of TPH exceedences within Made Ground were noted from the Celtic 2007 dataset and only included exceedences of aromatics > EC16-EC21 and

aromatics > EC21-EC35. Similar trends were observed, except that that they were predominantly associated with the cohesive Made Ground.

Polycyclic Aromatic Hydrocarbons (PAH)

13.3.21 PAH compounds are typically formed as a result of pyrolytic processes, especially the incomplete combustion of organic materials (e.g. ash, clinker etc) or can be present within petroleum hydrocarbon substances (e.g. oils, greases etc).

13.3.22 PAH contamination (notably naphthalene, benz(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and dibenzo(a,h)anthracene) are indicated to be widespread across the site and are predominantly associated with the shallow (<3.0m bgl) suspected combustion wastes within the western section of the site and suspected construction and demolition wastes within the central and eastern sections of the site. Concentrations were typically recorded at the same order of magnitude as the screening value, but were also frequently recorded at between one and two orders of magnitude greater than the screening value. The greatest exceedences were typically noted within the suspected combustion wastes.

13.3.23 Indeno(1,2,3)pyrene, fluoranthene and phenanthrene exceedences were localised to within the western and north eastern sections of the site and are predominantly associated with the shallow to intermediate (<4.2m bgl) suspected combustion wastes. Concentrations were typically recorded at the same order of magnitude as the screening value but were also frequently recorded at one order of magnitude greater than the screening value. A single sample (TP117) was recorded at two orders of magnitude greater than the screening value.

13.3.24 The other PAH exceedences (benzo(k)fluoranthene, pyrene, acenaphthylene, acenaphthene and fluorene) were isolated and restricted to individual locations (TP117 at 4.2m, TP139 at 2.4m and WS309 at 3.2m) within the north western and north eastern sections of the site. Concentrations were recorded at the same to one order of magnitude greater than the screening values.

13.3.25 Those PAH compounds recorded within natural ground (possibly reworked ground) were isolated and restricted to a single location (WS102 at 2.8m). Concentrations were typically recorded at the same order of magnitude as the screening value.

13.3.26 A reduced number of PAH exceedences were noted from the Celtic 2007 dataset and this included exceedences for naphthalene, benz(a)anthracene, chrysene,

benzo(b)fluoranthene, benzo(a)pyrene and dibenzo(a,h)anthracene. For these determinands similar trends were observed, except that they were predominantly associated with cohesive and granular Made Ground, concentrations were generally lower and that fewer exceendences were recorded within the central sections of the site. The differences can likely be explained by how the soils were logged and that areas were likely inaccessible at the time of the Celtic site investigation. An increased number of exceedences were also noted from natural cohesive strata (possibly reworked ground), but these were still relatively isolated to specific locations.

Benzene, Toluene, Ethylbenzene and Xylene (BTEX)

13.3.27 BTEX exceedences (benzene, p/m-xylene and o-xylene) are indicated to be isolated and restricted to a single location (TP139 at 2.4m) within the north western section of the site and within the suspected combustion type wastes. Concentrations were recorded at one to two orders of magnitude greater than the screening value.

13.3.28 It should be noted that most of the samples tested for BTEX were recorded below their LOD (which was raised in some samples) and, in these instances, this was greater than the screening value. As positive exceedences have been noted a conservative approach is warranted and it is possible that other unrecorded benzene exceedences may be present.

13.3.29 No BTEX exceedences were recorded from the 2007 Celtic dataset.

Semi Volatile and Volatile Organic Compounds

13.3.30 Dibenzofuran is indicated to be relatively isolated to within the north eastern and the north western sections of the site and was predominantly encountered at shallow to intermediate depths (<4.2m bgl) and within a variety of Made Ground types. Concentrations ranged from the same order of magnitude to two orders of magnitude greater than the screening value.

13.3.31 The other VOC and SVOC exceedences are indicated to be isolated and are generally restricted to specific locations within the north eastern, north western and south eastern sections of the site. The exceedences generally occurred at shallow depth to intermediate depth (<4.2m bgl) and were predominantly encountered within the suspected construction and demolition wastes. Concentrations were typically recorded between one and two orders of magnitude greater than the screening values.

13.3.32 Regular PID testing was also undertaken during the 2020 WA investigation and only very low concentrations (between 0.0ppm and 13.8pmm) were recorded from soils which generally supports the observations noted above. The PID results can be found in Appendix L.

13.3.33 12 No. Membrane Interface Probe (MIP) tests were undertaken as part of the WA 2021 investigation, which indicated some form of VOC contamination that was localised to the north western and central south western sections of the site as shown in Drawing LD10385 – 024. The result can be found in Appendix Q.

13.3.34 Similar trends were observed from the 2007 Celtic dataset except that exceedances of 2,4-Dinitrotoluene, Chloromethane and 2,4-Dimethylphenol were also noted and that they occurred within a more varied range of strata types, which included one sample from natural cohesive strata (possibly reworked ground). No exceedances of pentachlorophenol or 1,2,4-Trimethylbenzene were noted.

Polychlorinated Biphenyls (PCB)

13.3.35 PCB exceedences are indicated to be localised to within the central section of the site and are predominantly associated with the shallow (<3.0m bgl) to deeper (>5.0m bgl) suspected construction and demolition wastes. Concentrations were typically recorded at one order of magnitude greater than the screening value. However, 9 No. samples were also recorded at two orders of magnitude greater than the screening value.

13.3.36 It should be noted that most of the samples tested for PCB's were recorded below their LOD (which was raised in some samples) and in these instances this was greater than the screening value. As positive exceedences have been noted a conservative approach is warranted and it is possible that other PCB exceedences may be present. It should be noted that the screening value used is already conservative, as it is the sum is the sum of Dioxins, Furans and Dioxin-Like PCBs and assumes a typical mixture that will be worse than the PCB congeners recorded at the site.

Asbestos

13.3.37 Possible ACMs were encountered during the site investigation works as outlined in Section 11. A total of 129 No. samples were screened for asbestos and a summary of results where asbestos was confirmed by laboratory analysis is provided in Table 13.2.

Table 13.2: Summary of Asbestos Identified				
Location	**Depth (m)**	**Strata**	**Type & Comments**	**Quantification**
CP103	2.00 – 3.00	MGC	Chrysotile & Crocidolite – fibre bundles and ACM debris in soil	0.0046%
CP107	4.50	MGG	Amosite – soil containing ACM debris	-
CP109	7.50	MG-CDW	Chrysotile & Amosite – fibre bundle and material typical of asbestos cement debris in soil	5.11%
CP202	6.70	MGG	Chrysotile – fibre bundle in soil	<0.001%
RH203	4.00 – 5.00	MG-CDW	Chrysotile – fibre bundle in soil	<0.001%
TP102	1.60	MG-CDW	Chrysotile – soil containing material typical of asbestos paper	0.279%
TP104	1.80	MG-CDW	Chrysotile – loose fibres in soil	-
TP126	0.50	MG-CW	Chrysotile – fibres in soil	<0.001%
TP138	1.60	MG-CDW	Chrysotile – soil containing ACM debris.	-
TP149	0.50	MG-CW	Chrysotile – loose fibres in soil	<0.001%
TP203	1.00	MGC	Chrysotile & Amosite – fibre bundle in soil	0.0607%
TP203	2.90	MG-CDW	Chrysotile & Amosite – ACM debris in soils	<0.001%
TP204	2.50	MGC	Chrysotile – loose fibres in soil	<0.001%
TP207	3.00	MG-HW	Chrysotile – ACM debris in soil	0.0173%
TP211	1.80	MGC	Chrysotile – fibre bundles in soil	<0.001%
TP212	1.50	MG-CW	Amosite – loose fibres in soil	0.0031%
TP224	1.40	MG-CDW	Amosite – loose fibre in soil	0.0053%
TP229	3.00	MG-CDW	Chrysotile & Crocidolite – loose fibres in soil	0.0489%
TP239	1.40	MGC	Chrysotile – fibre bundle in soil	<0.001%
TP242	2.50	MGG	Amosite – ACM fragment in soil	<0.001%
TP245	2.00	MG-CDW	Chrysotile & Amosite – loose fibres in soil	0.0647%
TP249	1.50	MG-HW	Chrysotile & Crocidolite – fibre bundle in soil	0.0019%
TP251	2.00	MGC	Chrysotile – ACM debris in soil	<0.001%
WS310	2.80	MGC	Crocidolite – fibre bundle in soil	<0.001%
WS311	1.40	MGC	Amosite – fibre bundles in soil	0.0199%
WS112	0.90	MG-CW	Chrysotile – ACM debris in soil	0.109%
Notes:				

Table 13.2: Summary of Asbestos Identified				
Location	**Depth (m)**	**Strata**	**Type & Comments**	**Quantification**
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste				

13.3.38 Asbestos fibre concentrations above the human health screening value of 0.001% were generally localised to within the central south western section of the site and to a lesser extent the central north eastern section of the site. Exceedences were predominantly associated with the shallow (<3.0m bgl) suspected construction and demolition type wastes. Concentrations were typically recorded at the same or one order of magnitude greater than the screening value. However, 2 No. samples (TP102 at 1.6m and WS112 at 0.9m) were recorded at two orders of magnitude greater than the screening value and a single sample (CP109 at 7.5m) was recorded at three orders of magnitude greater than the screening value.

13.3.39 No asbestos was identified as part of the 2007 Celtic site investigation, but this is likely due to a change in laboratory analytical techniques and / or the techniques not being as accurate / sensitive at the time that these tests were undertaken.

13.4 Assessment of Vapours – Soils (Human Health)

13.4.1 Based on the ground conditions and contamination encountered it is anticipated that soil vapours could pose a risk to those identified receptors and that this may need to be dealt with by the inclusion of passive vapour protection measures in new buildings, which is line with third party assessments, and / or by source reduction (e.g. remediation of heavily impacted soils). However, further detailed risk assessment will be required in line with current guidance to specify the precise requirements for vapour protection / remediation and this is discussed further at the DQRA stage. Ultimately, the final choice for mitigation will be in conjunction with specialist remediation contractors and will be subject to agreement with relevant regulators.

13.5 Assessment of Vapours – Groundwater (Human Health)

13.5.1 Chemical contaminants in groundwater can volatilise into soil gas and migrate through unsaturated soils upward into overlying buildings through cracks and gaps in the building floors, foundations etc. The vertical screening distance is the minimum thickness of unsaturated zone between a vapour source and the overlying building

foundation (i.e. vertical separation distance) as defined in guidance document Petroleum Vapour Intrusion, ITRC, 2014).

13.5.2 Several empirical studies have defined vertical screening distances for petroleum hydrocarbon compounds in dissolved phase groundwater sources. The vertical screening distance used to derive the Groundwater Vapour GAC by SOBRA in 2017 is relatively shallow with the depth to source assumed to be 0.65m bgl.

13.5.3 Concentrations of volatile contaminants in groundwater from the WA 2020 & 2022 site investigation have been screened against residential end use GAC for assessing vapour risks to human health from volatile contaminants in groundwater (SOBRA 2017). A summary of the recorded groundwater volatile vapour exceedances is provided in Table 13.3.

Table 13.3: Groundwater Vapour Exceedences

Determinand	Location (Date)	Response Zone m bgl	Groundwater Body Screened	SoBRA GACgwvap (µg/l)	Recorded Concentration µg/l
TPH Aliphatic Fraction C10-C12	CP109 (2020)	9.00 – 13.00	MG	37	117
	CP109 (2022)	9.00 – 13.00	MG	37	81
Notes: MG = Perched Groundwaters within Made Ground					

13.5.4 The sample was obtained from a response zone that screened deep perched waters within the Made Ground (between 9.00m and 13.00m bgl) and a potentially significant risk is only envisaged if foundations were to extend to within 0.65m of the source (i.e. vertical screening distance noted above) or if the source area was more widespread. Additional consideration will to be given to the potential vapour risk represented by dissolved concentrations of aliphatic C10-C12 TPH in the further vapour DQRA works that will be requried.

13.5.5 The remainder of the volatile contaminants were recorded below their respective LOD and / or screening criteria. While some screening values were below the raised limit of detection applied to some samples, in the absence of any positive exceedences, the concentrations are considered likely to be low and to not pose an unacceptable risk.

13.6 Assessment of Contamination – Groundwater (Human Health)

13.6.1 Based on the groundwater conditions encountered and the seepage within the central southern section of the site, it is anticipated that shallow perched groundwaters within the Made Ground could pose a risk to those identified receptors. However, due to the intermittent nature of the seepage any long-term exposure to these contaminated waters is unlikely and the risk is slightly to be significantly reduced or removed following development of the site.

13.7 Human Health Risk Assessment – Construction Workers

13.7.1 The CLEA Soil Guideline Values only apply to the protection of health for long term chronic exposure. Construction workers are more likely to be at risk from a high single exposure (i.e. an acute dose, which can result in contaminant poisoning). Procedures for the calculation of for acute lethal doses are outlined in SoBRA 'Development of Acute Generic Assessment Criteria for Assessing Risks to Human Health from Contaminants in Soil' dated April 2019.

13.7.2 None of the samples contained concentrations of arsenic, benzene, cadmium, free cyanide, phenol, trichloroethene and vinyl chloride that were elevated with respects to an acute lethal dose. No acute lethal dose value is given for lead.

13.7.3 Under CDM Regulations 2015 and the Health and Safety at Work Act (1974) appropriate PPE will be required for all construction workers. At the very least, this would reduce any dermal and ingestion pathways and will help to mitigate any risk.

Asbestos

13.7.4 Groundworks may be carried out at different phases of a site development including enabling works, site preparation or installation of underground services. These activities typically generate some soil derived dusts and construction arisings. If soil derived dusts are generated in areas containing asbestos in soil, then respirable asbestos fibres may be released into the air which pose a risk to human health.

13.7.5 As possible ACM's and low to high concentrations of asbestos fibres have been detected in Made Ground across the site (between 0.0018% and 5.11%), it is considered necessary for an asbestos management plan (AMP) to be developed, to fully detail how soils impacted with asbestos can be dealt with, in accordance with the Control of Asbestos Regulation 2012 (CAR 2012), and to protect construction workers and the public from exposure to asbestos fibres during the redevelopment works. The

presence of potential ACM will need to be considered when determining the correct work category and need for mitigation to comply with CAR 2012 in developing the AMP for the site works.

13.7.6 It is recommended that a watching brief for ACM is maintained during groundworks across the site, particularly within the suspected construction and demolition type waste that are present within the central sections of the site. Where possible the groundworks on site should be designed and planned to minimise the exposure of workers to contaminated soil and to minimise potential generation of airborne fibres. This should be considered in the Health and Safety plan under the CDM Regulations and include appropriate method statements and risk assessments prior to undertaking any works at the site (i.e. remedial / earthworks / construction works) that could generate airborne fibres from contaminated soils.

13.7.7 Where risks cannot be removed entirely at the planning stage, mitigation measures should include procedures to control the potential release of asbestos fibres during groundworks at the site (e.g. damping down haul roads, stockpiles and excavations, as requried) and the use of PPE including gloves and respiratory facemasks to protect groundworks. All mitigation measures incorporated during the remedial works / earthworks / construction works as outlined above, should be in accordance with requirements in CAR 2012 and the AMP which will be developed for the site.

13.8 Free Product in Soils

13.8.1 Hydrocarbon odours and staining to soils were frequently noted across the site during both the WA and Celtic site investigation works as outlined in Section 11 and section 8, respectively. Multiple exceedences of the soil saturation concentrations for Aliphatics >C12-C44 were also noted from the laboratory results, as shown in Table 13.4:

Table 13.4: Summary of Soil Saturation Concentrations (WA 2020 & 2022)				
Contaminant	**Min. Recorded (mg/kg)**	**Max. Recorded (mg/kg)**	**GAC_S (mg/kg)**	**No. of Exceedances**
Aliphatics >C12-C16	<1	276	24	17
Aliphatics >C16-C21	<1	773	8.48	38
Aliphatics >C21-C35	<1	3590	8.48	82
Aliphatics >C35-C44	<1	1610	8.48	43
Notes: $_S$ Soil Saturation Limits; LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015).				

13.8.2 It should be noted that an exceedence of the soil saturation limit only indicates that the theoretical concentration at which pore water has become fully saturated has been exceeded. Under these conditions there is the potential for NAPL / free product to be present, but there are numerous other site-specific factors that need to be considered.

13.8.3 As part of the WA 2021 investigation, 48 No. Optical Image Profiler (OIP) tests were undertaken across the site to delineate possible NAPL / hydrocarbon fuels / oils. 14 No. OIP "blips" were recorded predominantly within the suspected combustion wastes within the north western and south eastern sections of the site and the suspected construction and demolition type wastes within the central and southern sections of the site; both of which are shown in Drawing LD10385-024. The result can be found in Appendix Q.

13.8.4 Frequent groundwater level monitoring has also been undertaken using a product / water interface probe in areas where visual and olfactory evidence of contamination has been recorded, where OIP "blips" have been recorded and where exceedences of the soil saturation limits have been recorded. No NAPL or free product was detected with the interface probe nor was any visual evidence of free product recorded during development, purging and groundwater sampling. Celtic also state that no NAPL was encountered during their works.

14 GENERIC QUANTITATIVE RISK ASSESSMENT – CONTROLLED WATERS

14.1 General

14.1.1 Four rounds of groundwater sampling were undertaken by WA between December 2020 and June 2022 from shallow and deep monitoring wells that had response zones specifically targeting perched groundwater within the Made Ground, perched groundwater within the Glacial Till and deep groundwater within bedrock. 39 No. purged groundwater samples were obtained and tested for potential CoC appropriate to the former land uses.

14.1.2 A single round of groundwater sampling was also undertaken by Celtic in June 2007. 12 No. purged groundwater samples were obtained and tested for a range of contaminants that Celtic considered to be appropriate to the site's former land uses. This data has been reviewed independently from the more recent WA dataset and these findings are outlined in Section 8. Comparisons have been made between the datasets where relevant, but it is the WA data that has primarily been relied upon to undertake the updated assessments.

14.1.3 During the most recent round of groundwater sampling many of the historical boreholes could not be sampled due to the positions being vandalised, destroyed, silted up or being lost. However, additional monitoring wells were installed during the WA 2022 site investigation to provide coverage across the main areas of concern identified from the previous investigations.

14.2 Assessment Criteria

14.2.1 In order to assess the risk to controlled waters, the recorded groundwater and soil concentrations have been compared with relevant assessment criteria that are protective of those controlled waters receptors identified within the preliminary CSM outlined in Section 9 and that are compatible with the findings from the most recent 2022 WA site investigations, that have proven that bedrock occurs at depths of c. 45m bgl and is overlain by between c. 35m and 45m of predominantly cohesive Glacial Till (i.e. a geological barrier).

14.2.2 For groundwater with bedrock, the UK Drinking Water Standards (UK DWS) or best equivalent values (e.g. World Health Organisation) have been used as these would be the most relevant for the protection of the Principal Aquifer that is present beneath the site. Based on the preliminary CSM and the depth to bedrock from the most recent

2022 site investigation, it is highly unlikely that groundwater is in continuity with those identified surface water receptors, so the use of GAC that would be protective of surface water is not considered to be applicable for these deeper groundwater.

14.2.3 For soil leachates and perched groundwater within the Made Ground and Glacial Till, samples have been compared with Environmental Quality Standard (EQS) values that would be protective of the surface water environment, as the preliminary CSM and the most recent WA 2022 site investigation data indicates that pathways to the deeper groundwater within bedrock / Principal Aquifer are highly unlikely. Where EQS values are not available, results have been compared to UK DWS or a best equivalent values.

14.2.4 For the above, assessments have also been undertaken using the simplified Metal Bioavailability Assessment Tool (M-BAT) to calculate the amounts of bioavailable copper, zinc, nickel, manganese and lead and associated Predicted No Effect Concentrations (PNECs). Parameters from the Rochdale Canal were obtained during sampling. Parameters from the River Medlock have been obtained from the EA's Water Quality Archive from a sampling location approx. 1.5km south east and upstream of the site.

14.2.5 For those determinands included in the analytical suite which do not have a corresponding assessment criteria from the above sources, reference is made to a hierarchy of international guidance in accordance with EA guidance.

14.3 Screening of Groundwaters

14.3.1 A summary of the exceedences of the screening criteria for groundwaters from both the 2020 and 2022 WA datasets are presented in Table 14.1. A summary of exceedences from the 2007 Celtic dataset are summarised separately in Table 8.2. A summary of the exceedences in relation to each groundwater receptor (e.g. perched groundwater within Made Ground and deeper groundwater within bedrock) is outlined further in Section 16.

14.3.2 Specific details regarding the location, depth, contaminant concentrations and strata for each exceedance are included within Appendix I and the analytical laboratory results of the soil and groundwater chemical analyses are attached at Appendix H. Parameters obtained from groundwater are contained within Appendix K.

Table 14.1: Summary of WA 2020 & 2022 Contaminant Exceedances in Groundwater							
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**GAC[1] (µg/l)**	**No. of Exceedences**			
				MG	**MG/GT**	**GT**	**BR***
Metals							
Arsenic	0.829	35.6	10[3]	-	-	**-**	1
Boron	42.6	54,800	100	11	2	**4**	0
Cadmium	<0.08	11	0.25	**1**	0	1	-
Chromium	<1	10.7	4.7	**5**	1	0	-
Copper to Canal	<0.3	140	18.62[6]	**1**	-	-	-
Copper to River			21.46[6]	**1**	-	-	-
Lead to Canal	<0.2	13.9	6.55[6]	**-**	-	2	-
Lead to River			6.78[6]	**-**	-	2	-
Manganese to Canal	37.2	3,880	132.8[6]	13	5	**9**	-
Manganese to River			173.54[6]	13	5	-	-
Manganese to Aquifer			50[3]	-	-	-	8
Nickel to Canal	<0.4	130	9.73[6]	**4**	2	-	-
Nickel to River			12.16[6]	**2**	-	-	-
Selenium	<1	11.8	10[3]	-	-	-	**1**
Zinc to Canal	<1	54.5	29.61[6]	2	**1**	-	-
Zinc to River			30.20[6]	2	**1**	-	-
Iron	<19	11,000	1000	**2**	1	1	-
TPH							
Total Aliphatics & Aromatics >C5-35	<10	6,590	10[1]	**8**	3	3	4
PAH							
Naphthalene	<0.01	4.3	2	**2**	0	0	-
Fluoranthene	<0.005	19.7	0.0063	16	6	**9**	-
Anthracene	<0.005	5.21	0.1	**11**	2	4	-
Benzo(b)fluoranthene	<0.005	33.2	0.1[3]	-	-	-	5
Benzo(k)fluoranthene	<0.005	14.9	0.1[3]	-	-	-	3
Benzo(a)pyrene	<0.002	23	0.00017	12	4	**7**	-
			0.01[3]	-	-	-	6
Benzo(g,h,i)perylene	<0.005	23.2	0.1[3]	-	-	-	3
Indeno(1,2,3-cd)pyrene	<0.005	22.1	0.1[3]	-	-	-	3
SVOC / VOC							
Phenol	<1	370	7.7	**2**	1	1	-
Chloroform	<1	2.96	0.1[4]	-	-	-	**4**

bis(2-Ethylhexyl) phthalate	<2	104	8[5]	-	-	-	**1**
PFAS							
Total PFOS	<0.65ng/l	102ng/l	0.65ng/l	**6**	1	0	-
Total PFOS (Post Ox.)	<2ng/l	129ng/l	0.65ng/l	**6**	1	0	-
Other							
Sulphate	<2,000	807,000	250,000[3]	2	1	**4**	3
Total Cyanide	<50	180	1	**4**	0	1	-
Complex Cyanide	<50	180	1	**2**	0	0	-
Thiocyanate	<50	120	1	**2**	0	0	-

Notes:
Ex = Exceedences, MG = Perched Groundwater within Made Ground, GT = Perched Groundwater within Glacial Till and BR = Groundwater within Bedrock, **Bold** = groundwater body from which the maximum recorded concentrations were noted.
[1] EQS values used unless noted otherwise. [2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted. [3] UK Drinking Water Standard (2016). [4] The Water Supply (Water Quality) Regulations 2000, [5] World Health Organization Guidelines for Drinking Water Quality. [6] Lowest PNEC calculated from M-BAT tool for those samples that exceeded bioavailable EQS.

14.3.3 Most of the recorded concentrations for those other SVOC's and VOC's were either at concentrations that were below their respective screening criteria and / or were recorded at concentrations below the limits of detection (LOD). While the screening values for some of the contaminants were below the LOD (which was raised in some samples), in the absence of any positive concentrations above the screening value, the concentrations (if present) are likely to be low and not pose an unacceptable risk.

Metals and Metalloids

14.3.4 Metal exceedences (notably boron, manganese, nickel and chromium) were predominantly encountered within the shallow perched waters within Made Ground (response zones <5.0m bgl), that was generally localised to the central south western and central western sections of the site. Zinc, iron, cadmium and copper were isolated and were predominantly encountered within shallow perched groundwaters in the north western section of the site. The highest concentrations were most abundant within these perched groundwaters, although exceedences were typically recorded at the same order of magnitude as the screening value. The most notable exception being from the deeper perched waters within Made Ground at the location of CP109 (response zone between 9.0m and 13.0m bgl), where concentrations of boron,

chromium and nickel were recorded at an order of magnitude above the screening value.

14.3.5 Metal exceedences where generally less frequent within the perched groundwaters within the underlying Glacial Till, but they were generally recorded at similar locations to those exceedences within the perched groundwaters within the Made Ground (i.e. the central south western and central north western sections of the site), principally where continuity between the two groundwater bodies is indicated. The most notable exceptions are 3 No. isolated locations within the north westernmost and north easternmost sections of the site, that are outside of recorded extent of the clay pit excavations. Boron, manganese and selenium where also elevated above the concentrations recorded within perched groundwaters within the Made Ground with a single zinc exceedence also being elevated.

14.3.6 For the groundwater within bedrock, different screening criteria have been used, so the exceedences recorded are not comparable. However, most of metal concentrations are indicated to be greatly reduced, the exception being selenium, which was typically recorded at an order of magnitude greater than the concentrations recorded within the overlying perched groundwaters. This general decreasing concentration of metals is generally observed from the shallow to the deeper groundwaters, the exceptions being boron, manganese and selenium, which appear to increase in concentrations with depth.

Total Petroleum Hydrocarbons

14.3.7 TPH exceedences were predominantly recorded within the perched groundwater within Made Ground that was localised to the central north western and central south western sections of the site. The highest concentrations were most abundant within these perched groundwaters, with exceedences typically being recorded at one order of magnitude greater than the screening value. The most notable exceptions being two locations within the north western (WS305) and south eastern (WS308) sections of the site, where concentrations within shallow perched groundwaters (response zones <5.0m bgl) were recorded at two orders of magnitude above the screening value. The highest TPH concentration in the entire dataset was also recorded within these perched groundwaters at WS308.

14.3.8 TPH exceedences within the perched groundwaters within Glacial Till were generally restricted to individual locations but were generally recorded at similar locations to

those exceedences within the perched groundwaters within the Made Ground (i.e. the central south western, central eastern and central south eastern sections of the site). This was typically within the areas of deeper Made Ground where continuity with the overlying perched groundwaters is indicated. Concentrations were typically reduced from those recorded within the overlying perched waters within the Made Ground, but still generally at one order of magnitude above the screening values. The most notable exception being a single isolated location within the north easternmost section of the site (RH108) and outside of the recorded extents of the clay pit excavations, where a concentration at two orders of magnitude above the screening value was noted within deep groundwater within Glacial Till (response zone between 26.0m and 28.0mbgl). This concentration was also the second highest TPH concentration within the entire dataset.

14.3.9 TPH exceedences within the deep groundwater within bedrock were localised to the eastern section of the site and restricted to a single location within the south western section of the site (RH106). Concentrations were generally elevated from those within the overlying perched groundwater within the Glacial Till and were typically recorded at one order of magnitude above the screening value, with a single sample (RH203) recording exceedences at two orders of magnitude above the screening value. The highest concentrations were recorded from RH203, which is located upgradient of the indicated south westerly groundwater flow direction within bedrock. Conversely the lowest concentration was recorded from RH106, which was located downgradient.

Polycyclic Aromatic Hydrocarbons (PAH)

14.3.10 For the purposes of the risk assessment for perched water within Made Ground and Glacial Till, anthracene, benzo(a)pyrene, fluoranthene and naphthalene are the only PAH compounds with an EQS AA screening value. In the absence of an EQS AA value for benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene; benzo(a)pyrene has been used as a marker for these PAH compounds.

14.3.11 For the purposes of the risk assessment for the deeper groundwater within bedrock, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene are the only PAH compounds with screening values for the protection of aquifer resources. Consequently, these PAH compounds have been

used as surrogates to assess the degree of risk posed by PAH compounds within the groundwater.

14.3.12 PAH exceedences were frequently encountered within the perched groundwater within Made Ground. Using Benzo(a)pyrene as a surrogate, indicates that PAH exceedences are relatively localised to the central south western, central north western and north western sections of the site. The most notable exception was a single sample recovered from the south eastern section of the site (WS308) which was also in an area where elevated TPH concentrations were recorded. Concentrations were typically two to four orders of magnitude above the screening value.

14.3.13 Similarly, PAH exceedences were also frequently encountered within the perched groundwater within Glacial Till. Using Benzo(a)pyrene as a surrogate, indicates that PAH exceedences are concentrated within the central south western and central southern sections of the site. This was typically within the areas of deeper Made Ground, where continuity with the overlying perched groundwater is indicated. Concentrations were typically higher than the overlying perched groundwater within Made Ground and were recorded at three to five orders of magnitude above the screening value. The most notable exception being a single isolated location within the north easternmost section of the site (RH108) and outside of the recorded extents of the clay pit excavations, where a concentration at five orders of magnitude above the screening value was noted within deep groundwater within Glacial Till (response zone between 26.0m and 28.0mbgl). This concentration was also the highest benzo(a)pyrene concentration within the entire dataset.

14.3.14 For the groundwater within bedrock, different screening criteria have been used, so the exceedences recorded are not comparable. Using Benzo(a)pyrene as a surrogate indicates that PAH concentrations were generally lower than those encountered within the overlying perched groundwaters. However, at isolated locations within the eastern section (RH201 and RH203) and the south western (RH106) sections of the site, concentrations were comparable to those recorded in the overlying perched groundwaters. Notably RH106 and RH201 are located outside of the recoded clay pit extents and the lowest and second highest concentrations were recorded downgradient and upgradient, respectively, of the indicated groundwater flow direction within bedrock.

Volatile and Semi Volatile Organic Compounds

14.3.15 Phenol exceedences within perched groundwaters within the Made Ground were restricted to single locations within the central south western and north western sections of the site. Concentrations were recorded at two orders of magnitude above the screening values. Similarly, exceedences within the perched groundwater within Glacial Till were also isolated to within the central south western section of the site and in areas of deep Made Ground, where continuity with the overlying perched groundwater within Made Ground is indicated. Concentrations were also similar, although decreasing slightly, and were recorded at between one and two orders of magnitude greater than the screening value. Phenol concentrations were all below the LOD within the samples taken from bedrock groundwater.

14.3.16 Elevated concentrations of chloroform and bis(2-Ethylhexyl) phthalate were recorded within deep groundwater within bedrock at isolated locations within the central, south western and north western sections of the site and also within the north easternmost section of the site at RH108 within deep groundwater within Glacial Till (response zone between 26.0m and 28.0m bgl). These determinands were all recorded below the LOD within the perched groundwater within Made Ground and the shallow perched groundwater within Glacial Till. Concentrations were recorded at one order of magnitude greater than the screening value, with the lowest concentrations being recorded downgradient of the indicated groundwater flow direction within bedrock. RH108 is also located outside of the recorded clay pit extents.

14.3.17 It should be noted that most of the concentrations for the above were recorded at the LOD, which was above the screening value. Considering that positive exceedences have been recorded it is possible that some of the recorded concentrations below the LOD (which were raised in some samples) could exceed the screening value.

PFAS

14.3.18 Total PFOS (including post ox.) exceedences were predominantly recorded within perched groundwaters within the Made Ground that were localised to the central south western, central north western and north western sections of the site. Concentrations were highest within these perched water and were typically recorded at two to three orders of magnitude above the screening values. The highest concentrations were recorded within the central south western sections of the site

where suspected household type waste predominated, and the lowest concentrations were record within the north western section of the site where suspected combustion waste predominated.

14.3.19 Only a single exceedence was recorded within the shallow perched groundwater within the Glacial Till that was restricted to a single location (CP203), within the central southern section of the site and where continuity with the overlying perched groundwater within the Made Ground is indicated. Concentrations were typically reduced, but still recorded at two orders of magnitude greater than the screening values.

14.3.20 PFAS concentrations were not detected above the LOD within the deeper perched groundwater within Glacial Till or bedrock.

Inorganics

14.3.21 Sulphate exceedences within the perched groundwater in the Made Ground were relatively localised to the central sections of the site; most notably the central southern section of the site. Concentrations were recorded at the same order of magnitude as the screening values. Conversely, sulphate exceedences within the perched groundwater within the Glacial Till where more frequent, at higher concentrations, and their distribution was more widespread. Exceedences within the deep bedrock groundwater was localised to the north eastern section of the site, but concentrations were noted to be reduced and decreasing downgradient, but still generally higher than those recorded within the perched groundwater within the Made Ground.

14.3.22 Cyanide exceedences were largely restricted to the perched groundwater within the Made Ground and were relatively localised to the central north western and to a single location within central south western section of the site. Concentrations were typically recorded at two orders of magnitude above the screening value. Only a single exceedence, but at a reduced concentration, was recorded from the perched groundwater within the Glacial Till, from a single location (CP203), where continuity with the overlying perched waters within the Made Ground was indicated. Cyanide exceedances were absent within the deeper perched groundwater within Glacial Till and bedrock.

14.4 Non-Aqueous Phase Liquids or Free Product

14.4.1 OIP testing has indicated the presence of NAPL / hydrocarbon fuels / oils with "blips" generally being recorded within the suspected combustion wastes within the north western and south-eastern sections of the site and the suspected construction and demolition type wastes within the central and southern sections of the site; both of which are shown in Drawing LD10385-024.

14.4.2 During the WA site investigations, hydrocarbon sheens were also occasionally observed to shallow perched groundwater, mostly within the north western section of the site during trial pitting. During development and sampling of the monitoring wells hydrocarbon odours and putrid odours were also frequently encountered.

14.4.3 However, frequent groundwater level monitoring has been undertaken using a product / water interface probe in areas where the OIP testing was undertaken and where sheens were observed. No NAPL or free product was detected with the interface probe nor was any visual evidence recorded during development, purging and groundwater sampling. Celtic also state that no NAPL was encountered during their works.

14.5 Discussion of Groundwater Results

14.5.1 Those metal, TPH, PAH, SVOC / VOC and sulphate exceedences recorded within groundwater from bedrock and deeper Glacial Till merit further discussion, as the ground conditions at the site indicate that pathways or continuity between perched water within Made Ground and / or directly underlying granular Glacial Till are highly unlikely, due to the significant thicknesses of low permeability Glacial Till (i.e. a geological barrier) that have been recorded between the various groundwater bodies that are present beneath the site.

Background Concentrations

14.5.2 For those metal (boron, manganese, selenium) and sulphate exceedences that were recorded, the highest / most elevated concentrations were recorded within deep groundwater from bedrock and / or deep perched groundwaters within Glacial Till. This does not correlate with the concentrations recorded at the source (i.e. Made Ground and perched waters within the Made Ground), which were found to be significantly lower.

14.5.3 A review of "Baseline Report Series: 8. The Permo-Triassic Sandstones of Manchester and East Cheshire" indicates that high baseline concentrations for manganese, sulphate and selenium (up to 1790 µg/l, 666 mg/l and 4.7 µg/l respectively) have been regionally recorded for the groundwater within the Principal Aquifer that is present beneath the site. Consequently, those exceedences recorded for manganese, sulphate and selenium are likely to be representative of baseline conditions and once the baseline concentrations are accounted for, many of the concentrations are recorded at negligible concentrations.

14.5.4 A similar situation to that outlined above is also apparent for the boron and manganese exceedences that were recorded within the deep perched water from Glacial Till. While relatively high concentrations have been recorded within perched groundwater within Made Ground and immediately underlying groundwater within Glacial Till, a plausible pathway to the deeper perched groundwater is not indicated. Many of the higher concentrations were also recorded within boreholes that were outside of the recorded clay pit extents and were elevated above those concentrations recorded within the perched groundwater within the Made Ground. This suggests that background concentrations within the deeper Glacial Till may also be elevated and is indicative of confined conditions.

Presence and Absence of Specific Determinands

14.5.5 Many of the determinands noted within the perched groundwaters within Made Ground where absent within bedrock. This included cyanide, cadmium, chromium, phenol, BTEX, multiple SVOC / VOC compounds, sulphide and PFAS. Furthermore, concentrations of chloroform and bis(2-Ethylhexyl) phthalate were present within bedrock, but were absent, along with their precursors, from the perched groundwaters within Made Ground. Elevated concentrations of chloroform were also detected at RH108 within deep groundwaters within Glacial Till (response zone between 26.0m and 28.0m bgl).

14.5.6 Both of the above are supportive of a lack of continuity between the deeper groundwater within bedrock and deeper perched water within Glacial Till, with the latter also being indicative of another source of contamination other than the site and / or in baseline conditions within the Principal Aquifer or deeper confined waters within the Glacial Till.

Increased Concentrations of Contamination Upgradient of the Site and Outside of the Recorded Clay Pit Extents

Within the deep groundwater within bedrock, there were several determinands (TPH, PAH, sulphate, chloroform and bis[2-ethyhexyl]phthalate) that were recorded at increased concentrations upgradient of the indicated groundwater flow direction to the south west. Often these were also at elevated concentrations to those within the overlying perched groundwaters. The lowest concentrations for the above were also recorded from the downgradient boreholes. Furthermore, many of the elevated concentrations within bedrock and deep perched groundwater within Glacial Till (RH108) were located outside of the recorded clay pit extents, where only limited thicknesses of Made Ground were encountered. If the site were to be the source of the contamination within the deeper groundwaters, the opposite trend should have been observed.

TPH & PAH

14.5.7 Generally, TPH and PAH concentrations within bedrock were lower than those recorded within the perched groundwater within Made Ground, but elevated concentrations were recorded at RH106, RH201 and RH203 that were comparable, or elevated, to those concentrations recorded within the overlying perched groundwater. Significantly elevated TPH and PAH was also recorded at RH108 within deep perched groundwater within Glacial Till.

14.5.8 During the 2020 site investigation, a second round of groundwater sampling and testing was undertaken from RH106 and RH108 and in both instances the second round of testing recorded significantly reduced total TPH concentrations that were below the LOD, with significantly reduced PAH concentrations also being recorded from RH108.

14.5.9 While PAH concentrations were significantly reduced, exceedences at the same order of magnitude as the screening values were still recorded. However, the screened sections from the 2020 WA boreholes were noted to be fully silted up, and in some cases, this extended a significant distance up the standpipe. This particulate matter could account for those PAH exceedences that have been recorded. These boreholes could not be sampled during the 2022 site investigation, as they had become completely silted up almost to ground level and were dry.

14.5.1 Regardless, as noted above, many of these boreholes were located outside of the recorded extents of the clay pit excavation and for those that screened bedrock, the highest (RH201 & RH203) and lowest (RH106) TPH and PAH concentrations were noted upgradient and downgradient, respectively, of the indicated south westerly groundwater flow direction. Despite the potential for interference from particulate matter within the 2020 boreholes, this suggests another source of contamination other than the site and / or in baseline conditions within the Principal Aquifer or deeper confined waters within the Glacial Till.

Summary

14.5.2 There are multiple lines of evidence to suggests that those metal (boron, manganese and selenium), TPH, PAH, SVOC / VOC and sulphate exceedences recorded within groundwater from bedrock and deeper Glacial Till are unlikely to be representative of contamination leaching from and originating from the site. Furthermore, due to the significant thickness of low permeability Glacial Till (i.e. a geological barrier) that has been recorded, any contamination within perched groundwater in Made Ground is unlikely to represent an ongoing or potential future significant risk to the deeper groundwater or the sensitive Principal Aquifer, due to the lack of a pathway. Following development, a betterment is also envisaged with a c. 70% increase in hardstanding areas, which will further reduce vertical migration with most surface waters / rainwater being captured by drainage.

14.6 Assessment of Contamination – Leachate

14.6.1 A total of 20 No. soil samples from Made Ground were analysed for leachate to assess the potential risks to controlled waters from impacted soils. This included 10 No. samples from the 2020 WA investigations and 10 No. samples from the 2007 Celtic investigation.

14.6.2 A summary of the exceedences of the screening values from the 2020 WA dataset presented in Table 14.2. The exceedances from the Celtic 2007 dataset are summarised in Table 8.3. A summary of the exceedences in relation to each strata type is outlined further in Section 16.

14.6.1 Specific details regarding the location, depth, contaminant concentrations and strata for each exceedance are included within Appendix I and the analytical laboratory results of the soil and groundwater chemical analyses are attached at Appendix H.

Table 14.2: Summary of Leachate Exceedences in Soil (WA 2020)				
Contaminant	**Min. Recorded (µg/l)**	**Max. Recorded (µg/l)**	**EQS GAC (µg/l)**	**No. of Exceedences**
Metals				
Chromium VI	<3	53.4	3.4	3
Arsenic	0.53	73.4	50	1
Chromium	<1	1,500	4.7	4
Cadmium	<0.08	0.349	0.08	2
Copper to Canal	0.71	35.8	18.62[2]	1
Copper to River			21.46[2]	1
Lead to Canal	<0.2	108	6.55[2]	2
Lead to River			6.78[2]	2
TPH				
Total Aliphatics & Aromatics >C5-35	<10	65	10[1]	2
PAH				
Benzo(a)pyrene	<0.002	0.0398	0.00017	4
Fluoranthene	0.0106	1.63	0.0063	10
Anthracene	<0.005	1.18	0.1	1
Inorganics				
Total Cyanide	<50	70	1	1
Sulphate	2,200	279,000	250,000[3]	1

Notes:
[1] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.[2] Lowest PNEC calculated from M-BAT tool for those samples that exceeded bioavailable EQS. [3] UK Drinking Water Standard (2016).

14.6.2 Most of the contaminants were recorded below their respective LOD and / or screening criteria. While some screening values were below the LOD, in the absence of any positive exceedences, the concentrations are considered to be low enough to not pose an unacceptable risk.

14.6.3 Following a receptor specific assessment using the M-BAT tool, the bioavailable concentrations for nickel and manganese were all found to be below the EQSbioavailable screening value.

Metals and Metalloids

14.6.4 Exceedences of metals (chromium VI, cadmium, chromium, copper, arsenic and lead), were generally localised to the north western section of the site, but also occurred at isolated locations across the entire site. They were generally recorded at the same order of magnitude as the screening values and were mostly found within the suspected combustion type wastes and to a lesser extent the suspected construction and demolition type wastes.

Total Petroleum Hydrocarbons (TPH)

14.6.5 Exceedences of TPH were recorded at individual locations within the central section of the site and were generally found within the suspected construction and demolition type waste and suspected household type waste. Concentrations were recorded at the same order of magnitude as the screening value.

Polycyclic Aromatic Hydrocarbons (PAH)

14.6.6 Exceedences of PAH were frequent and generally localised to the north western, south western and south eastern sections of the site, where they were associated the suspected combustion type wastes and to a lesser extent the suspected construction and demolition type wastes. Relatively isolated exceedences were also noted within the north east and central parts of the site. Concentrations were generally recorded at one order of magnitude greater than the screening value.

Inorganics

14.6.7 Exceedances of total cyanide were restricted to a single location (TP123) within the north western section of the site. It was recorded at one order of magnitude greater than the screening value within the suspected combustion type wastes.

14.6.8 Exceedances of sulphate were restricted to a single location (TP112) within the central south western sections of the site and associated with the suspected construction and demolition wastes. Concentrations were generally recorded at the same order of magnitude as the screening value.

Phenols

14.6.9 Exceedances of phenol monohydric were recorded within the Celtic 2007 dataset at a single location within the north eastern section of the site and was associated within

cohesive Made Ground. It was recorded at the same order of magnitude as the screening value.

Limitations

14.6.10 It should be noted that for all the PAH compounds assessed, cyanide and phenol monohydric, most of the concentrations were recorded at the LOD, which was above the screening value. Considering that positive exceedences have been recorded it is possible that some of the recorded PAH, phenol monohydric and cyanide concentrations below the LOD could also exceed the screening value.

Discussion of Leachate Results

14.6.11 The recorded exceedances for PAH compounds, sulphate, cyanide and phenol in soil leachate generally correlate with those recorded exceedances in perched groundwater within Made Ground. The spatial distribution and concentrations recorded are generally similar and indicate that the leachates generated from the Made Ground at the site (particularly those from the suspected combustion type wastes) could be contributing to the concentrations of these contaminants in shallow perched groundwaters at the site.

14.6.12 While the recorded exceedences for metals in soil leachate only loosely correlate with those exceedences recorded within shallow perched groundwater within Made Ground, the concentrations themselves do generally correlate. This indicates that the leachates generated from the Made Ground at the site (particularly those from the suspected combustion type wastes) may be contributing to the concentrations of these contaminants in shallow perched groundwater at the site.

14.6.13 The recorded exceedences of TPH in soil leachate do not correlate with those recorded exceedances in groundwater. Exceedences within soil leachate were relatively isolated and occurred at relatively low concentrations, while those within groundwater were relatively widespread and occurred at much higher concentrations. This disparity could be due to limitations with the laboratory methods used or it could indicate that leachates generated from the Made Ground at the site are not significantly contributing to TPH contamination within groundwater.

14.7 Assessment of Contamination – Surface Waters

14.7.1 Three rounds of surface water sampling and testing have been undertaken from the Rochdale Canal that forms the northern boundary of the site.

- The first round was undertaken by Celtic in 2007, with two samples being obtained (Canal A and Canal B taken upstream and downstream, respectively).
- The second round was undertaken by WA in December 2020, with three samples being obtained (SW01, SW02, SW03; taken midstream, upstream and downstream along the canal, respectively).
- The third round was undertaken by WA in June 2022, with three samples being taken midstream, upstream and downstream along the canal.

14.7.2 A summary of the exceedences of the screening criteria from both the 2020 and 2022 WA dataset are presented in Table 14.3. A summary of the exceedences of the screening criteria from the Celtic 2007 dataset are presented in Table 8.5. A summary of the exceedences in relation to each strata type is outlined further in Section 16.

14.7.3 Specific details regarding the location, depth, contaminant concentrations and strata for each exceedance are included within Appendix I and the analytical laboratory results of the soil and groundwater chemical analyses are attached at Appendix H. Parameters obtained from surface water are contained within Appendix K.

Table 14.3: Summary of Exceedences in Surface Water (WA 2020 & 2022)

Contaminant	Min. Recorded (µg/l)	Max. Recorded (µg/l)	GAC (µg/l)	Number of GAC Exceedances
Metals				
Chromium	<1	6.25	4.7	1
TPH				
Total Aliphatics & Aromatics >C5-35	<10	83	10[1]	3
PAH				
Fluoranthene	0.024	0.485	0.0063	6
Benzo(a)anthracene	0.0109	0.182	0.01	6
Benzo(a)pyrene	0.0107	0.186	0.00017	6
PFAS				
Total PFOS	1.87ng/l	<6.5ng/l	0.65ng/l	1
Total PFOS (Post ox.)	<2.19ng/l	<10ng/l	0.65ng/l	1

Notes:
Environmental Quality Standards (2015) values unless noted.
*1 Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.

14.7.4 Most of the contaminants were recorded below their respective LOD and / or screening criteria. While some screening values were below the limit of detection, in the absence of any positive exceedences, the concentrations are likely to be low enough to not pose an unacceptable risk.

14.7.5 Following a site-specific assessment using the M-BAT tool, the bioavailable concentrations for lead, nickel, manganese and copper were all found to be below the EQSbioavailabe screening value.

Metals and Metalloids

14.7.6 Marginal exceedences of chromium were recorded on a single occasion from midway along the canal from the WA 2020 surface water testing. The remainder of samples were recorded below the LOD.

14.7.7 Marginal exceedences of lead, copper and nickel were recorded upstream and downstream from the Celtic 2007 surface water testing with the highest concentrations typically being recorded from upstream. However, no parameters were obtained to allow for M-BAT screening to be undertaken, so the screening criteria used were not receptor specific and in light of updated information, these can be discounted.

14.7.8 No other exceedences were recorded from either dataset, but arsenic, boron, manganese, iron and nickel were found to be at slightly higher concentrations upstream of the site. Chromium, copper, lead, zinc and iron concentrations were generally found to be at slightly higher downstream. The remainder were recorded below the LOD.

Total Petroleum Hydrocarbons

14.7.9 Marginal exceedences of TPH were recorded midstream and downstream from the WA datasets, with the highest concentrations being recorded from midstream. The remainder of the TPH concentrations from both the Celtic and WA datasets were recorded below the LOD.

Polycyclic Aromatic Hydrocarbons

14.7.10 PAH compounds (benzo(a)pyrene and fluoranthene) were recorded within all samples from both rounds of WA testing with the lowest concentrations being recorded downstream of the site. The highest concentrations were recorded midstream, but

elevated concentrations were also noted upstream, indicating that there are background concentrations of PAH compounds within the canal. PAH concentrations from the Celtic dataset were recorded below the LOD.

PFAS

14.7.11 A single total PFOS exceedence at an order of magnitude greater than the screening value was recorded midstream along the canal. Results from upstream and downstream were below the LOD.

Discussion of Surface Water Results

14.7.12 The contaminants recorded within surface water are generally not reflective of those encountered within shallow perched groundwater within Made Ground or soil and leachate contaminants. Contaminants recorded within perched groundwater within Made Ground that are absent from the canal are numerous and include phenol, BTEX, multiple SVOC / VOC compounds, cadmium, selenium and cyanide.

14.7.13 The above is likely due to a lack of hydraulic continuity that is indicated between the canal and shallow perched groundwaters within Made Ground; the canal is confined by those natural clay deposits (i.e. a geological barrier) that have been recorded around the periphery of the site; water levels in the canal are elevated from perched groundwater levels and the canal is likely clay lined. Shallow perched groundwater flow directions are also indicated to be away from the canal and towards the deeper parts of the clay pit excavations as shown in Drawing LD10385-019. The possibility of groundwater flooding and overspill into the canal is considered to be highly unlikely due to the topography, the indicated groundwater flow directions and information from the Envirocheck Report indicates a limited potential for groundwater flooding to occur.

14.7.14 As the site is slightly elevated from the canal along its northern boundary, some surface water run-off with leached contaminants could be migrating towards the canal along the site's northern boundary. This is loosely supported by the highest concentrations of contaminants in surface water generally being recorded from the midpoint of the canal. However, the potential for significant leaching to occur is low. due to the limited amount of time these waters would have to percolate through the soils before entering the canal.

14.7.15 Furthermore, elevated concentrations of some contaminants (notably PAH) were recorded from upstream of the site and this indicates that some of the background concentrations of contaminants within the canal may already be elevated (e.g. fuel leaks from passing canal boats or general detritus that has been tipped into the canal over the years).

14.8 Assessment of Contamination – Groundwater Seepage

14.8.1 During a ground gas and groundwater monitoring round that was undertaken on the 21st January 2021 and following a sustained period of heavy rainfall, an upwelling of groundwater, with associated groundwater flooding at the surface, was noted within the central south western section of the site adjacent to the site's southern boundary (see Drawing LD10385-22). The water was observed to be migrating in a southern direction towards the site's southern boundary, with most of the water being captured by the off-site drainage that runs parallel to the site's southern boundary.

14.8.2 The upwelling was occurring via three observable fissures / cracks in the ground and had a notable putrid / sulphurous odour. When first observed, it had a slight orange tinge to it, but during subsequent visits a light bluish grey sheen / film was noted instead, with the submerged sediment coloured similarly. Some light bluish grey particulate matter was also noted flowing out of the upwelling and some similarly coloured scum / foam was noted in areas where the flow of water was reduced.

14.8.3 To quantify the risks and establish the source of this groundwater upwelling, a single water sample was obtained from the main point of upwelling on the 25th January 2021 and was submitted for laboratory testing. It should be noted that no recent excavations or excavations from previous stages of site investigation were recorded within the area of seepage.

14.8.4 The results were initially compared to the United Utilities (UU) water quality data for the Newton Heath area to ascertain if the waters could be from a burst unrecorded water pipe. Chlorine, Cyanide, Thiocyanate, Chromium VI, mercury, cadmium, copper, lead, selenium, zinc, TPH and most of the PAH, SVOC and VOC compounds were recorded below the limit of detection.

14.8.5 Determinands recorded above the LOD that could pose a risk to human health and controlled waters are summarised in the Table 14.4:

Table 14.4: Summary of Concentrations Above the LOD from Groundwater Seepage Sample		
Contaminant	**Recorded Concentration**	**Max. UU Concentrations**
Carbon		
Carbon, Organic	17.4 mg/l	2.3 mg/l
Inorganics		
Conductivity	1.61 mS/cm	0.156 mS/cm
Total Dissolved Solids	1300 mg/l	-
Dissolved Oxygen	3.44 mg/l	-
Redox Potential	173 mV	-
Alkalinity as Total CaCO3	897 mg/l	12
Fluoride	0.679 mg/l	0.05 mg/l
pH	7.25	7.88
Sulphate	236 mg/l	43.4 mg/l
Sulphide	0.613 mg/l	-
Metals		
Arsenic	1.5 µg/l	<0.48 µg/l
Boron	15,700 µg/l	<0.0146 µg/l
Chromium	7.22 µg/l	<0.830 µg/l
Manganese	533 µg/l	3.51 µg/l
Nickel	3.49 µg/l	2.30 µg/l
Calcium	379 µg/l	16,600 µg/l
Iron	1.89 µg/l	16.1 µg/l
PAH		
Naphthalene	0.127 µg/l	-
Acenaphthene	2.38 µg/l	-
Acenaphthylene	2.39 µg/l	-
Fluoranthene	0.268 µg/l	-
Anthracene	0.057 µg/l	-
Phenanthrene	0.0479 µg/l	-
Fluorene	0.167 µg/l	-
Chrysene	0.0146 µg/l	-
Pyrene	0.171 µg/l	-
SVOC & VOC		
1,4-Dichlorobenzene	1.15 & 1.57 µg/l	-
Chlorobenzene	8.7 µg/l	-
1,2-Dichlorobenzene	1.15 µg/l	-
Notes: UU Concentrations obtained from the UU website. UU note PAH concentrations (sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene) as 0 µg/l.		

14.8.6 Analytical laboratory results for the full groundwater chemical analyses are attached at Appendix H.

Discussion of Groundwater Seepage Results

14.8.7 Most of the concentrations recorded from the groundwater seepage were significantly elevated above the UU water quality data, effectively ruling out a burst drinking water supply pipe as the cause of the seepage.

14.8.8 With the exception of 1,4-Dichlorobenzene and 1,2-Dichlorobenzene, the concentrations correlate with the concentrations of those determinands recorded from the perched groundwater within the Made Ground that is present at the site. Furthermore, the seepage was recorded to be occurring close to one of the buried highwalls of the former clay pit excavations (see Drawing LD10385-022), from an area where perched groundwater elevations are indicated to be high and, in a location, where the perched groundwater in this general area is indicated to be flowing towards (see Drawing LD10385-019). Consequently, the lines of evidence suggest that it is likely that the groundwater seepage is from the perched shallow groundwater within the Made Ground that is present within this part of the site.

15 GROUND GAS RISK ASSESSMENT

15.1 Background

15.1.1 The preliminary CSM has identified the following on-site possible ground gas sources; made ground associated with the former land uses (e.g. historic and registered landfill and brickworks) and a potentially infilled reservoir within the central northern section of the site. Off-site possible ground gas sources include areas of possibly infilled ground (e.g. ponds, excavations and the extension of those on-site excavations off-site), other historic landfills and other areas of Made Ground.

15.2 Assessment Criteria

15.2.1 It is currently understood that the form of many of the proposed residential structures are unlikely to conform to the model low rise housing type used for the NHBC Traffic Light System assessment. Consequently, the ground gas risk assessment has been undertaken by calculating Gas Screening Values (GSV) for each location and the site as a whole and comparing the results to the Characteristic Gas Situations (CS) as outlined in BS8485.

15.2.2 Calculations have been undertaken using the maximum steady flow and peak carbon dioxide and methane concentrations for each monitoring location and the site as a whole, from both the Celtic and WA dataset, so that a worst-case assessment can be undertaken. Where initial peak flows and negative flows have been recorded, but judged unrepresentative, this has been noted and / or discussed.

15.3 Results and Assessment

15.3.1 The gas monitoring results from WA ground gas monitoring undertaken between 30th November 2020 to 25th March 2021 and 19th May 2022 to 18th June 2022 have recorded concentrations of methane up to 6.0% by volume and concentrations of carbon dioxide up to 20.2% by volume and variable flow rates ranging from -3.7l/hr to 20.9/hr.

15.3.2 The gas monitoring from the Celtic 2007 investigation undertaken between 27th June 2007 to 23rd July 2007 recorded concentrations of carbon dioxide between <0.1% and 14.3% (typically between <0.1% and 9.8%), methane concentrations up to 30.5% (typically <0.1%) and gas flow rates of up to 2.3 l/hr.

15.3.3 11 No. visits have been undertaken by WA and 3 No. visits were undertaken by Celtic. Atmospheric pressures were below 1000mb for four of the WA visits and two of the

Celtic visits, with a minimum pressure of 966mb being recorded during the most recent round of monitoring. The WA data was collected through the late autumn to early spring 2021 and late spring to early summer 2022. The Celtic data was collected during summer 2007. Two of the visits were undertaken during periods of falling atmospheric pressure. Therefore, the data collected is believed to cover the worst-case conditions and the frequency and period of monitoring undertaken is considered to be sufficient.

15.3.4 The results and the subsequent GSV calculations from both the WA and Celtic data are included within Table 15.1.

Table 15.1: Summary of Ground Gas Monitoring Data

Borehole ID	Max Steady Flow Rate (l/hr)	Max Peak CH4 (% v/v)	Max Peak CO2 (% v/v)	Max. BH Qhg (CH4)	Max. BH Qhg (CO2)	Characteristic Situation (CS)
WA Data 2020 & 2022						
CP103a	-2.40*2	**1.2**	1.3	0.0288	0.0312	CS2*3
CP103b	-2.40*2	**1.5**	3	0.036	0.072	CS2
CP107#	-2.40*2	0.1	1.3	0.0024	0.0312	CS1
CP108#	-2.80*2	0	1.7	0	0.0476	CS1
CP109#	2.50	**3.1**	0.3	0.0775	0.0075	CS2
CP110	-3.00*2	0	**6.3**	0	0.189	CS2
CP112#	-2.40*2	**5.8**	**5.8**	0.1392	0.1392	CS2
CP113#	-3.00*2	0	2.6	0	0.078	CS2
RH101#	-2.50*2	0	0.8	0	0.02	CS1
RH102#	-2.80*2	0	1.7	0	0.0476	CS1
RH106	-2.10*2	0	4.4	0	0.0924	CS2
RH108#	20.9	0	2.8	0	0.5852	CS2
RH109a#	-2.50*2	0	**7.3**	0	0.1825	CS2
RH109b	-2.30*2	0	**6.7**	0	0.1541	CS2
RH110	-2.50*2	0	1	0	0.025	CS1
WS101#	-2.40*2	0	3.1	0	0.0744	CS2
WS102	-2.20*2	0	**10.7**	0	0.2354	CS2
WS103	-2.70*2	0	**5.1**	0	0.1377	CS2
WS104	-2.50*2	0	1.6	0	0.04	CS1
WS105#	-2.50*2	0.5	1.7	0.0125	0.0425	CS1
WS106#	-2.70*2	0	1.5	0	0.0405	CS1
WS107#	-3.00*2	0	**20.2**	0	0.606	CS2
WS108#	-3.70*2	0	4.9	0	0.1813	CS2

Table 15.1: Summary of Ground Gas Monitoring Data						
Borehole ID	**Max Steady Flow Rate (l/hr)**	**Max Peak CH4 (% v/v)**	**Max Peak CO2 (% v/v)**	**Max. BH Qhg (CH4)**	**Max. BH Qhg (CO2)**	**Characteristic Situation (CS)**
WS109#	-2.20*2	0	7	0	0.154	CS2
WS111#	-3.70*2	**3.8**	**14.8**	0.1406	0.5476	CS2
WS112	-3.00*2	0	**5.9**	0	0.177	CS2
WS113#	-1.50*2	0	**17.4**	0	0.261	CS2
WS117	0.1	0	**5.8**	0	0.0058	CS2*3
WS119	-2.40*2	0	2.4	0	0.0576	CS1
WS120	-2.40*2	0	1.4	0	0.0336	CS1
BH04	-2.10*2	0	**13.7**	0	0.2877	CS2
BH06	-2.40*2	0	**11.8**	0	0.3422	CS2
WS311	0.1	**6**	**10**	0.006	0.01	CS2*3
CP202#	0.1	0.1	0.2	0.0001	0.0002	CS1
WS303#	0.1	0	**5.7**	0	0.0057	CS2*3
CP207#	0.1	0.3	2.4	0.0003	0.0024	CS1
RH205#	0.1	0	0	0	0	CS1
WS302#	0.1	0.3	4.2	0.0003	0.0042	CS1
WS312#	0.1	0	0.9	0	0.0009	CS1
CP203#	0.1	0	0.2	0	0.0002	CS1
CP206#	0.1	0	0.3	0	0.0003	CS1
CP205#	0.1	0	0.3	0	0.0003	CS1
CP204	0.1	0	0.2	0	0.0002	CS1
WS313	0.1	0	2.9	0	0.0029	CS1
WS308#	0.1	0	**7.1**	0	0.0071	CS2*3
RH201#	0.1	0	0	0	0	CS1
WS316#	0.1	0	2.9	0	0.0029	CS1
WS301	0.1	0	**6.6**	0	0.0066	CS2*3
CP201#	0.1	0	2	0	0.002	CS1
WS315	0.1	0	2.2	0	0.0022	CS1
CP208#	0.1	0	0.3	0	0.0003	CS1
CP209#	0.1	0	0	0	0	CS1
WS318#	0.1	0	3.3	0	0.0033	CS1
WS305#	0.1	0	2.9	0	0.0029	CS1
RH204#	1.5	0	0.7	0	0.0105	CS1
WS314	0.1	**1.5**	0.9	0.0015	0.0009	CS1
RH202#	0.1	0	0.5	0	0.0005	CS1
RH203#	0.1	0	0.6	0	0.0006	CS1

Table 15.1: Summary of Ground Gas Monitoring Data						
Borehole ID	**Max Steady Flow Rate (l/hr)**	**Max Peak CH4 (% v/v)**	**Max Peak CO2 (% v/v)**	**Max. BH Qhg (CH4)**	**Max. BH Qhg (CO2)**	**Characteristic Situation (CS)**
CP210[#]	0.1	0	0.6	0	0.0006	CS1
RH206[#]	1.2	0	0.2	0	0.0024	CS1
Celtic Data						
WS1	0.1	0	1.6	0	0.0016	CS1
WS2	0.1	0	0.8	0	0.0008	CS1
WS3	0.1	0	1.7	0	0.0017	CS1
WS4	0.1	0	**5.5**	0	0.0055	CS2[*3]
WS5	0.1	0	**5.5**	0	0.0055	CS2[*3]
WS6	0.1	0	4.5	0	0.0045	CS1
WS7	0.1	0	1.7	0	0.0017	CS1
WS8	0.6	0	3.3	0	0.0198	CS1
WS9	0.1	**7.6**	**15**	0.0076	0.015	CS2[*3]
WS10	0.1	0.4	**6.3**	0.0004	0.0063	CS2[*3]
WS11	0.1	0	**6.3**	0	0.0063	CS2[*3]
WS12	0.1	0	**5.7**	0	0.0057	CS2[*3]
WS13	0.1	0	3.2	0	0.0032	CS1
WS14	0.1	0	1.5	0	0.0015	CS1
WS15	0.1	0	1.9	0	0.0019	CS1
WS16	0.1	0	2.6	0	0.0026	CS1
WS17	0.1	0	2.9	0	0.0029	CS1
WS18	0.1	**1**	**8.7**	0.001	0.0087	CS2[*3]
WS19	0.1	**2.3**	**7.7**	0.0023	0.0077	CS2[*3]
WS20	0.1	0.1	**9.8**	0.0001	0.0098	CS2[*3]
WS21	0.1	0.8	**9.6**	0.0008	0.0096	CS2[*3]
WS22	0.1	0.9	**8.6**	0.0009	0.0086	CS2[*3]
BH1[#]	0.1	**30.6**	**8.4**	0.0306	0.0084	CS2[*3]
BH2[#]	0.1	**19.7**	2.2	0.0197	0.0022	CS2[*3]
BH3	0.1	0	0.2	0	0.0002	CS1
BH4	2.3	0	0	0	0	CS1
BH5	2.3	0	0	0	0	CS1
BH6	0.1	0.4	**8**	0.0004	0.008	CS1[*3]
BH7	0.1	0.3	1.2	0.0003	0.0012	CS1
BH8	0.1	0	1.2	0	0.0012	CS1
BH9	0.1	0	2.1	0	0.0021	CS1
BH10	0.1	**15.4**	**8.6**	0.0154	0.0086	CS2[*3]

Table 15.1: Summary of Ground Gas Monitoring Data						
Borehole ID	**Max Steady Flow Rate (l/hr)**	**Max Peak CH4 (% v/v)**	**Max Peak CO2 (% v/v)**	**Max. BH Qhg (CH4)**	**Max. BH Qhg (CO2)**	**Characteristic Situation (CS)**
BH11	0.1	**15.4**	**8.3**	0.0154	0.0083	CS2*3
BH12	0.1	**6.8**	**5.7**	0.0068	0.0057	CS2*3
Worst-credible Qhg (l/hr) *				**0.1406**	**0.606**	**CS2**
Worst-possible Qhg (l/hr) +				**6.3954**	**4.2218**	**CS4**

Qhg = Hazardous gas flow rate, in accordance with BS8485:2015

* Based on maximum recorded concentration and maximum flow rate applicable to any individual borehole. + Based on maximum recorded concentration and maximum flow rate across the whole site. *1 Where no flow is detected, detection limits of 0.1l/hr have been used. *2 Denotes where negative flow rates are the maximum flow rates recorded. As there are uncertainties regarding the reason for the negative flow rates these negative values have been reversed and used for the calculation of the GSV. *3 Denotes where the characteristic situation has been increased due to methane being recorded above 1% and / or carbon dioxide being recorded above 5%. # Response zone of monitoring well flooded or partially flooded. **Bold** denotes concentrations above 5% for CO2 and 1% for CH4.

15.3.5 The gas monitoring data indicates that the site should be classified as CS2 and that ground gas protection measures are required. While a highly conservative worst possible CS4 situation has been calculated for the site based on the maximum recorded concentrations and maximum flow rate across the whole site, this is not consistent with the conceptual model for the site (i.e. an old landfill with mostly inert wastes from a ground gas perspective) and is deemed to be unrepresentative for the following reasons:

- The maximum flow rate of 20.9l/hr recorded from RH108 is the main driver behind this worst possible characterisation and the response zone for this borehole is located at a depth of between 26m and 28m bgl in deep Glacial Till and is not representative of the main source of ground gas (i.e. the landfill) and pathways for flow are unlikely due to the significant thickness of glacial clay proved at this location and elsewhere.
- The peak methane and carbon dioxide concentrations used in the assessment were recorded in boreholes where the response zones were noted to be either fully flooded or partially flooded, which may have resulted in elevated carbon dioxide or methane concentrations. In such situations, when groundwater enters

the monitoring well, any dissolved gases in groundwater are able to partition from the water to the air in the well headspace until equilibrium is achieved. This gas then becomes trapped in the air space, resulting in high gas concentrations being recorded within the headspace when it is sampled during gas monitoring, with the overall gas concentration in the unsaturated zone being significantly less than that measured in the well headspace. The effect can be compounded due to additional gasses coming out of solution as the pressure drops within the monitoring well due to atmospheric effects.

15.3.6 By taking the above into consideration, the worst possible characterisation is reduced to CS2, which is more in line with the overall dataset and the conceptual model for the site.

15.3.7 Consideration has been given to the zoning of the site (specifically for the south western section of the site that lies outside of the landfill and where natural superficial strata are present at shallow depth), but the current dataset does not justify this approach (CS2 is indicated for boreholes in this area) and the presence of sand layers within the natural superficial deposits could act as pathways for ground gas from the nearby landfill.

15.3.8 The ground gas monitoring results are included at Appendix J.

15.4 Ground Gas Protection Measures

15.4.1 As outlined in BS8485, the proposed building types are likely to be Type A (Private) or Type B (Private or commercial / public, possible multiple) and in consideration of a CS2 situation for the site, a minimum gas protection score of 3.5 is required.

15.4.2 To achieve the points required, new structures will need to incorporate a combination of two or more types of gas protection measures in accordance with BS8485. The three general types of ground protection measures include:

- Structural barrier (within floor slab).
- Appropriate ventilation.
- Gas resistant membrane.

15.4.3 It is likely that most of the residential structures would be formed on a precast suspended segmental subfloor (i.e. beam and block). In this situation the 3.5 points

required can be achieved by incorporating the following into the floor slab construction:

- Passive Subfloor Dispersal Layer (2.5 points for very good performance and 1.5 points for good performance) that meets all the relevant criteria as set out in BS8485.
- Gas Resistant Membrane (2 points) that meets all the relevant criteria as set out in BS8485. In the event that the membrane could come into contact with organic contaminants then the resistance to such contaminants will need to be considered.

15.4.4 By incorporating the above with the floor slab construction, a maximum of 4.5 points can be achieved. While this point allocation seems like an overdesign, this is the only way that a beam and block floor slab construction can achieve the required points for a CS2 situation and incorporates a factor of safety into the design.

15.4.5 When further information about the form of the proposed residential structures is available and if a significant number of structures are found to conform to the model low rise housing type for the NHBC Traffic Light System assessment, then it may be prudent to undertake a separate assessment for those structures where this would be applicable, as the scope of the ground gas protection measures could be reduced.

15.4.6 If significant surcharging of the site is to be undertaken as part of the remedial works or the development of the site, that could result in increased ground gas generation, or if impermeable cover systems are used that could result in the build-up of gas, then additional ground gas monitoring may be required at the edges of such features to further quantify the risk.

15.5 **Radon Gas**

15.5.1 An initial assessment for radon gas has been carried out. The determination follows the two-stage procedure outlined in BR211 Radon: Guidance on protective measures for new dwellings (2007).

15.5.2 The assessment indicates that the site is in a lower to intermediate probability radon area where <1% to 1 to 3% of homes are estimated to be at or above the Action Level. In both instances no radon protection measures are required.

16 REVISED CONCEPTUAL SITE MODEL AND QUALITATIVE RISK ASSESSMENT

16.1 Introduction

16.1.1 In line with relevant guidance documents, plausible source, pathway and receptor linkages have been identified for the site. A preliminary CSM was presented in Section 8. At the time of writing, the CSM was largely based on the information that had been obtained before 2021 and a number of uncertainties in the CSM existed.

16.1.2 Following the completion of the most recent phases of site investigation works that have been undertaken at the site, the uncertainties have been reduced and an updated CSM is presented below.

16.2 Sources

16.2.1 The potential sources identified with the preliminary CSM are still applicable and further specific details from the WA phased site investigation works are included below. Celtic 2007 data has been referenced where this is applicable.

Soils

16.2.2 In soils, there are exceedances of screening values within:

- The suspected combustion type wastes that predominated within the north western and to a lesser extent the south western, south eastern and north easternmost sections of the site. These materials were generally found to contain frequent / widespread exceedences of metals (arsenic and lead) and PAH; occasional / localised exceedences of beryllium, nickel, total cyanide and TPH; and rare / isolated exceedences of asbestos, TPH, PCB's, hexavalent chromium, copper, zinc, benzene, p/m-xylene and o-Xylene. Total PFOS results were recorded below the LOD.
- The suspected construction and demolition type wastes that were typically recorded within the central section of the site. These materials were generally found to contain frequent / widespread exceedances of lead, PAH and PCB's; occasional / localised exceedences of TPH, asbestos, arsenic and nickel; and rare / localised exceedences of total cyanide, beryllium, copper, zinc, dibenzofuran, carbazole, 2-methylnaphthalene, trichloroethene and 1,2,4-trimethylbenzene. Elevated concentrations of Total PFOS (5.79 µg/kg) were identified in a single sample.

- The general cohesive Made Ground that was generally present across the site and intermixed with those other waste types noted above, were generally found to contain frequent / widespread exceedences of lead and PAH; occasional / localised exceedences of arsenic, total cyanide and TPH; and rare / isolated exceedences of asbestos, beryllium, cadmium, nickel, dibenzofuran and carbazole. Total PFOS results were all recorded below the LOD.
- The general granular Made Ground that was generally present across the site and intermixed with those other waste types noted above were generally found to contain frequent / widespread exceedences of lead and PAH; occasional / localised exceedences of PCB's; rare / isolated exceedences of total cyanide, beryllium, nickel, TPH, dibenzofuran and 1,2,4-trimethylbenzene. Total PFOS results were recorded below the LOD.
- The suspected household type wastes were typically recorded within the central south western part of the site, but also generally intermixed with the suspected construction and demolition type wastes within the central north western and central eastern parts of the site. In comparison to the other material types only limited testing was undertaken on these materials, but they were generally found to contain occasional / localised exceedences of asbestos and lead; rare / isolated exceedences of nickel, PAH and pentachlorophenol. Total PFOS results were recorded below the LOD.
- The suspected colliery spoil type waste was typically recorded within the north eastern section of the site. In comparison to the other material types, only limited testing was undertaken on these materials, and they were only found to have a single exceedence of naphthalene.
- Within the natural strata only a single exceedence of arsenic, a single exceedance of lead, and single exceedences of individual PAH compounds were identified at WS102 at 2.80m bgl. Total PFOS results were recorded below the LOD. Celtic noted a single exceedence of cyanide at TP67 at 2.8m bgl which was at a similar location to the above exceedance in WS102 (25m south east). Celtic also recorded an increased frequency of PAH exceedences, but these were still isolated to specific locations. The natural strata in both instances were noted to directly underlie the Made Ground strata and the descriptions were not typical of the natural strata elsewhere and hence were more likely to be reworked natural ground.

Leachate

16.2.3 In soil leachate, there are exceedances of screening values for:

- Within the suspected combustion and demolition type wastes occasional localised exceedences of hexavalent chromium, chromium, fluoranthene and benzo(a)pyrene; and rare / isolated exceedences of cadmium, total cyanide, copper and lead. The exceedences were generally localised within the north western / western section of the site. It should be noted that testing within this strata was limited.
- Within the suspected construction and demolition type waste occasional localised exceedences of fluoranthene; and rare / isolated exceedences of arsenic, cadmium, chromium, TPH, sulphates and benzo(a)pyrene. The exceedences were generally localised within the central section of the site. It should be noted that testing within this strata was limited.
- Within the suspected colliery spoil a single exceedence of fluoranthene. This exceedence was from the central eastern section of the site. It should be noted that testing within this strata was limited.
- Within the suspected household waste single exceedences of chromium, lead, TPH, Anthracene, fluoranthene and benzo(a)pyrene. This exceedence was from the central section of the site. It should be noted that testing within this strata was limited.
- Within the general cohesive Made Ground a single exceedence of hexavalent chromium and fluoranthene. This exceedence was from the site's southern boundary and in line with the school that abuts the site to the south. It should be noted that testing within this strata was limited. A single exceedance of phenol was noted from the Celtic 2007 dataset.

Groundwater

16.2.4 In groundwater there are exceedances of screening values for:

- In perched groundwater within the Made Ground there are frequent / widespread exceedances of the screening values for PAH, boron and manganese; occasional / localised exceedences of TPH, chromium, nickel, cyanide and total PFOS; rare / isolated exceedances for phenol, sulphate, zinc and iron; and a single exceedence of cadmium.

- In perched groundwater sampled from response zones that screened both Made Ground and Glacial Till, or where the Glacial Till was screened immediately below the Made Ground, there were occasional / localised exceedances of the screening values for PAH and manganese; rare / isolated exceedances for metals (boron, nickel, zinc and iron), TPH and total PFOS; and single exceedences of sulphate, chromium, zinc and phenol.
- In perched groundwater sampled from response zones that only screened deeper Glacial Till there were frequent exceedences of PAH and manganese; occasional / localised exceedences of TPH, boron and sulphate; rare / isolated exceedences of lead and single exceedences of total cyanide, phenol, iron and cadmium.
- In deep groundwater within bedrock there were frequent exceedances of the screening values for manganese; occasional / localised exceedences of PAH, TPH, chloroform and sulphate; and single exceedences of arsenic, selenium and bis(2-Ethylhexyl) phthalate. Most of the exceedences within bedrock are unlikely to be representative of contamination leaching from and originating from the site as outlined in Section 14.
- Concentrations of contaminants were significantly reduced within the Celtic 2007 dataset and most notably all PAH, SVOC / VOC's and TPH were generally recorded below the LOD. The exception being a single TPH sample within perched groundwater within Made Ground that was slightly elevated. Metal concentrations and phenol were also generally reduced, but similar trends to the WA datasets were observed.

Surface Waters

16.2.5 In surface waters there are exceedances of screening values for:

- Marginal exceedences of chromium from midstream along the canal.
- Marginal exceedences of TPH were recorded midstream and downstream with the highest concentrations being recorded from midstream.
- PAH compounds (benzo(a)pyrene and fluoranthene) were recorded within all samples from both rounds of WA testing with the lowest concentrations being recorded downstream of the site. The highest concentrations were recorded midstream, but elevated concentrations were also noted upstream.
- A single total PFOS exceedences at an order of magnitude greater than the screening value was recorded midstream along the canal.

- Concentrations of arsenic, boron, manganese, iron and nickel were found to be at slightly higher concentrations upstream. Concentrations of chromium, copper, lead, zinc and iron were generally found to be at slightly higher concentrations downstream

Non-Aqueous Phase Liquids (NAPL) / Free Product

16.2.6 Frequent groundwater level monitoring was undertaken by WA using a product / water interface probe in areas where visual and olfactory evidence of contamination has been recorded, where OIP "blips" have been recorded and where exceedences of the soil saturation limits have been recorded. No NAPL or free product was detected with the interface probe nor was any visual evidence of recorded during development, purging and groundwater sampling. Celtic also state that no NAPL was encountered during their works.

Ground Gas

16.2.7 The site investigation works indicate that the following ground gas sources are present at the site:

- Made Ground of significant thickness (up to 13.85m) within the historical landfill with abundant degradable constituents. A moderate ground gas generation potential is envisaged based on the age of the landfill.
- Made Ground of limited thickness and extent associated with the former infilled reservoir. Low degradable content. A very low ground gas generation potential is envisaged.
- The WA ground gas risk assessment undertaken is generally indicative of CS2 and a worst-case possible scenario of CS4.

16.2.8 Off-site possible ground gas sources include areas of possibly infilled ground (e.g. ponds, excavations, and the extension of those on-site excavations off-site), other historic landfills other areas of Made Ground.

16.3 Receptors

16.3.1 Several sensitive receptors were identified in the preliminary CSM included within Section 9. Following completion of the additional phased site investigation works the source-pathway-receptor linkages have been updated and there are now sufficient lines of evidence to support the removal of bedrock Principal and Secondary B

Aquifers and the Rochdale Canal as receptors. These lines of evidence are discussed further below.

Human Health

16.3.2 Human health receptors include current site users, future site users / occupiers, construction workers, and the general public / adjacent site users (includes residential properties and the school to the south).

Groundwater

16.3.3 The site is indicated to be underlain by three groundwater bodies. This includes:

- Perched groundwater within Made Ground;
- Perched shallow and deeper groundwater within the superficial Secondary A and Secondary Undifferentiated Aquifers within the Glacial Till and;
- Deeper groundwater within the Principal Aquifer and Secondary B Aquifer within the Collyhurst Sandstone Formation / Chester Formation and Manchester Marls, respectively.

16.3.4 It should be noted that the superficial Secondary A and Undifferentiated Aquifers are indicated to comprise several minor aquifers restricted to lenses of granular strata separated from each other by significant thickness of very low permeability, overconsolidated cohesive strata (i.e. a geological barrier). The perched and confined / isolated nature of the groundwater within the Made Ground and Glacial Till are highlighted within the cross sections contained within Appendix N and Drawings LD10385-017 to LD10385-020.

16.3.5 The site does not lie within a groundwater source protection zone, there are no potable groundwater abstractions within 2.0km of the site and the site's groundwater vulnerability is recorded as low.

16.3.6 The Principal Aquifer and Secondary B Aquifer within bedrock have been removed from the CSM due to the lack of a valid source-pathway-receptor linkage, as outlined by the multiple lines of evidence below:

- The site lies within a BGS Buried Glacial Valley where thick drift deposits are known to be present. This has been validated by the site investigation works where rotary coring techniques have shown that the landfill is underlain by between c. 35m and 45m of predominantly low permeability and overconsolidated glacial clay (i.e. a

geological barrier) as shown in Drawing LD10385-007, the cross sections in Appendix N and the exploratory hole logs contained within Appendix F. The depth to rockhead is also consistent with the findings from local BGS boreholes as shown in Drawings LD10387-008 and LD10387-009.

- Exceedances of the controlled waters screening values and the highest concentrations of determinands are most widespread within perched groundwater within the Made Ground. The absence of most of these determinands in the bedrock groundwater and the presence of elevated concentrations of contaminants not detected within the perched groundwater within Made Ground (see Section 14), supports the lack of continuity between the perched water within the Made Ground and the deeper groundwater within bedrock. The latter is also indicative of background / baseline conditions within the Principal Aquifer and / or another source of contamination other than the site as discussed in Section 14.
- Concentrations of boron, manganese, selenium and sulphate where higher within the deep groundwater within bedrock than they were within the soils or perched groundwater within Made Ground. This is also indicative of background / baseline conditions within the Principal Aquifer and / or another source of contamination other than the site as discussed in Section 14.
- Many of the elevated concentrations of determinands within bedrock were from boreholes located outside of the recorded extents of the clay pit excavation and the highest and lowest concentrations were noted upgradient and downgradient, respectively, of the indicated south westerly groundwater flow direction. If the site were to be the source of the contamination within the deeper groundwaters, then the opposite trend should have been observed. This is also indicative of another source of contamination other than the site and / or baseline conditions within the Principal Aquifer.
- Further evidence of the confined nature of the perched groundwater within the landfill and the lack of a vertical migration pathway to deeper groundwater is supported by the groundwater seepage that has been observed on-site during periods of heavy rainfall. If groundwater within the backfilled clay pits where infiltrating into the underlying natural strata at a significant rate, then this relationship is unlikely to have been observed. Sub artesian conditions within

deeper groundwater are also indicated and this is also indicative of confined conditions within the deeper groundwater.

- Previous third-party DQRA indicated that there was limited evidence to suggest that significant contaminants were leaching from Made Ground into the deeper groundwater at the site. This assessment was based on rockhead being encountered at c. 20m bgl but given that rockhead has been proven to be significantly deeper at c. 45m bgl, this assessment is now known to have been highly conservative and this is also supportive of excluding the deeper groundwater as a receptor.

Surface Water

16.3.7 The nearest graded watercourse is the River Medlock located 650m south and downgradient of the site. The EA has assigned a Moderate (2019) and a General Quality Assessment (Chemistry) rating of E (Poor). It is understood that there are no sensitive surface water abstractions within influencing distance of the site and that most are for non-sensitive industrial purposes.

16.3.8 The Rochdale Canal and Moston Brook have been removed from the CSM, due to the lack of a valid source-pathway-receptor linkage, as outlined by the multiple lines of evidence below:

- A lack of hydraulic continuity is indicated between the Rochdale Canal and shallow perched groundwater, as the canal is confined by those natural clay deposits (i.e. a geological barrier) that are indicated around the periphery of the site as shown by the cross sections in Appendix N. The canal is also likely to be clay lined. There is also no evidence of any land drainage from the site out falling into the canal.
- Water levels within the canal are generally elevated above the perched groundwater encountered at the site as shown in Drawings LD10385-017 and Drawings LD10385-018. The exception being TP104 where groundwater strikes were recorded at 82.7m and 81.0m AOD with the canal being at c. 81.0m AOD. However, this trial pit position was at the location of a historical reservoir, so the groundwater encountered there is likely to be localised and contained within this feature and not representative of the general perched groundwater levels within the Made Ground.

- Localised shallow perched groundwater flow directions are indicated to be away from the Rochdale Canal and towards the deeper parts of the clay pit excavations as indicated in Drawing LD10385-019. Consequently, the lateral migration and possibility of groundwater flooding and overspill into the canal is considered to be highly unlikely.
- The contaminants recorded from samples obtained from the Rochdale Canal are generally not reflective of those encountered within the shallow perched groundwater or soil leachates within the landfill as outlined in Section 14. Elevated concentrations of some contaminants (notably PAH) were also recorded from upstream of the site and this indicates that some of the background concentrations of contaminants within the canal may already be elevated and are not attributable to the site.
- The site is slightly elevated from the canal in places along the northern boundary so some surface water run-off could be migrating towards the canal in this area. However, the potential for significant leaching to occur is very low to negligible due to the limited amount of time these waters would have to percolate through the soils before entering the canal. Infiltration and interception by vegetation are also more likely to occur.
- While the Rochdale Canal has been assigned a General Quality Assessment (Chemistry) rating of B (Good) and it is listed as a Site of Biological Interest (SBI), it is not a graded watercourse and hence the River Medlock is considered to be the more sensitive receptor.
- Moston Brook has been discounted due to the lack of valid pathways (i.e. any surface waters would first be intercepted by the canal, topography generally falls to the south west and groundwater flows are away from this receptor). Furthermore, Moston Brook is culverted for most of its length.

Building and Services

16.3.9 Historic, current and future buildings and service infrastructure (including those adjacent to the site) are also potential receptors.

16.4 Potential Contaminative Linkages

Human Health

16.4.1 In terms of human health, the main potential exposure pathways are considered to be inhalation of soil dust and vapours / ground gas, dermal contact and ingestion of soils, dust, and waters. There is also the possibility of consumption of homegrown vegetables and ingestion of soil attached to vegetables following development of the site. However, the viability of these pathways varies as follows:

- Following development of the site there is expected to be an increase in hardstanding areas, which would help to minimise the dermal, ingestion and inhalation pathways (excluding vapours).
- Construction works and to a lesser extent current site users are likely to have acute interaction with soil and materials, so they are likely to be at risk from all three potential pathways whilst working on the site (i.e. dermal contact, ingestion and inhalation).
- Windblown pathways are most likely during construction of the site but will be significantly reduced following development of the site due to the increase in hardstanding areas.
- Seepage of groundwater at the surface and migration to off-site receptors. This has been mitigated in the short term by a third-party who has diverted these waters away from off-site receptors via small drainage channel. During development the seepage / shallow waters will be managed via a suitable CEMP and following development the risk of a seepage will be significantly reduced due to a c. 70% increase in hardstanding areas reducing site infiltration etc. However, further groundwater seepage could still occur due to leachate generation etc. and as such there may be a requirement for the ongoing or potential future management / mitigation of these shallow perched groundwaters.

Controlled Waters – Groundwater

16.4.2 The main pathways by which contaminants are likely to reach groundwater on-site is through the infiltration of rainwater causing vertical movement through the unsaturated zone followed by vertical and lateral movement of contaminants within groundwater as shown on Drawing LD10385-016 and described below:

- Currently, most of the site is vegetated (although tree feeling has recently taken place) and derelict land with vertical migration pathways being restricted to those granular Made Ground materials confined within the backfilled clay pit excavations. During development vertical migration pathways are likely to increase following removal of vegetation and during earthworks. Following development, vertical migration pathways are likely to be significantly reduced from the baseline due to a c. 70% increase in hardstanding areas and the use of low permeability clean cover systems. Built infrastructure (e.g. foundations and services) may also provide pathways. Surface water is also more likely to be captured by drainage before soaking into the ground.
- Further vertical migration into the underlying Glacial Till is significantly limited due to the predominantly low permeability nature of the underlying Glacial Till (i.e. a geological barrier). This is supported by the observed groundwater seepage within the south western section of the site, which indicates that the perched groundwater within the backfilled clay pits is relatively confined. Refer to the cross sections contained within Appendix N and Drawings LD10385-007 and LD10385-010 to 014.
- Lateral migration pathways through the ground to off-site receptors from the backfilled clay pit excavations are indicated to be very limited due to the surrounding low permeability Glacial Till (i.e. a geological barrier). Lateral migration through the ground within and between the various backfilled clay pits is anticipated to be variable due to the indicated extent and geometry of the various excavations and the variability encountered within the backfilled materials. Lateral migration at the base of the backfilled clay pit excavations is expected to predominate at the interface between the granular Made Ground and the underlying predominantly low permeability Glacial Till (i.e. a geological barrier). Refer to the cross sections contained within Appendix N and Drawings LD10385-006 to 007 and LD10385-010 to 014.
- Within the central and eastern areas of the site (area of the main clay pit excavations) there are a handful of exploratory hole positions where Made Ground directly overlies natural granular deposits or where only a very thin layer of clay is present. This indicates that vertical migration pathways are present in places to the underlying granular layers within the shallow Glacial Till. However, these

granular layers are indicated to have limited vertical and lateral connectivity and are separated from each other by a significant thickness of very low permeability, overconsolidated cohesive strata (i.e. a geological barrier). As such there is unlikely to be continuity between the shallow and deeper perched water within the Glacial Till. The perched and confined / isolated nature of the groundwater within the shallow Glacial Till are highlighted within the cross sections contained within Appendix N and Drawings LD10385-017 to LD10385-018.

- Shallow perched water strikes within Made Ground were encountered between 0.1m and 8.2m bgl with monitored elevations recorded between 85.18m and 75.49m AOD. Shallow perched groundwater strikes within the underlying natural superficial deposits were encountered between 1.0m and 15.0m bgl with monitored elevations recorded between 83.44m and 63.32m AOD. Analysis of groundwater levels within the perched groundwater within the Made Ground / landfill are variable but are generally indicated to be towards the deepest parts of the clay pit excavations as shown in Drawing LD10385-007 and Drawing LD10385-019. Groundwater flow within Glacial Till is also variable due to the lack of interconnectivity between the various sand and gravel layers as shown Drawing LD10385-020.
- Slightly confined conditions are indicated for the groundwater within the shallow natural superficial deposits, and this also suggests that these water bodies are confined. It is expected that these confined conditions would reduce the downward migration of some contaminants through groundwater.
- Interception of rainwater by the dense vegetation that is present at the site and the uptake of shallow perched water by roots and evaporation are also a mechanism by which the infiltration of rainwater / surface waters into the backfilled clay pit excavations is reduced.
- Limited vertical and lateral migration pathways may also exist via historic man-made features such as relic foundations, underground infrastructure / voids, excavations and buried services. However, the presence of these features is indicated to be limited from the various site investigations that have been undertaken.
- Lateral migration of perched groundwater beneath the site to the River Medlock Valley is considered unlikely due to the presence of significant thickness of low

permeability Glacial Till (i.e. a geological barrier) and the lack of connectivity that is indicated for the sand and gravel lenses.

Controlled Waters – Surface Water

16.4.3 The main pathway by which contaminants are likely to reach surface water receptors is through surface water run-off / overland flow as follows:

- The site and the surrounding topography generally falls to the south west and towards the site's south western corner.
- During development of the site, surface water run-off is likely to increase due to the removal of vegetation and earthworks. However, management of these surface waters would be required as part of the development of the site (i.e. via a CEMP or similar) and this should limit pathways to receptors.
- Following the development of the site it is envisaged that surface water pathways will be reduced as any waters will likely be captured within on-site drainage before they encounter any surface water receptors or soils.

Ground Gas and Vapour

16.4.4 With the exception of downward migration, the main ground gas pathways are similar to those lateral and vertical migration pathways envisaged for groundwater. However, the ground gas generation potential of the source is the main factor in the potential for the lateral migration of any ground gases and groundwater itself can sometimes facilitate lateral migration of dissolved ground gases. Ingress and accumulation then occurs once the ground gas or vapour has reached a valid receptor (e.g. a building). Inhalation is the main pathway for human health receptors.

16.4.5 Following development of the site, ground gas pathways are envisaged to be reduced due to the possible use of low permeability cover systems. Conversely built infrastructure (e.g. foundations and services) may also provide pathways.

Buildings / Infrastructure

16.4.6 Potential sources of on-site contamination and aggressive ground and groundwater have been identified that could have the ability to degrade concrete or water pipes which are likely to come into direct contact with the contaminated / aggressive Made Ground or groundwater. Ingress and accumulation of ground gases and vapours may also occur.

Flora / Fauna

16.4.7 The site is vegetated with other flora and fauna being present that have developed within potentially contaminated soils. Future vegetation may be planted at the site and may come into contact with contaminated soils or groundwater.

16.5 Qualitative Risk Assessment

16.5.1 A qualitative risk assessment has been undertaken for the contaminant linkages to identify any potentially unacceptable risks. The CIRIA document Contaminated Land Risk Assessment – a guide to good practice C552, 2001 defines the Consequence of Risk, Probability of Risk Being Realised and Risk Classification Definition. These definitions are provided in Appendix E and are used to provide a qualitative risk assessment for each identified source, pathway, receptor linkage.

16.5.2 The combined CSM and qualitative risk assessment for each identified source, pathway, receptor linkage can be found in Table 16.1.

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
Contamination in soil/shallow perched groundwater noted in the CSM originating from the following on-site sources: 1. Made Ground associated with site's former historic uses. 2. Site's former use as brickworks with clay extraction pits. 3. Site's former uses as historic	Human Health (inhalation, dermal contact and ingestion).	Future site users	Medium	Likely	Moderate (Low with mitigation)	The most sensitive receptor in this scenario would be a child. Hardstanding in the form of roads and pavements will be present across most of the site, reducing the potential for most pathways to be present. However, pathways could still be present in gardens and areas of soft landscaping. Remediation and mitigating measures will be required to protect future site users, and this would likely include clean cover systems within private gardens / areas of soft landscaping. Following remediation, the consequence of any risk being realised would be reduced.
		Current site users	Medium	Low	Low to Moderate	The site is currently densely vegetated, derelict and fenced / secure and only has infrequent use from trespassers. Fly tipped materials are present but pathways and long-term exposure are limited.
		Construction workers	Medium	Likely	Moderate (Low with mitigation)	Less sensitive receptor in this instance (adult). Increased risk to construction workers due to acute interaction with soils. Asbestos fibres have been recorded within soils above the threshold for human health and airborne fibres could be generated. No acute GAC exceedences noted. Risk to construction workers can be managed through the

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
and registered landfill. 4. Former reservoir (possibly infilled) 5. Perched groundwaters within the made ground / landfill. 6. Fly tipped materials & bund along the site's eastern boundary						use of appropriate and safe working procedures, the use of appropriate PPE and suitable mitigating measures to deal with asbestos fibres.
		Adjacent site users	Medium	High Likelihood	High (Low with mitigation)	The most sensitive receptor in this instance would be a child. Contaminated shallow perched groundwater has been observed seeping out of the ground and migrating to sensitive off-site receptors following a period of heavy rainfall. However, an impermeable bund and drainage channel has been installed to divert these waters back onto the site and away from off-site receptors. During development of the site contaminated soils and shallow perched groundwater will likely be exposed and the risk of migration to off-site receptors via windblown soils or surface water run-off would be increased. However, it is unlikely that contaminants from on-site would migrate off-site in large quantities or at the concentrations recorded on-site, so the consequence is reduced. Risks would be reduced by undertaking development works in accordance with a CEMP. Increase in hardstanding areas and reduced infiltration post development will reduce the risk of further seepages. Some form of leachate / shallow

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
						perched groundwater mitigation may be required to prevent future groundwater seepage to off-site receptors.
	Controlled waters (migration of groundwater through the ground and surface water run-off/overland flow).	Superficial Secondary Undifferentiated Aquifer	Mild	Low	Low	The superficial Secondary Undifferentiated aquifer is not considered to be overly sensitive and comprises significant thickness of low permeability Glacial Till (i.e. a geological barrier). However, localised pathways do exist in places from the landfill to sand and gravel lenses within the till where these directly underlie the landfill and exceedences of contaminants have been recorded. However, the levels of contaminants observed within Made Ground were generally not reflected within shallow or deep natural deposits and the granular lenses are indicated to be discontinuous and not in continuity with other groundwater or surface water bodies, so the overall impact is indicated to be relatively localised and confined.
		Superficial Secondary A Aquifer	Medium	Unlikely	Low	The superficial Secondary A Aquifer encroaches into the north western section of the site and is likely be of limited extent. No evidence for significant natural granular deposits that would warrant a Secondary A Aquifer classification. Pathways are considered unlikely for the

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
						reasons outlined above for the Secondary Undifferentiated Aquifer.
		River Medlock	Medium	Unlikely	Low	The River Medlock is not overly sensitive (WFD Cycle 2 2019 Overall Classification: Moderate), and pathways are limited due to the distance to the receptors, the presence of predominantly low permeability Glacial Till (i.e. a geological barrier) between the site and the river and in some instance's barriers to surface water runoff/overland flow. While granular lenses are present within the Glacial Till, the ground model for the site indicates that these are isolated, and it is unlikely that any continuity is present over such a large distance.
	Buildings / Infrastructure (Direct contact)	Future and existing buildings and water pipes	Mild	Likely	Low to Moderate (Low with mitigation)	Elevated and widespread concentrations of aggressive contaminants (e.g. sulphates and PAH) are widespread and would have the ability to degrade concrete or water pipes. Mitigating measures could include concrete design to withstand chemical attack and barrier pipe/ ductile pipes for water supply pipes.
	Flora and Fauna	Existing vegetation and potential fauna	Minor	Likely	Low	The site is vegetated although recently tree feeling has been undertaken, with other flora and fauna being present that have developed within contaminated soils.

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
		on site and future vegetation				Future vegetation may be planted at the site and may come into contact with contaminated soils.
On-site ground gas sources and vapour sources including Made Ground / landfill, former infilled reservoir and contaminated groundwaters.	Buildings (gas / vapour migration, ingress and accumulation). Human Health (inhalation)	Future site users	Severe	Likely	High (Low with mitigation)	Significant thicknesses of Made Ground (up to 14m) have been identified within the historical landfill with abundant degradable constituents. A moderate ground gas generation potential is envisaged based on the age of the landfill and the recorded waste types. Elevated ground gas concentrations and flow rates have been recorded and the most recent monitoring visits to date are generally indicative of CS2 and a worst-case possible scenario of CS4. Recent data also indicates that there is a risk vapours could be generated from soils and groundwater and further work is requried. Based on the most recent results, ground gas and vapour protection is envisaged (to be confirmed following a detailed vapour assessment) for new buildings on-site and this will mitigate the risk.
		Future on-site buildings	Severe	Likely	High (Low with mitigation)	
		Current site users	Mild	Unlikely	Very low	Current site users are infrequent (e.g. trespassers) and activities are undertaken in open atmosphere so the risk to current site users is very low.

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
		Adjacent site users	Severe	Unlikely	Low to Moderate (Low with mitigation)	Based on previous and more recent site investigations, pathways to off-site receptors are considered unlikely due to the natural clay deposits that are indicated along the site's boundaries. Possible pathways are indicated within the south easternmost corner of the site where historic excavations appear to have extended off-site. However, these are indicated to be relatively isolated from the main excavations that occurred on-site, and recent data indicates that only low gas concentrations have been recorded in this area. Mitigation measures could include gas venting trenches along site boundaries to reduce the risk.
		Adjacent buildings	Severe	Unlikely	Low to Moderate (Low with mitigation)	
Off-site historic and current sources as outlined in the CSM.	Inhalation, dermal contact and ingestion	Future site users	Medium	Low	Low to Moderate (Low with mitigation)	It is unlikely that soil bound contaminants from off-site (unless fully exposed) have made their way to site in large quantities. Most of the surrounding area is also developed so any significant sources of contamination are likely to have been removed or covered thereby breaking the pollutant pathway linkage.
		Current site users	Medium	Low	Low to Moderate (Low with mitigation)	

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
		Construction workers	Medium	Low	Low to Moderate (Low with mitigation)	See above for commentary.
	Migration of groundwater through the ground and surface water run-off/overland flow to those receptors beneath the site	Superficial Secondary A Aquifer	Medium	Unlikely	Low	In most cases migration of contaminants to the site via surface water / overland flow is unlikely due to the distance of the sources from the site, the presence of physical barriers and that interception by local drainage in developed areas is likely to occur. Migration of groundwater through the ground is unlikely due to the predominantly low permeability of the surrounding Glacial Till (i.e. a geological barrier). While outfalls to the canal may be present from off-site sources, continuity between the groundwater at the site and the Rochdale Canal is not indicated.
		Superficial Secondary Undifferentiated Aquifer	Mild	Unlikely	Very Low	
		River Medlock	Medium	Unlikely	Low	
	Direct contact	Existing and future buildings and water pipes	Mild	Unlikely	Very Low	See previous sections regarding the contaminative potential for off-site sources and the potential pathways for soils and groundwater that may be aggressive to buildings and water pipes.

Table 16.1: Combined CSM & Quantitative Environmental Risk Assessment						
Source / Contaminant	**Pathways**	**Receptors**	**Consequence of Risk Being Realised*1**	**Probability of Risk Being Realised*2**	**Risk Rating**	**Necessary Actions / Commentary**
Other off-site ground gas and vapour sources including: 1. Potential areas of infilled land 2. Historic landfills 3. Cemetery	Gas migration, ingress, and accumulation	Future site users	Medium	Unlikely	Low (Very low with mitigation)	These sources are anticipated to have a low to moderate ground gas generation potential, so the consequence is reduced. However, pathways to the site are unlikely due to the predominantly low permeability of the surrounding Glacial Till. Gas concentrations recorded for those monitoring wells adjacent to the site's south eastern boundary are relatively low and indicate that ground gas generation / migration from the infilled ground adjacent to the site's south eastern boundary is of a limited nature. Ground gas protection is likely required for those on-site sources anyway so this will further reduce the risk from off-site sources.
		Current site users	Medium	Unlikely	Low (Very low with mitigation)	
		Existing and future buildings	Medium	Unlikely	Low (Very low with mitigation)	

Notes

*[1] Considers both the potentially severity of the hazard and the sensitivity of the receptor. Where applicable, the most sensitive receptor / hazard has been used for the overall assessment.

*[2] Considers both the presence of the hazard and the integrity of the pathway. Where applicable, the most likely hazard / pathways have been used for the overall assessment.

17 GROUND ENGINEERING CONSIDERATIONS

17.1.1 It is understood that the site is to be redeveloped for a residential end use that also includes a school, but at this stage there is no finalised development plan. Following finalisation of any proposed development layouts, detailed design or structural loading information and any earthworks designs, this section may require detailed review to assess whether the recommendations made remain applicable or require re-assessment. These recommendations should not be considered in isolation without considering the report in full.

Design Stratigraphy

17.1.2 Highly variable Made Ground deposits have been encountered and are associated with the historical infilling of those former clay pit excavations that are recorded to have occupied most of the site. The depth of the Made Ground was found to vary significantly and has been recorded between 0.3m and 13.85m bgl (an indicative Made Ground contour plan is shown in Drawing LD10385-006), and is underlain by between 35m to 45m of predominantly cohesive / low permeability Glacial Till (an indicative Glacial Till thickness contour plan is shown in Drawing LD10385-007), which is in turn underlain by solid geology comprising weathered Sandstone of the Collyhurst Sandstone and Chester Formations (indicative rockhead contour plans are shown in Drawing LD10385-008 and 009).

Foundations

17.1.3 The Made Ground in its current state would not be suitable as a founding stratum without some form of ground improvement, due to its extremely variable nature and variable strength characteristics. For those areas where Made Ground can be fully excavated, recompacted and engineered without restriction, buildings could be founded on shallow reinforced foundations. However, for those areas where deeper Made Ground is to be left in-situ beneath the re-engineered Made ground, it is recommended that either deep trench reinforced foundations extending to natural strata or raft foundations are utilised. Larger structures with higher loadings such as the proposed school or multi-storey residential dwellings may require piling into the underlying Glacial Till. Following finalisation of the proposed development layout a foundation zoning plan should be produced to identify plot specific foundation requirements.

17.1.4 Where buildings require a piled foundation solution, specialist advice will be required to determine the most suitable pile types for the recorded ground conditions. Due to the presence of abundant large obstructions throughout the Made Ground, driven piles or Continuous Flight Auger (CFA) piles are unlikely to be suitable. Consideration will also need to be given to the minimisation of pile arisings originating from the Made Ground, as the regulators will likely consider this material to be waste and if it is to be retained on-site then it will need to meet a defined and pre-agreed end-of-waste criteria. Furthermore, given the presence of Made Ground and that ongoing or potential future consolidation could occur, it is essential that pile design allows for negative skin friction. Due to the presence of contaminated ground and groundwater within the former landfill, a piling risk assessment and subsequent mitigation may be required for a proposed piling solution on the basis that new pathway linkages may be created during pile construction.

17.1.5 Vibrostone / concrete columns or dynamic compaction may also be a suitable ground improvement technique for some parts of the site (exclusion zones will likely be required from neighbouring properties and the canal to protect them from vibration), and this may be adopted in combination with any material turnover that is undertaken. This combination may eliminate the requirement for raft or piled foundations in the areas where this can successfully be undertaken. However, this is subject to detailed inspection / advice from specialist ground improvement contractors as significant shallow perched waters are present that may require dewatering and consideration would also need to be given to the contamination that is present in soils and groundwater.

17.1.6 For those areas of the site where natural Glacial Till deposits are present at shallow depth (<2.5m bgl) it may be feasible to use traditional shallow foundations bearing into the Glacial Till. However, this is subject to careful design which ensures that total and differential settlements do not exceed serviceability limit states and ensures that the minimum ground cover to foundation formation level and foundation depths to suit the proximity / species of existing / recently felled trees are both maintained in accordance with current design standards and good engineering practice.

17.1.7 To minimise issues with potential differential settlement of the foundation structure, it is recommended that foundations are not constructed upon more than one stratum type and that new buildings do not straddle areas of improved and unimproved

ground or areas of buried highwalls. Where these areas cannot be avoided foundations should be either stepped / deepened to the same depth, alternative foundation solutions (e.g. piles) be adopted or the area of ground improvement is extended to include all areas where buildings are proposed. Any localised 'soft spot' areas encountered during the excavation for shallow foundations should also be removed and foundations extended down to suitable formation strata.

Floor Slabs

17.1.8 Due to the significant thicknesses of Made Ground across the site with areas where deeper Made Ground is likely to be left in-situ beneath re-engineered Made Ground, suspended floor slabs will likely be required to mitigate against settlement / differential settlement. This form of construction would also be beneficial for the ground gas protection measures that are indicated. However, this is also dependent on the finalised earthworks design, the type of foundation solution adopted for different areas of the site, and the other geotechnical factors outlined elsewhere in this report.

External Areas

17.1.9 The most likely sub-grade formations for external areas will be the excavated, recompacted and engineered Made Ground materials and to a lesser extent the very shallow natural Glacial Till. Based on the laboratory testing results undertaken for the cohesive Made Ground and shallow cohesive Glacial Till materials, frost susceptibility and the influence of trees will need to be considered when external designs are carried out.

17.1.10 Once site levels are known, validation testing should be undertaken to finalise the design for any external areas. For those areas of the site where deeper Made Ground is to be left in-situ beneath any re-engineered Made Ground there is a risk of ongoing or potential future long-term settlement and this will need to be considered in the remediation design and external designs. To limit settlements within those areas where deeper Made Ground is to be left in-situ beneath engineered Made Ground, reinforcement (e.g. geogrids), soil modification / stabilisation and / or ground improvement should be considered.

17.1.11 Modification / stabilisation or a non-volumetrically active capping layer may be required for those cohesive Made Ground and / or natural shallow cohesive Glacial

Till deposits that are indicated to be susceptible to frost and / or likely influenced by trees / shrubs. Further geotechnical testing may be required to confirm this.

17.1.12 All formations should be proof rolled prior to construction of external areas and this will aid in the detection of loose or soft pockets and allow appropriate measures to be taken. The formation should be inspected / validated by a competent geotechnical engineer.

17.1.13 In all instances it is recommended that advice and consultation with specialist ground works contractors be sought and further geotechnical testing and / or validation (e.g. Californian Bearing Ratio tests at formation level) will be required once site levels are known to finalise external designs.

Earthworks

17.1.14 Based on the existing site levels and the current proposed development plan, it is envisaged that some earthworks will be required for the proposed structures and / or external areas. At this preliminary stage, the formation levels for the site are not known, but it is anticipated that the materials excavated and potentially re-used as part of an earthworks exercise at the site are likely to comprise the shallow Made Ground materials and to a lesser extent the natural Glacial Till.

17.1.15 Results from the laboratory testing indicate that the Made Ground was often slightly dry or slightly wet of the optimum and, where cohesive, were generally of intermediate plasticity and medium shrinkage potential. There were also various anthropogenic constituents present within the shallow Made Ground and consequently, high levels of compaction may not be achievable unless modification / stabilisation and / or ground improvement of the soils is undertaken. Those large constituents that are indicated should be removed / regraded prior to engineering. It may be necessary to remove materials that have a high organic content, and / or high plasticity in order to achieve required levels of compaction in these materials.

17.1.16 While grading analyses indicate that the shallow cohesive superficial deposits may be suitable for use as general fill and in some case selected fill, results from the laboratory testing indicate that it was often slightly dry of the optimum and was generally of intermediate plasticity and low shrinkage potential. It may be necessary to remove materials that have a high organic content, and / or high plasticity in order to achieve required levels of compaction in these materials.

17.1.17 It may be feasible to stockpile concrete derived from the Made Ground and old foundations / surfacing which have been grubbed out. This material may be reused on site, once it has been crushed to a suitable size, provided that the material meet a defined and pre-agreed end-of-waste criteria.

17.1.18 In all instances, once formation levels are finalised specialist advice should be sought from specialist ground works contractors. Further geotechnical testing and validation will be required to ensure that the required levels of compaction have been achieved.

Total Settlements and Differential Settlements

17.1.19 For those areas where deeper Made Ground are to remain in-situ beneath engineered fill, settlements could exceed serviceability limit states and / or result in differential settlements in response to additional loads, degradation of waste materials leading to collapse and / or self-weight settlement etc. and these movements could exceed the serviceability limit states for residential housing and other structures. This will need to be taken into consideration for the chosen foundation or external designs.

17.1.20 Quantifying settlements of the Made Ground on site is inherently difficult due to the extreme variability of the material. The remediation design should consider future settlement performance. Following earthworks and remediation at the site, settlement testing (e.g. skip load tests or other forms of maintained load tests) should be undertaken to model total settlements and the time it would take for these settlements to occur, especially for those areas where shallow foundations are to be utilised in order to satisfy NHBC requirements. This would inform what mitigation measures would be required to deal with any unacceptable settlements.

17.1.21 For those areas where deeper Made Ground is to remain in-situ beneath engineered fill alternative foundation solutions may need to be adopted as outlined in the foundation's subsection. Alternatively, to limit settlements within these areas and to potentially allow for the use of shallow foundations, reinforcement (e.g. geogrids or geotextiles), soil modification / stabilisation and / or ground improvement of the shallow and deep Made Ground should be considered to mitigate against any ongoing or potential future settlements. Again, maintained load tests may be required to confirm the future settlement performance and in order to satisfy NHBC requirements.

Obstructions

17.1.22 Numerous large obstructions within the Made Ground and other relict infrastructure associated with the former brickwork's buildings were encountered during the site investigation. These features will likely require total or partial removal to facilitate development of the site. For any larger or deeper features that are to remain in-situ, it is recommended to undertake probing to identify if any further ground obstructions are present, which may impede the progress of the proposed foundation solutions. The results of such investigations will be used in the selection of foundations.

Buried Highwalls

17.1.23 Numerous buried highwalls to the former clay pit excavations are present beneath the site and the variation in the depth of the Made Ground could result in severe differential settlements if buildings are constructed across these areas. During earthworks it is recommended that exposed highwalls are surveyed and that the properties and geometry of the fill are further investigated so that exclusion zones where ground movements are likely to be unacceptably large can be delineated. Consideration should be given to the use of piled or raft foundation solutions in these areas as this would mitigate against any unacceptable movements and hence reduce the extent of any exclusion zones.

Excavations

17.1.24 Due to the high degree of variability encountered within the Made Ground, excavations should be supported or battered back to a stable angle to ensure adequate stability is achieved for the duration of any works. Any excavations that are to be left open or unsupervised will need to be secured. The temporary works design of the remediation contractor should also reduce the risk of instability to any other surrounding works and safeguard the stability of such land.

17.1.25 Any excavations requiring entry by site personnel should be fully supported for reasons of safety and the main works Contractor shall satisfy themselves at all times of the suitability and stability of excavated strata and adopt appropriate shoring techniques, where appropriate in accordance with the Confined Spaces Regulations.

17.1.26 Excavations within the Made Ground and natural superficial strata present across the site should be readily achievable using conventional mechanical backhoe excavators. Occasionally hard digging conditions may be encountered where obstructions are

present within the Made Ground Deposits and in this instance larger capacity excavators and pneumatic / hydraulic breaking equipment may be necessary.

Groundwater

17.1.27 Shallow perched groundwaters were frequently encountered within Made Ground during the construction of exploratory holes at the site and during groundwater monitoring visits. A temporary groundwater seepage at the surface was also noted along the sites southern boundary following a period of heavy rainfall. Groundwater levels can vary seasonally or following periods of prolonged wet or dry weather and levels higher or lower than those measured may be present during construction. The groundwater level may also change following any changes to site levels.

17.1.28 Due to the presence of shallow perched groundwaters, there will likely be a requirement for localised temporary works in the form of dewatering / barriers during excavation of any service trenches, mass excavations or excavations that are undertaken as part of any earthworks exercise at the site. There are also environmental and possible permitting considerations associated with the management of these shallow perched groundwaters and these are detailed further in Section 19. Groundwater treatment may be required prior to discharge or removal from site.

17.1.29 If groundwater is encountered during excavation, degradation of the formation may occur. The formation should therefore be adequately protected from seepages and protected from adverse weather conditions. The earthworks design should ensure that temporary works site drainage is allowed for. If the formation layer becomes wet resulting in loosening of the surface materials, then excavation may have to be taken deeper in order to find a suitable bearing layer.

17.1.30 Sub-artesian groundwater conditions are indicated within the deeper groundwaters and will need to be considered for any deep piled foundations as any strata where these conditions are encountered could be subject to hydraulic pressures.

Collapse Compression

17.1.31 Made Ground / Fill materials deposited in a low-density state in the dry can, at a later date, become inundated with water, which can result in collapse compression / inundation settlement. Such settlements may be significant and exceed development serviceability limits if mitigation measures are not undertaken. Areas of colliery spoil

material have been identified within the north eastern section of the site and these types of materials can be particularly susceptible to collapse compression.

17.1.32 Trial pit excavations within the colliery spoil noted distinct angled layering within this stratum that is indicative of end tipped materials that have likely been placed without any systematic compaction. While corrected SPT N-Values indicate that the suspected colliery spoil materials are of medium density, there were a number of very coarse constituents (e.g. cobbles and boulders of weak siltstone) that could have exaggerated the results.

17.1.33 While no water strikes were generally encountered within this stratum, it was noted to be damp throughout with moisture contents being recorded between 7.1 and 21% (on average 13.6%), which is indicative of partial saturation. Groundwater monitoring undertaken by Celtic in 2007 from two monitoring wells (BH5 and BH12) screened within this stratum recorded groundwater from this base of this stratum only at depths of between 4.99m and 7.1m bgl (between 76.21m and 71.12m AOD).

17.1.34 Six laboratory compaction tests have been completed on the suspected colliery spoil and a comparison of the results with recorded moisture contents indicates that the materials were generally dry of their optimum moisture contents indicating that there is a potential for collapse compression to occur.

17.1.35 Two soakaway tests were undertaken within the Colliery Spoil, with dimensions of the pit monitored before and after the test to assess any collapse caused by the addition of water. 1000 litres of water were added to SA05 within the Colliery Spoil and this initially drained within 12 minutes. After the inundation test, the depth of the trial pit was 100mm deeper than prior to the test. An identical test was undertaken in SA02, with the water completely draining in 90 seconds and the base of the pit 70mm deeper after completion of the test.

17.1.36 Based on the findings it is considered that there is a low to moderate risk of collapse compression within the Colliery Spoil Results suggest that there are areas where moisture contents are lower than optimum resulting in the potential for collapse compression to occur. The inundation testing and laboratory compaction tests have provided evidence that collapse compression may occur because of water inundation.

17.1.37 It would be prudent to investigate the risk of collapse compression further for any colliery spoil materials that are to remain in-situ once earthworks are completed in

these areas. For those areas where suspected colliery spoil is excavated and recompacted, the risk of collapse compression will be significantly reduced.

17.1.38 A similar risk from collapse compression / inundation settlement is envisaged for those other areas of the site where susceptible fill materials are present. As such, the remediation design should consider the future settlement performance of the wider remediated site in regard to collapse compression / inundation settlement, as well as any other potential types of settlement.

Combustion

17.1.39 Calorific value (CV) is commonly used for assessing combustibility of Colliery Spoil. It is generally accepted that samples with a CV of 10 MJ/kg or greater are almost certainly combustible, whilst samples with a CV of 2 MJ/kg or less are unlikely to be combustible. Samples with a CV of 7 MJ/kg or greater are considered to be at risk from smouldering.

17.1.40 Six samples of colliery spoil material were tested for calorific value. The results ranged from <2.0 – 9.0 MJ/kg at depths of between 0.3m and 5.4m bgl.

17.1.41 Materials with a calorific value >7 MJ/kg should be kept a minimum of 1m away from any potential sources of ignition (sub-station, services etc.) and when used in areas of private gardens or soft landscaping that a 1m thick layer of inert material is present to prevent accidental ignition.

17.1.42 Any colliery spoil excavated during development of the site with a calorific value >7 MJ/kg should not be left exposed for long periods of time to minimise the risk of combustion. Covering any stockpiles with suitable cohesive material will prevent any oxygen getting to the coal and minimise the combustion risk.

17.1.43 Further calorific value testing is recommended during earthworks where Colliery Spoil is used as fill material, so that the material placed in the upper 1m, or within 1m of a potential ignition source does not exceed 7 MJ/kg. The same applies to those materials that are to be stockpiled at the site. The remediation design should consider the potential combustibility of any fill materials and ensure that such risks are adequately mitigated by design (e.g. selection of fills, reduction in permeability of compacted fills etc).

Concrete Assessment

17.1.44 A suite of chemical tests were undertaken in Accordance with BRE Special Digest 1: 2005 - Concrete in Aggressive Ground in order to specify the concrete class required at the site. Results from both the WA 2020 and 2022, along with the Celtic 2007 investigations have been considered in this assessment (this includes specific geochemical testing and those results obtained from the environmental testing).

17.1.45 The suspected colliery spoil has the potential for pyrite to be present, so consideration has been given to the total potential sulfate content to account for the potential for oxidation of pyrite following ground disturbance.

17.1.46 A summary of the Design Concrete Class (DS) and the Aggressive Chemical Environment (ACEC) for each soil type is presented in Table 17.1:

Table 17.1: Summary of Design Concrete Class

Soil Type	Design Concrete Class	ACEC Class (mobile groundwater)
Made Ground – Suspected Colliery Spoil	DS-4	AC-5
Made Ground – Suspected Combustion Waste	DS-2	AC-2
Made Ground – Suspected Construction and Demolition Waste	DS-2	AC-2
Made Ground – Suspected Household Waste	DS-2	AC-2
Granular Made Ground	DS-2	AC-2
Cohesive Made Ground	DS-2	AC-3Z
Topsoil Fill	DS1	AC-2Z
All Made Ground	DS-2	AC-2
Glacial Till	DS1	AC-1

17.1.47 Due to the high degree of variability encountered across the site and the potential for various Made Ground types to be intermixed a worst-case Design Sulphate Class (DS) of “DS-2” and an Aggressive Chemical Environment for Concrete (ACEC) of “AC-3Z” has

been determined for the Made Ground. The exceptions being for those suspected colliery spoil materials were "DS-4" and "AC-5" is indicated due to the potential for pyrite to be present. For the natural strata at the site the assessment for natural ground locations has been undertaken and "DS-1" and "AC-1" is indicated.

Soakaways

17.1.48 Four soakaway tests were carried out in general accordance with BRE Digest 3652 "Soakaway Design". The locations of the soakaways are shown on Drawing LD10385-003, and the logs are within Appendix F. Where the water level did not fall to 25% effective depth, the test was not considered suitable for calculation of an infiltration rate, and this was the case for both of the tests undertaken. Calculated infiltration rates for each successful test are summarised in the table below:

Table 17.2: Summary of Soakaway Testing

Location	Stratum	Infiltration Rate	Remarks
SA01	Cohesive Glacial Till	n/a	Groundwater level remained constant for two hours
SA03		n/a	Seepage in pit during excavation. Water level increased slightly during two-hour test
SA02	Colliery Spoil	1.01E-02	-
SA05 x2		1.21E-04 & 2.07E-04	Two tests undertaken

17.1.49 Testing indicates that traditional soakaways will not provide a suitable drainage solution for the discharge of surface water run-off within the Cohesive Glacial Till at the site. Furthermore, given the significant thicknesses of Made Ground encountered across the site, the recorded levels of contamination, the shallow perched groundwater issues and the risk associated with collapse compression, soakaway construction is not considered suitable.

Slag Expansion

17.1.50 Six emery expansion tests were undertaken on the suspected slag materials to assess the degree of expansion following subjection to increasing temperatures. Changes in height of between 0.22 – 1.92mm (on average 1.16mm) were noted. No significant heat sources are envisaged for the proposed development so the risk of slag expansion due to heat is thought to be low.

17.1.51 Slag can also expand following saturation due to hydration. However, as most of the materials were either below the water table or partially saturated to some extent the risk from expansion is thought to be low.

17.1.52 Further testing should be undertaken during earthworks if the suspected combustion waste materials, particularly those above the water table or indicated to be relatively dry, are to be used as engineered fill.

17.1.53 Consideration should be given to the stockpiling of any excavated slag to expose the material to moisture from natural precipitation and / or application of water by spraying so that hydration and associated expansion takes place prior to use of the material. Up to 18 months may be needed to hydrate any potentially expansive oxides.

Trafficability

17.1.54 During the various stages of site investigation works undertaken by WA ground conditions at the site were generally noted to be wet, soft and compressible and this resulted in significant delays due to trafficability issues.

17.1.55 Trafficability at the site on surface materials and / or on any excavated shallow Made Ground may need to be considered, particularly during wet weather and this could necessitate stabilisation of the soils or the use of track matts during the development of the site. The remediation contractor should factor such trafficability issues into their design, method of works and programme.

18 GEOTECHNICAL RISK REGISTER

18.1 Introduction

18.1.1 This section presents the Geotechnical Risk Register for the site, together with details of other construction related risks known at this time. The risks have been evaluated using the risk evaluation matrix suggested in Part 2 of HD22/08 "Managing Geotechnical Risk" which is reproduced in Table 18.1:

Table 18.1: Risk Evaluation Matrix

Probability	Impact		Risk (R = P X I)	Response to Risk
Very Likely (5)	Very High (5)	Potential to halt project or potential for major claim or similar	17 to 25	Unacceptable: act now to prevent
Likely (4)	High (4)	Significant delay on overall project or major impact on cost	13 to 16	Unacceptable: act now to prevent
Probable (3)	Medium (3)	Major delay on this task, but significant impact on overall project unlikely or Significant impact on cost	9 to 12	Early attention required
Unlikely (2)	Low (2)	Minor delay on this task, but significant impact on overall project unlikely or minor impact on cost	5 to 8	Regular attention required
Negligible (1)	Very Low (1)	No significant impact on task or project or negligible impact on cost	1 to 4	Monitor

18.1.2 The geotechnical risk register is presented in the Table 19.2. The purpose of the risk register is to highlight the potential risks, and consequences of those risks, together with measures to be taken to mitigate the risks. It is envisaged that the geotechnical risk register becomes a "live" document which is reviewed and revised throughout the development of the site, as the risks become better understood, or when additional risks are identified by further works or during remediation of the site, or site later site development.

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
1	Total and differential Settlements	The site is a historical landfill with significant thickness of Made Ground with varying proportions of waste materials that may settle in response to additional loads, degradation of waste materials, self-weight settlement etc. Natural cohesive soils of very low to high compressibility (generally medium compressibility) indicated.	4	4	16	Settlement of the ground and damage to overlying buildings, externals, pipes or services by differential settlement. Negative friction can occur on piles installed through a compressible layer due to consolidation.	Settlement calculations, mini zone load tests and / or monitoring to quantify risk. Avoid large differential loadings of ground. Piled foundations or rafts for structures. Reinforcement or soil stabilisation / ground improvement of shallow soils for external areas and services. Service and external designs to accommodate ongoing or potential future settlement. Settlement of deeper fill materials likely to be ongoing or to occur in the future. Deep ground improvement (e.g. dynamic compaction may be an option). Long-term maintenance of external areas and services may be required.	3	2	6

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
2	Unforeseen or highly variable ground conditions	Ground conditions encountered different from those encountered during the ground investigation. Inherent variability due to the site being a historical landfill and high degree of variability indicated from site investigation.	4	4	16	Problematic for foundation, floor slab and external design and earthworks if ground conditions change over short distances. Cost and programme implications.	Various control measures as discussed in the sections below.	1	4	4
3	Exposed site surface becoming soft causing trafficability problems	Excess rainfall, vegetation removal, grubbing of concrete bases and site strip exposing variable and susceptible soils, shallow perched and deeper groundwaters, standing water and frequent trafficking. Significant delays due to trafficability experienced during the most recent stage of site investigations.	4	4	16	Vehicles becoming struck and areas of the site being inaccessible, causing delays and additional costs.	Avoid exposure of soft material if possible. Consider specialist plant, track matting or surface stabilisation / ground improvement of soils.	2	3	6

Table 18.2: Geotechnical Risk Register									
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
4	Groundwater	Shallow perched groundwaters frequently encountered within Made Ground. High water table indicated with groundwater seepage at the surface following a period of heavy rainfall. Deeper groundwater within granular layers within Glacial soils. Slight artesian conditions noted for groundwater encountered within bedrock and deeper Glacial soils.	4	3	12	Potential for water ingress into open excavations that may result in instability and collapse. Softening of sub-grade material. Reduced bearing capacity for some types of foundations. Sub artesian groundwater may cause issues for deep piled foundations. Groundwater levels may vary seasonally and change following any changes to site levels.	Groundwater control measures during excavations (e.g. dewatering / barriers). Drainage and foundation designs that consider groundwater conditions. Groundwater monitoring. During development of the site control / management of surface waters and shallow perched groundwaters will naturally be required.	2	2	4
5	Collapse Compression	Susceptible materials (e.g. loose partially saturated fill including colliery spoil) prone to water inundation if left in-situ.	3	3	9	Collapse due to increased loads and / or more commonly the addition of water causing damage to structures, externals and services by sudden or differential settlements.	Assessment via wetting / loading tests. Rafts or piled foundations for structures, ground improvement techniques for externals and services. Where practicable, excavation, recompaction as engineered fill. Avoid large amounts of water entering the ground via soakaways	1	3	3

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
6	UXO	The site is located within a moderate risk bombing area with several bomb strikes within the surrounding area and nearby strategic military targets.	3	3	9	UXO or munitions encountered in excavations or at depth.	UXO risk assessment to be undertaken prior to mass earthworks / remedial works / development to re-quantify the risk. Mitigation as determined by risk assessment.	1	3	3
7	Bulking	Overconsolidated Glacial materials and colliery spoil are likely to be susceptible to bulking or an increase in volume upon excavation. Slag within the suspected combustion wastes could expand in certain conditions.	3	3	9	Bulking could have implications for any cut and fill balance that may be required and if material is planned for re-use. Bulking will also influence haulage operations, especially where material will need to be sent off-site.	Determination and adoption of bulking factor for incorporation into any civil engineering designs.	1	3	3

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
8	Excavatability and obstructions	Numerous very coarse constituents within Made Ground impeding excavations progression of piled foundations. Further obstructions associated with relict foundations and underground infrastructure in the areas of the former brickworks buildings.	4	2	8	Delays caused by breaking out obstructions. Significant obstructions may affect subsequent design and construction by hindering excavations and / or obstructing foundations. Obstructions may contain voids or be filled with hazardous substances.	Larger capacity excavators and pneumatic / hydraulic breaking equipment to deal with obstructions. Probing for piled foundations or mass excavation works for other foundation types.	1	2	2
9	Aggressive Ground	Concentrations of sulphate and other contaminations noted in soils and groundwater that would be harmful to concrete and services. Potential for pyrite to be present within colliery spoil.	4	2	8	Damage to building materials (e.g. foundations, external areas, aggregates, and services) via chemical attack or corrosion	Design concrete to withstand aggressive ground. Results indicate a design sulphate class of DS-2 and AC-3Z may be appropriate. The exceptions being for those suspected colliery spoil materials were “DS-4” and “AC-5” is indicated due to the potential for pyrite to be present. For the natural strata “DS-1” and “AC-1” is indicated.	1	2	2

Table 18.2: Geotechnical Risk Register											
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk			
			P	I	R			P	I	R	
10	Instability of excavations	Highly variable, loose, or soft compressible soils at shallow depth associated with Made Ground infill material and granular layers within Glacial Till.	3	2	6	Failure / instability of excavations. Stability of land surrounding site.	Temporary supports or battering of side slopes. Dewatering or groundwater barriers. Earthworks design and construction sequences and temporary works drainage to mitigate risks.	1	2	2	
11	Combustibility	Some of the Made Ground materials at the site (e.g. colliery spoil or combustion waste) are indicated to be susceptible to combustion.	2	3	6	Combustion or smouldering of materials	Stockpiles should be protected to prevent ignition and any susceptible material used as engineered fill may need to be placed beneath a 1m thick inert layer in garden areas / areas of soft landscaping to prevent accidental ignition. Further calorific value testing should be undertaken if these materials are to be sued as engineered fill. Remediation design to remove risk of future combustion via fill selection during engineering and the formation of low permeability engineered soils.	1	3	3	

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
12	Faulting	A geological fault is conjectured to cross the westernmost section of the site; although not proven during site investigation works. However, foundations are not envisaged to extend to within influencing distance of the fault.	2	2	4	Highly weathered, altered, or fractured rock within the zone of influence of the fault that impacts on foundation design. Differing ground conditions either side of the fault. Ground gas and / or water emissions.	Generally not applicable as foundations to rockhead are not envisaged. Otherwise, non-percussive piling techniques and / or foundation designs to consider ground conditions if foundations are to extend to rockhead.	1	2	2
13	Expansive Soils (Shrink / Swell) including Frost Heave	Cohesive soils of low to intermediate (generally low) shrinkage potential and very low to moderate (generally very low) volume change potential indicated. Site was previously densely vegetated with various types of mature trees, and these have since been removed. Trees may be retained along site boundaries and new trees planted as part of the proposed development.	2	2	4	Shrink / swell of ground potentially damaging building foundations, externals, pipes, or services by differential movements.	Consideration of deepening foundations where near to trees or former tree locations. Foundations in excess of 1m depth to counter the effects of frost heave. Removal of unsuitable materials and replacement with engineered fill for external areas. Reinforcement or soil stabilisation / ground improvement. Do not plant or remove trees near to buildings without specialist advice.	1	2	2

Table 18.2: Geotechnical Risk Register										
Reference	Identified Geotechnical Hazard/Risk	Cause	Risk Before Control			Consequence	General Control Measures	Residual Risk		
			P	I	R			P	I	R
14	Services	Unrecorded services may be present at the site.	1	2	2	Service strike	Obtain service plans prior to the start of works. All site work to be undertaken using appropriate methods of utility protection precautions.	1	2	2
15	Rock Weathering	Weathered rockhead profile identified, likely exacerbated by faulting at the site. However, foundations are not envisaged to extend to bedrock.	1	1	1	Weathered zone with variable geotechnical properties that can be problematic for foundation design.	Generally not applicable as foundations to rockhead are not envisaged. Otherwise, avoidance of weathered zone with foundations being taken to more competent rock or founded within competent overlying strata.	1	1	1
16	Variable Rockhead	Depth to bedrock increases to the south west. The depth to bedrock has likely been influenced by the faulting that is present at the site. Consequently, a high degree of variability is envisaged. However, foundations are not envisaged to extend to bedrock.	1	1	1	Problematic for foundation design if foundations need to be taken to rockhead (not envisaged). Deeper foundations that could increase cost.	Generally not applicable as foundations to rockhead are not envisaged. Otherwise, locate buildings that require foundations to rockhead in those areas where less variability is present. Alternative foundations solutions may be possible for some structures.	1	1	1

19 CONCLUSIONS AND RECOMMENDATIONS

19.1 Contamination – Human Health

19.1.1 Laboratory results were analysed using the CLEA methodology to assess the risk to human health for a residential with plant uptake land use scenario. A range of widespread to isolated exceedances of the screening values were recorded in soils for a range of determinands that are typical of a historical landfill. This included metals (arsenic, lead, nickel, beryllium, chromium VI, cadmium, copper and zinc), PAH's, TPH's, total cyanide, PCB's, SVOC / VOC's, BTEX and PFAS. Asbestos was identified in 26 out of 129 No. samples with quantifiable concentrations recorded between <0.001 and 5.11%.

Future Site Users

19.1.2 Remedial works / mitigation will be required to prepare a site of this nature for residential development and to reduce the risks from those contaminant concentrations considered to represent an unacceptable risk to identified receptors and to provide an overall site betterment. While some of the mitigation is envisaged to be provided by the proposed development itself (i.e. external hardstanding areas and building cover breaking most of the SPR linkages) and the adoption of clean cover systems for privates gardens and areas of public open space; a Detailed Quantitative Risk Assessment (DQRA) will be required to further quantify the risks to human health and to provide sufficient information to undertake an Options Appraisal and to develop a Detailed Remediation Strategy for the site.

19.1.3 The final thickness and composition of any clean cover system, the inclusion of any hardstanding areas as pathway breaks and the reporting outlined above, will all need to be agreed with the regulatory authorities prior to remedial / development works commencing on-site.

Construction Workers

19.1.4 Construction workers are envisaged to be at increased risk as they are likely to have acute interaction with contaminated soils and asbestos fibres that have been identified within the Made Ground. It is envisaged that the risks can be managed through the use of appropriate health and safety measures, practices and procedures, the use of appropriate PPE and suitable mitigating measures to deal with asbestos

fibres as outlined below. Following mitigation, the risks to construction workers is considered to be low.

Asbestos in Soils

19.1.5 Due to the low to high concentrations of asbestos fibres that have been recorded within the Made Ground at the site, it is recommended that groundworks at the site are undertaken in accordance with an Asbestos Management Plan (AMP) to ensure compliance with the Control of Asbestos Regulations 2012 (CAR 2012) to protect construction workers and members of the public from exposure to asbestos fibres. The groundworks on site should be designed and planned to minimise the exposure of workers / members of the public to contaminated soil and to minimise potential generation of airborne fibres with appropriate environmental controls established by the contractors working on the site. This should also be considered in the Health and Safety plan under the CDM Regulations.

19.1.6 It is also recommended that a watching brief for asbestos containing material is maintained during groundworks across the site, particularly within the suspected construction and demolition type waste that are present within the central sections of the site. If any unrecorded asbestos is visually identified during the groundworks, all works within the vicinity should cease and further advice should be sought, as additional testing, mitigation or remedial measures may be required.

Adjacent Site Users

19.1.7 Due to the sensitivity of the adjacent site users (e.g. primary school and residential properties with gardens), since contaminated shallow perched groundwaters have historically been observed seeping out of the site and migrating off-site, and that contaminated soils and groundwaters could be mobilised during the development of the site, mitigation measures will need to be undertaken to reduce the risk to off-site receptors.

19.1.8 The greatest risks are envisaged as part of the remedial / construction works, but it is anticipated that the risks can be reduced to acceptable levels by undertaking the works in accordance with an appropriate Construction and Environment Management Plan (CEMP) with appropriate environmental controls established by the contractors working on the site. Furthermore, the remedial works themselves would be removing any unacceptable risk associated with contamination at the site and would provide

overall site betterment. Post remediation / development of the site further betterment is envisaged due to the breakage of any unacceptable source-pathway-receptor linkages.

19.1.9 The long-term condition of the site will also need to prevent perched shallow groundwater and / or groundwater seepages from impacting off-site receptors. This is discussed further below in the groundwater flooding subsection.

Vapours

19.1.10 Soil and groundwater vapours could pose a risk to those identified receptors and at this early stage it is envisaged that passive vapour protection measures in new buildings, which is line with third party assessments, and / or some form of source reduction may be required. Further DQRA will be required in line with current guidance to specify the precise requirements for vapour protection and / or confirm if remediation is necessary. The final choice for mitigation will be in conjunction with specialist remediation contractors and will be subject to agreement with relevant regulators.

19.1.11 Depending on the outcome of the vapour assessment from the DQRA, there may be a requirement for vapour monitoring in line with BS8576. To allow for a more representative / pragmatic assessment to be undertaken, additional shallow monitoring wells could be installed post remediation with subsequent vapour monitoring being undertaken.

19.2 **Contamination – Controlled Waters**

19.2.1 Exceedances in screening values within perched groundwater have been recorded for metals, cyanide, sulphate, TPH, PAH, phenol, PFOS, PFOA and benzene with the most widespread and elevated exceedances present within perched groundwaters within the Made Ground. Similar exceedences have also been recorded within soil leachate for some of these contaminants indicating that soil leachate may be contributing to some extent to those concentrations of contaminants recorded within perched groundwaters.

Groundwaters

19.2.2 The ground model for the site indicates that the perched groundwaters within the Made Ground are largely contained by the underlaying natural Glacial Clays (i.e. a geological barrier). While pathways to perched groundwaters within immediately

underlying granular lenses within the Secondary Undifferentiated Aquifer are present in places, and exceedences have been recorded, these granular layers are indicated to be discontinuous and not in continuity with other sensitive groundwaters or surface water bodies. Furthermore, multiple lines of evidence exist to demonstrate the lack of a source-pathway-receptor linkage from the site to the bedrock Principal or Secondary B Aquifers (see Section 16); most notably that they have been proven to both be overlain by substantial thicknesses (between 35m and 45m thick) of predominantly low permeability Glacial Till (i.e. a geological barrier).

19.2.3 Consequently, it is considered highly unlikely that continuity exists with the bedrock Principal or Secondary B Aquifers and exceedences recorded within soils and perched groundwaters within the Made Ground and isolated perched groundwaters with the Secondary Undifferentiated Aquifer, are not considered to represent an ongoing or potential future significant risk to these deep groundwaters. As such, viable linkages to the Principal and Secondary B Aquifers have been removed from the CSM and subject to agreement with the regulators, do not need to be considered further.

19.2.4 Some form of dewatering and groundwater treatment will be required for those shallow perched groundwaters within Made Ground that are likely to be encountered during earthworks / remediation and that will require discharge from the site. Early liaison with the relevant regulatory authorities and utility providers is recommended to establish any permitting and / or discharge requirements that would need to be met. This will also provide betterment to the site by removing contaminant load during the works.

Surface Waters

19.2.5 Continuity between the Rochdale Canal and those perched groundwaters at the site are not indicated to be present based on the multiple lines of evidence as outlined in Section 16. While limited surface water run-off into the canal could currently be occurring in places, the potential for significant leaching to occur is considered to be very low to negligible due to the limited amount of time these waters would have to percolate through the soils before entering the canal. Infiltration and interception by vegetation are also more likely to occur. Furthermore, baseline concentrations for some contaminants within the canal are indicated to be elevated independent of any influence from the site indicating that the site does not appear to be having a significant adverse impact upon water quality in the Rochdale Canal and, as such,

contaminant linkages to the Canal have been discounted from the CSM and, subject to agreement with the regulators, do not need to be considered further.

19.2.6 The greatest risks to surface waters receptors are envisaged as part of the remedial / construction works, but it is anticipated that the risks can be reduced to acceptable levels by undertaking the works in accordance with an appropriate Construction and Environment Management Plan (CEMP) with appropriate environmental controls established by the contractors working on the site. Furthermore, the remedial works themselves would be removing any unacceptable risk associated with contamination at the site and would provide overall site betterment.

19.2.7 The risk posed to the River Medlock is indicated to be low as pathways are limited due to the distance to the receptor, the presence of predominantly low permeability Glacial Till (i.e. a geological barrier) between the site and the river, barriers to surface water runoff / overland flow and capture by urban drainage. While granular lenses are present within the Glacial Till, the ground model for the site indicates that these are isolated, and it is unlikely that any horizontal continuity is present over such a large distance. While the river may be fed from the sandstone beneath the site, there are no viable pathways to the sandstone from the site. Due to the distance to the river, significant attenuation and dilution is also likely to occur. As such, the river does not need to be considered further; subject to agreement with the regulators.

Groundwater Flooding

19.2.8 A temporary seepage of perched groundwaters from within the Made Ground was historically noted at the site following a period of heavy rainfall. This has been mitigated in the short term by a third-party and this included the installation of a temporary impermeable bund along the impacted part of the site's southern boundary with a small drainage ditch to divert the groundwaters back onto the site and away from off-site receptors.

19.2.9 During development any future seepage / shallow perched groundwaters would be managed via mitigation that would naturally be required as part of a development of this nature. This would be implemented via an appropriate Construction and Environmental Management Plan (CEMP) with appropriate environmental controls established by the contractors working on the site.

19.2.10 Following remediation and development of the site, the risk of groundwater flooding / seepage will be significantly reduced due to a c. 70% increase in hardstanding areas, the capture of surface waters by drainage and the possible use of low permeability cover systems for private gardens and areas of POS; all of which would reduce infiltration.

19.2.11 However, further groundwater seepage could still occur due to leachate generation etc. and as such there may be a requirement for the ongoing or potential future management / mitigation of these shallow perched groundwaters. While the risk is considered to be very low, hydrogeological modelling may be required to understand the potential for future seepages to occur and / or the remediation contractor would need to satisfy themselves that the remediation strategy / works effectively eliminates the potential for any future seepages to occur. If the risk of groundwater seepage cannot be eliminated, either at the design stage, or as the remedial works progress, then appropriate mitigation may be required to avoid potentially contaminated water being encountered by future site users at the surface. If required, subsequent discussions should be undertaken with specialist contractors and / or the relevant utility providers to determine the most effective way to manage this in the long term. Early liaison with the relevant regulatory authorities is also recommended to establish any permitting requirements.

19.2.12 In all instances, care will need to be taken to ensure that no new pathways are created to receptors, that the schemes are sufficiently robust, agreement is reached with the regulators and that the relevant permits, if required, are obtained.

Requirement for Controlled Waters DQRA

19.2.13 Given the above, the multiple lines of evidence outlined elsewhere in the report, the fact that the remaining receptors are not overly sensitive, and pathways are limited, the requirement for a DQRA for controlled water is not considered necessary. However, this is subject to any permitting requirements and / or agreement with the regulators. Early liaison with the regulatory authorities is recommended to establish any further requirements.

19.2.14 Regardless of the approach required, it is considered that protection and betterment of the groundwater and surface waters can be achieved through the remedial works and the construction of the proposed development due to increased hardstanding areas and / or any surface water run-off being captured by drainage. This would

reduce infiltration of rainwater into the near surface soils and correspondingly any associated leaching and migration of potential contaminants into the groundwater or surface waters will be reduced. Furthermore, as part of the remedial works some dewatering of excavations etc. is envisaged and some treatment of shallow perched groundwaters would be required to enable for discharge from the site, resulting in an overall betterment.

19.3 Materials Management

19.3.1 The site is a recorded landfill and the regulators state that materials that have been deposited under a waste management licence or environmental permit retain their waste classification. If the landfill site materials are excavated, in order for the material to be retained in any form, it must meet a defined and pre-agreed end-of-waste criteria or be undertaken using a bespoke deposit for recovery permit. If the material does not meet the required end-of-waste criteria or the recovery criteria, then any re-placement must be done under contemporary waste and environmental legislation i.e. it is likely to require another type of environmental permit.

19.3.2 In this instance a bespoke deposit for recovery permit is considered to be appropriate for the site; subject to agreement with the regulators. A waste recovery plan will need to be completed that demonstrates that the waste recovery test has been met and this information will need to be provided to the regulators before proceeding with the deposit for recovery permit application.

19.3.3 There are some areas of the site that have been proven by the site investigation works to lie outside of the recorded extent of the former clay pit excavations (subsequently landfilled) and where only limited thickness of Made Ground have been encountered (<0.50m). While the entire site boundary is recorded as landfill, it may be possible to reuse site won materials from the areas outside of the former clay pit excavations in accordance with the Definition of Waste Code of Practice (DoWCoP) or similar and an accompanying Materials Management Plan (MMP). This would enable for the reuse of this excavated material without it being classified as waste and, together with an agreed remediation strategy, demonstrate that the re-used material does not pose a risk to future site users or controlled waters. The MMP should be produced and agreed with relevant qualified persons and a declaration made (and receipt received) prior to work commencing. Early engagement and agreement with the regulatory authorities will be required to ascertain if this is an option.

19.3.4 Care will need to be taken during earthworks that are undertaken at the site to avoid unnecessarily excavating materials that could be classified as waste. In the event that any material is required to be removed from site to landfill, it is recommended that the chemical results obtained and the results from any further necessary testing are analysed to tentatively divide the materials at the site into hazardous and non-hazardous waste classifications in accordance with the relevant regulations, which include, but are not limited to Duty of Care, the Landfill Regulations, the Hazardous Waste Regulations and Publication WM3.

19.4 **Ground Gas and Radon**

19.4.1 The ground gas risk assessments indicates that the current site should be classified as Characteristic Situation 2 and that ground gas protection measures would be required for new buildings. Protection measures are likely to comprise a gas / vapour / organic contamination resistant membrane and passive subfloor dispersal layer.

19.4.2 When further information about the form of the proposed residential structures is available and if a significant number of structures are found to conform to the model low rise housing type for the NHBC Traffic Light System assessment, then it may be prudent to undertake a separate assessment for those structures where this would be applicable, as the scope of the ground gas protection measures could be reduced.

19.4.3 If significant surcharging of the site is to be undertaken as part of the remedial works or the development of the site, that could result in increased ground gas generation, or if impermeable cover systems are used that could result in the build-up of gas, then additional ground gas monitoring may be required at the edges of such features to further quantify the risk.

19.4.4 An initial assessment for radon gas has been carried out. The assessment indicates that the site is located within an area where no radon protection measures are required.

19.5 **Possible Free Phase Contamination / Free Product**

19.6 Frequent groundwater level monitoring was undertaken using a product / water interface probe in areas where visual and olfactory evidence of contamination has been observed in exploratory holes, where OIP “blips” were recorded and where exceedences of the soil saturation limits have been noted. No NAPL or free product

was detected with the interface probe nor was any visual evidence recorded during development, purging and sampling of perched groundwaters.

19.7 Unrecorded Contamination

19.7.1 It should be noted that the site was a landfill, and a high degree of variability is envisaged, and previously unrecorded contamination may be present. A protocol should be implemented to allow groundworkers to act appropriately upon encountering or suspecting the presence of previously unidentified ground contamination so that specialist advice can be sought and the possible requirement for additional remedial works can be identified.

19.7.2 A mound covering an area of approximately 950m^2 is present within the eastern section of the site. It is unknown at this stage if any contamination and / or asbestos is present within or beneath this mound, as investigation of this feature was beyond the scope of these works, due to its integrity having to be maintained to prevent unauthorised vehicular access to the site from Mitchell Street. During the site investigation works some of the original exploratory hole positions also had to be altered slightly because areas were inaccessible, largely due to the way the concurrent vegetation clearance works were being undertaken by a third party.

19.7.3 Consequently, further unrecorded contamination may be present and as a result a live "hotspot protocol" should be implemented that would allow for any unrecorded or problematic ground to be further investigated, assessed and the remediation strategy updated accordingly as the remediation works progress (subject to approval by the regulators).

19.8 Detailed Remediation Strategy and Verification Reporting

19.8.1 A detailed remediation strategy will be required for the site and will ultimately need to consider the above noted uncertainties. The exact requirements of the remedial strategy are also dependent on the completion of a DQRA and Options Appraisal that includes feedback from the Client's appointed remediation contractor. This information will be used to inform the mitigation and / or remediation that is required on site to reduce the identified risks and will feed into the final remediation strategy submitted to the Local Authority for approval.

19.8.2 The Detailed Remediation Strategy shall set out the overall objectives and outline methodologies to be used to undertake the mitigation / remediation and will outline

criteria that the remediation should meet in order to demonstrate that risks have been suitably reduced and describe the verification and validation requirements for mitigation and remediation works.

19.8.3 Subsequent verification and validation reporting will also be required to demonstrate to the regulatory authorities that the Detailed Remediation Strategy and associated plans have been followed and the remedial targets met.

19.9 Water Supply Pipes

19.9.1 Consideration should be given to the risks posed to any drinking water pipes and underlying utility connections that may be present and / or are constructed within, or come into contact with, the soils or shallow perched waters that have been identified at the site, as aggressive contaminants with the ability to permeate the materials and affect water supply are widespread. Appropriate assessment of subsurface ground services should be undertaken utilising the associated regulator documentation. It should be noted that the requirement for further chemical testing to meet these requirements may be required. Clean service corridors with mitigation that prevents creating preferential pathways are also recommended.

19.9.2 Depending on the how the development works are to be phased, there may be a requirement for these assessments to be undertaken prior to the completion of remedial works. This should be confirmed with the relevant contractors and / or regulatory authorities prior to works commencing at the site.

19.10 Decommissioning of Monitoring Wells

19.10.1 As part of the remedial works at the site, those monitoring wells that have been installed at the site should be decommissioned, as they may deteriorate and pose an ongoing or potential future risk to the Principal Aquifer and / or those other controlled waters receptors identified. Decommissioning should be undertaken in line with the Environment Agencies 'Good practice for decommissioning redundant boreholes and wells' (October 2012) to ensure that groundwater pollution does not occur.

19.11 Foundation Works Risk Assessment

19.11.1 Risk assessment and subsequent mitigation will also be required for some forms of foundation (e.g. piles) on the basis that new pathways / contaminant linkages to deeper groundwaters may be created. If the risk assessment or mitigation measures

are not deemed to be adequate by the EA an alternative foundation solutions may need to be considered.

19.11.2 Consideration should also be given to the possibility for some form of foundations (e.g. piles) to act as vertical vents for potentially hazardous ground gases and vapours. Consequently, the use of a propriety system that does not permit vertical venting may be required. However, this is subject to detailed inspection / advice from specialist ground improvement / piling contractors.

19.12 Invasive Species

19.12.1 Japanese knotweed is known to be present at the site, though its full extent has not been delineated. If it has not been recently undertaken, it is recommended that a full Japanese knotweed survey is completed at the site to determine its current extent on the site and those areas / soils that could be impacted. The survey should include other invasive species such as Giant Hogweed and Himalayan Balsam to confirm if these species are present or not.

19.12.2 A legislatively compliant Invasive Non-Native Species Management Plan covering, in particular Japanese knotweed, as well as other species, together with suitable monitoring, validation and management of the remedial works themselves, will be required to deal with the Japanese knotweed and associated infested soils that are present at the site. Consideration will need to be given to the impacts of dealing with the Japanese knotweed and how this could impact on the remedial / development programme for the site.

19.13 Geotechnical

19.13.1 It is understood that the site is to be redeveloped for a residential end use that also includes a school. Following finalisation of any proposed development layouts, detailed design or structural loading information and any earthworks designs / specifications, these recommendations and conclusions may require detailed review to assess whether they remain applicable or require re-assessment. These recommendations should not be considered in isolation without considering the reporting in full.

19.14 Foundations

19.14.1 The Made Ground in its current state would not be suitable as a founding stratum without some form of ground improvement, due to its extremely variable nature and variable strength characteristics. For those areas where Made Ground can be fully excavated, recompacted and engineered without restriction or where competent shallow Glacial Till (<2.5m bgl) is present; buildings could be founded on shallow reinforced foundations. However, for those areas where deeper Made Ground is to be left in-situ beneath the re-engineered Made Ground, it is recommended that either deep trench reinforced foundations or raft foundations are utilised. Larger structures with higher loadings such as the proposed school or multi-storey residential dwellings may require piling into the underlying Glacial Till.

19.14.2 Vibrostone / concrete columns or dynamic compaction may also be a suitable ground improvement technique for some parts of the site, and this may be adopted in combination with any material turnover that is undertaken. This combination may eliminate the requirement for raft or piled foundations in the areas where this can successfully be undertaken.

19.14.3 Numerous buried highwalls to the former clay pit excavations are present beneath the site and the variation in the depth of the Made Ground could result in severe differential settlements if buildings are constructed across these areas. Consideration should be given to the use of piled or raft foundation solutions in these areas as this would mitigate against any unacceptable movements and hence reduce the extent of any exclusion zones.

19.15 Floor Slabs

19.15.1 Due to the significant thicknesses of Made Ground across the site, with areas where deeper Made Ground is likely to be left in-situ beneath re-engineered Made Ground, suspended floor slabs will likely be required to mitigate against settlement / differential settlement.

19.16 External Areas

19.16.1 The most likely sub-grade formations for external areas will be the excavated, recompacted and engineered Made Ground and to a lesser extent the very shallow natural Glacial Till.

19.16.2 Once site levels are known, validation testing should be undertaken to finalise the designs for any external areas. To limit settlements within the areas where deeper Made Ground is to be left in-situ beneath engineered Made Ground, reinforcement (e.g. geogrids), soil modification / stabilisation and / or ground improvement should be considered.

19.16.3 Modification / stabilisation or a non-volumetrically active capping layer may be required for those cohesive Made Ground and / or cohesive Glacial Till deposits that are indicated to be susceptible to frost and / or likely influenced by trees / shrubs. Once final site levels and make up are known, further geotechnical testing should be undertaken to confirm this.

19.17 Earthworks

19.17.1 Earthworks will be required across the site for the proposed structures and external areas and the materials excavated and potentially re-used are likely to comprise the shallow Made Ground materials and to a lesser extent the natural Glacial Till; provided they comply with the acceptability criteria for earthworks as defined by the Highways Agency Manual of Contract for Highways Work, Volume 1: Specification for Highway Works, Series 600, Earthworks (SHW) and that the excavated materials have met defined and pre-agreed end-of-waste criteria. In areas of fill beneath proposed structures, fills should be selected in accordance with the above and compacted using an appropriate end product compaction specification. An appropriate level of compaction and frequency and method of testing will need to be selected.

19.17.2 It is envisaged that high levels of compaction will not be achievable unless modification / stabilisation and / or ground improvement of the soils is undertaken. It may be necessary to remove materials that have a high organic content, and / or high plasticity in order to achieve required levels of compaction.

19.18 Excavations

19.18.1 Excavations should be supported or battered back to a stable angle to ensure adequate stability is achieved for the duration of any works. Any excavations that are to be left open or unsupervised will need to be secured. The temporary works design of the remediation contractor should also reduce the risk of instability to any other surrounding works and safeguard the stability of such land.

19.19 Groundwater

19.19.1 There will likely be a requirement for localised temporary works in the form of dewatering / barriers during excavation of any service trenches, mass excavations or excavations that are undertaken as part of any earthworks exercise at the site. There are also environmental considerations associated with the management of these shallow perched groundwaters and these are detailed further above.

19.20 Collapse Compression

19.20.1 Areas of fill material (e.g. colliery spoil) have been identified across the site and there is a low to moderate risk of collapse compression for those susceptible materials that are to be left in-situ. It would be prudent to investigate the risk of collapse compression further for any such materials that are to remain in-situ once earthworks are completed in these areas. For those areas where the fill materials are to be excavated and recompacted, the risk of collapse compression will be significantly reduced / eliminated.

19.21 Combustion

19.21.1 Those colliery spoil materials identified at the site are indicated to be susceptible to combustion. Materials with a calorific value >7 MJ/kg should be kept a minimum of 1m away from any potential sources of ignition and should not be left exposed for long periods of time to minimise the risk of combustion. When used in areas of private gardens or soft landscaping a 1m thick layer of inert material should be present to prevent accidental ignition.

19.21.2 Further calorific value testing is recommended during earthworks where colliery spoil is used as fill material, so that the material placed in the upper 1 m, or within 1m of a potential ignition source does not exceed 7 MJ/kg. The same applies to those materials that are to be stockpiled at the site.

19.22 Concrete Assessment

19.22.1 Due to the high degree of variability encountered across the site and the potential for various Made Ground types to be intermixed a worst-case Design Sulphate Class (DS) of “DS-2” and an Aggressive Chemical Environment for Concrete (ACEC) of “AC-3Z” has been determined for the Made Ground. The exceptions being for those suspected colliery spoil materials were “DS-4” and “AC-5” is indicated due to the potential for

pyrite to be present. For the natural strata at the site the assessment for natural ground locations has been undertaken and "DS-1" and "AC-1" is indicated.

19.23 **Soakaways**

19.23.1 Given the significant thicknesses of Made Ground encountered across the site, the recorded levels of contamination, the shallow perched groundwater issues and that are risk associated with collapse compression, soakaway construction is not considered suitable for the site. Soakaways in those areas where natural Glacial Till is present at shallow are also not considered to be feasible.

19.24 **Slag Expansion**

19.24.1 Laboratory testing indicates that the risk from the expansion of slag is thought to be low. However, further testing should be undertaken during earthworks if the suspected combustion waste materials, particularly those above the water table or indicated to be relatively dry, are to be used as engineered fill.

19.25 **Total Settlements**

19.25.1 Following earthworks and remediation at the site, settlement testing (e.g. skip load or other maintained load tests) should be undertaken to model total settlements and the time it would take for these settlements to occur, especially for those areas where shallow foundations are to be utilised in order to satisfy NHBC requirements. This would inform what mitigation measures would be required to deal with any unacceptable settlements.

19.25.2 For those areas where deeper Made Ground is to remain in-situ beneath engineered fill, alternative foundation solutions may need to be adopted. Alternatively, to limit settlements within these areas and to potentially allow for the use of shallow foundations, reinforcement (e.g. geogrids), soil modification / stabilisation and / or ground improvement of the shallow and deep Made Ground should be considered to mitigate against any ongoing or potential future settlements. Maintained load testing may also be required in these areas to confirm the remediation and foundation design and to satisfy NHBC requirements.

19.26 **Trafficability**

19.26.1 Trafficability at the site on surface materials and / or on any excavated shallow Made Ground will need to be considered by the remediation contractor, particularly during

wet weather and this could necessitate stabilisation of the soils or the use of track matts during the development of the site.

19.27 **UXO**

19.27.1 The previous UXO Detailed Risk Assessment that was carried out for the site in 2020 was based on the proposed site investigation works and future bulk excavations of parts of the site. The report states that a reassessment will be required for the bulk earthworks that would need to be undertaken as part of the development of the site. The remediation of the site should be carried out in accordance with the recommendations given in the revised UXO risk assessment.

D R A W I N G S

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Legend

Site Boundary

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Notes

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

NUVU DEVELOPMENTS LTD

PROJECT

TEN ACRES LANE

DRAWING TITLE

SITE LOCATION PLAN

DRG No.	REV
LD10385-001	

DRG SIZE	SCALE	DATE
A3	1:30,000	25/08/22

DRAWN BY	CHECKED BY	APPROVED BY
JC	VC	AR

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Site Boundary

Notes

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

NUVU DEVELOPMENTS LTD

PROJECT

TEN ACRES LANE

DRAWING TITLE

SITE LOCATION PLAN - AERIAL

DRG No.		REV
LD10385-002		
DRG SIZE	SCALE	DATE
A3	1:5,000	25/08/2022
DRAWN BY	CHECKED BY	APPROVED BY
JC	VC	AR

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Site Boundary

Exploratory Hole Positions 2022

- WA Rotary Boreholes 2022
- WA Cable Percussion Boreholes 2022
- WA Trial Pits 2022
- WA Windowless Sample Holes 2022

Previous Exploratory Hole Positions

- Celtic Rotary Boreholes 2007
- Celtic Cable Percussion Boreholes 2007
- Celtic Trial Pits 2007
- Celtic Windowless Sample Holes 2007
- WA Cable Percussion Boreholes 2019
- WA Trial Pits 2019
- WA Windowless Sample Holes 2019
- WA Rotary Boreholes 2020
- WA Cable Percussion Boreholes 2020
- WA Trial Pits 2020
- WA Windowless Sample Holes 2020
- WA Cone Penetration Test Locations 2021

Notes

WA = Wardell Armstrong

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

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TEN ACRES LANE

DRAWING TITLE

EXPLORATORY HOLE LOCATION PLAN

DRG No.	REV
LD10385-003	A

DRG SIZE	SCALE	DATE
A3	1:2,750	25/08/22

DRAWN BY	CHECKED BY	APPROVED BY
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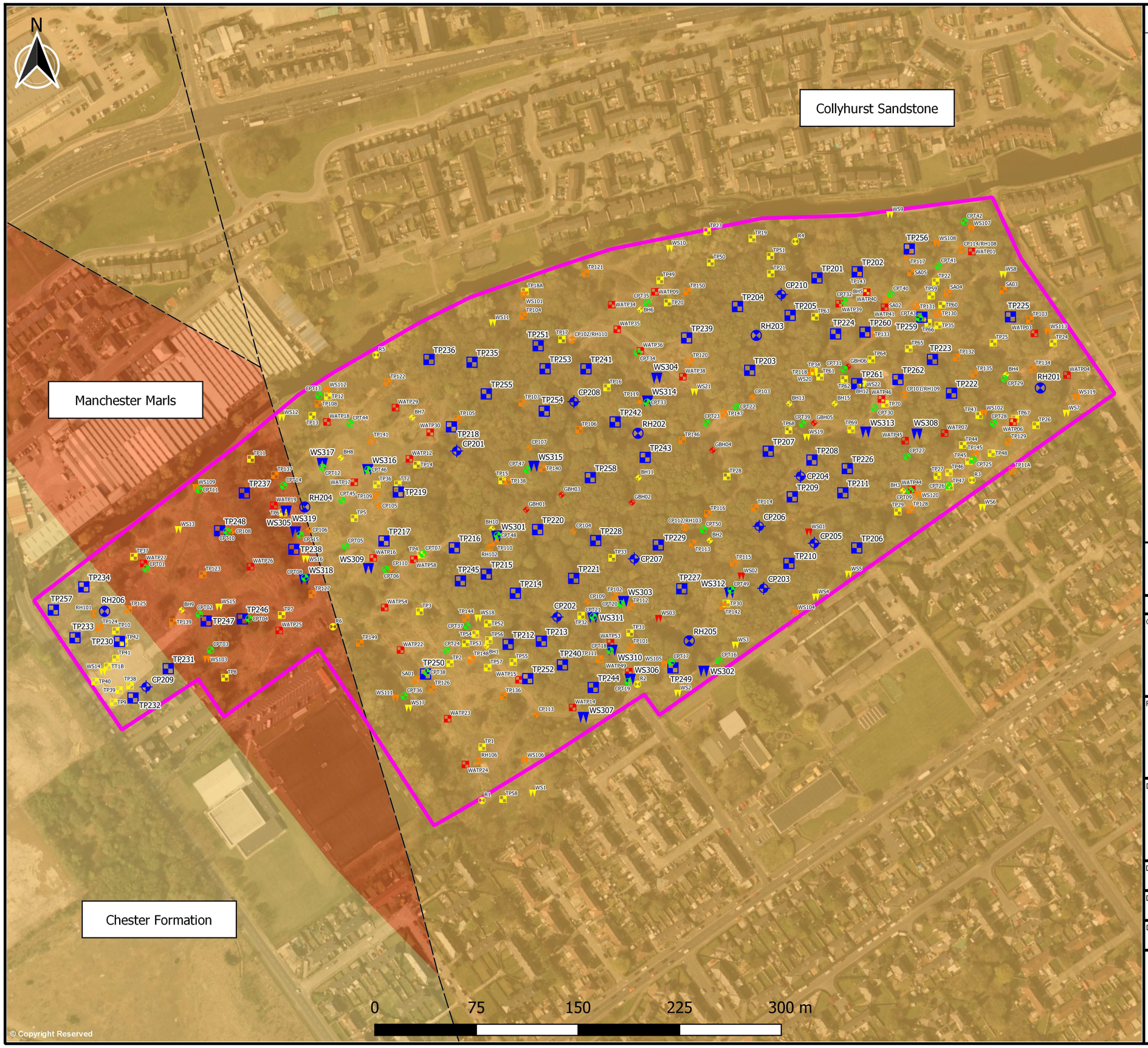

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Legend

- Site Boundary
- Collyhurst Sandstone Formation
- Manchester Marls Formation
- Chester Formation
- Conjectured Fault

Exploratory Hole Positions 2022

- WA Rotary Boreholes 2022
- WA Cable Percussion Boreholes 2022
- WA Trial Pits 2022
- WA Windowless Sample Holes 2022

Previous Exploratory Hole Positions

- Celtic Rotary Boreholes 2007
- Celtic Cable Percussion Boreholes 2007
- Celtic Trial Pits 2007
- Celtic Windowless Sample Holes 2007
- WA Cable Percussion Boreholes 2019
- WA Trial Pits 2019
- WA Windowless Sample Holes 2019
- WA Rotary Boreholes 2020
- WA Cable Percussion Boreholes 2020
- WA Trial Pits 2020
- WA Windowless Sample Holes 2020
- WA Cone Penetration Test Locations 2021

Notes

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

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NUVU DEVELOPMENTS LTD

PROJECT

TEN ACRES LANE

DRAWING TITLE

GEOLOGICAL SITE FEATURES PLAN - SOLID GEOLOGY

DRG No.	REV
LD10385-004	B

DRG SIZE	SCALE	DATE
A3	1:2,750	23/09/2022

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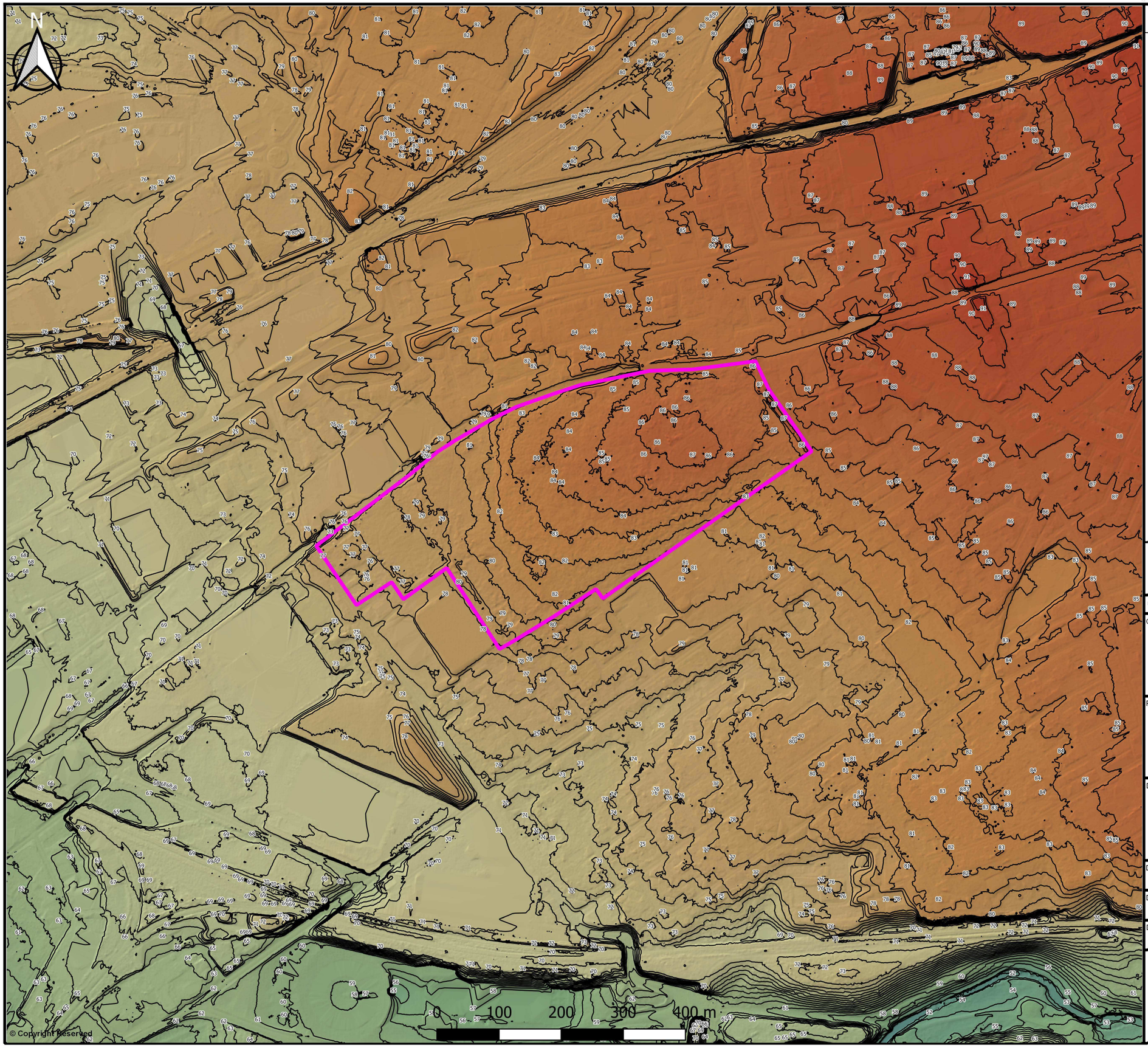

DO NOT SCALE FROM THIS DRAWING

Legend

Site Boundary

Elevation in Metres Above Ordnance Datum

- 43m
- 56m
- 70m
- 83m
- 96m

Notes

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

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PROJECT

TEN ACRES LANE

DRAWING TITLE

SHADED RELIEF MAP

DRG No.	REV
LD10385-005	

DRG SIZE	SCALE	DATE
A3	1:6,500	25/08/2022

DRAWN BY	CHECKED BY	APPROVED BY
JC	VC	AR

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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Indicative Extent of Clay Pit Excavations from Historical Maps

Made Ground Thickness mbgl

- 0.0 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 4.9
- 4.9 - 5.9
- 5.9 - 6.9
- 6.9 - 7.9
- 7.9 - 8.9
- 8.9 - 9.9
- 9.9 - 10.9
- 10.9 - 11.9
- 11.9 - 12.9
- 12.9 - 13.8

Notes

mbgl = metres below ground level

See Drawing LD10385-003A for the exploratory hole legend. Only exploratory holes used for the contour are shown. Contours are indicative only and have been interpolated between those exploratory holes where the full depth of Made Ground has been proved. Due to the likley complex geometry of the historic clay pit excavations the contours should be used with caution. The contour / drawing also contains information from third party boreholes and no reliance can be provided for this data. WA cannot be liable for any errors within third party data.

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

NUVU DEVELOPMENTS LTD

PROJECT

TEN ACRES LANE

DRAWING TITLE

INDICATIVE MADE GROUND THICKNESS CONTOUR PLAN

DRG No.	REV
LD10385-006	

DRG SIZE	SCALE	DATE
A3	1:2,750	25/08/2022

DRAWN BY	CHECKED BY	APPROVED BY
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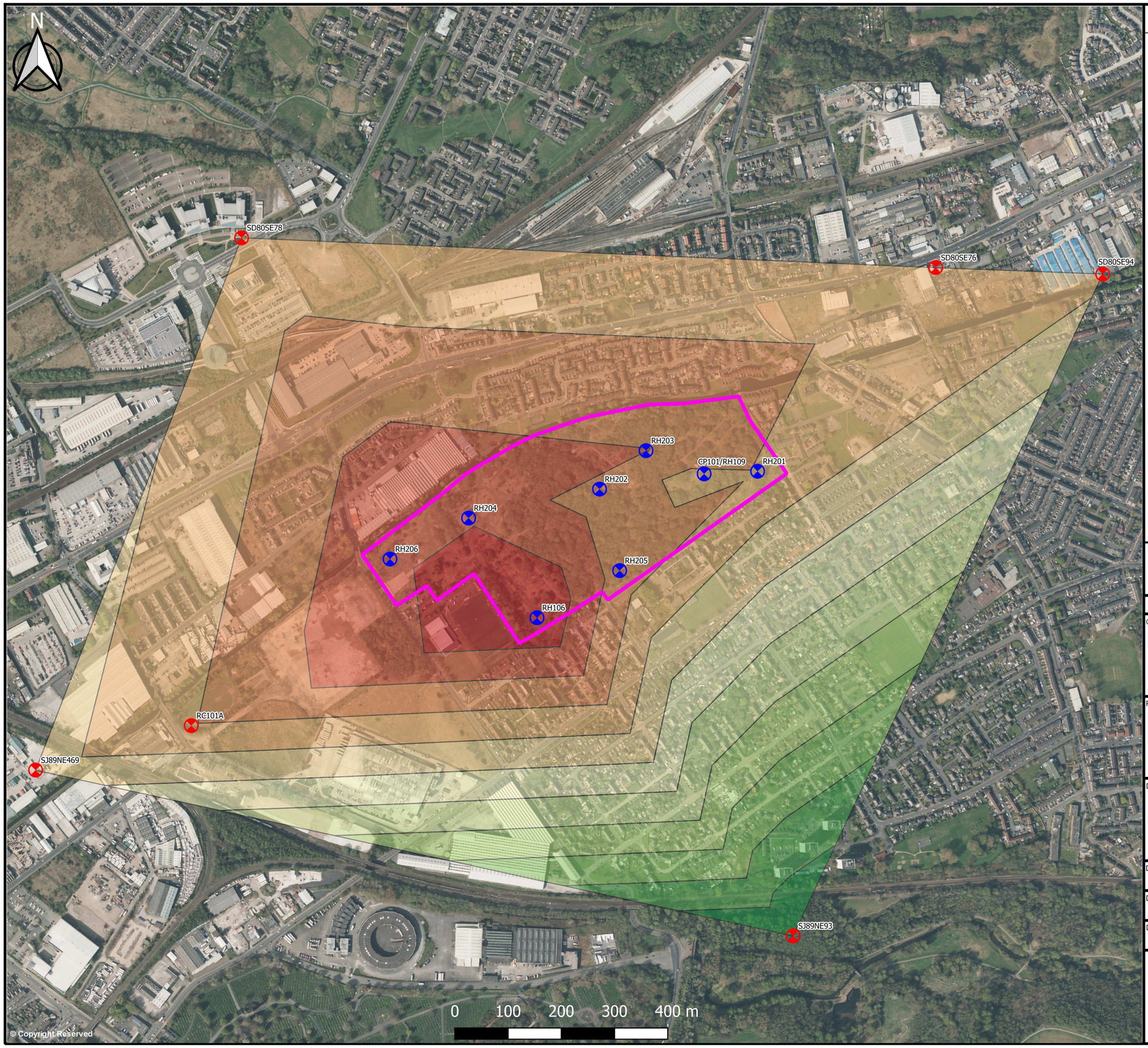

DO NOT SCALE FROM THIS DRAWING

Legend

Site Boundary

Boreholes Proving Glacial Till Thickness

- WA Boreholes
- Third Party Boreholes

Glacial Till Thickness Contour

- 12.2 - 15.1m
- 15.1 - 18.1m
- 18.1 - 21.0m
- 21.0 - 23.9m
- 23.9 - 26.9m
- 26.9 - 29.8m
- 29.8 - 32.8m
- 32.8 - 35.7m
- 35.7 - 38.6m
- 38.6 - 41.6m
- 41.6 - 44.5m

Notes

Contours are indicative only and have been interpolated between those exploratory holes where the full thickness of the Glacial Till has been proven. There are numerous other boreholes on and off-site that are indicative of Glacial Till thickness, but were terminated before the thickness was proven and hence are not shown on this plan. Please refer to the 3D model screenshot shown in Drawing LD10385-010 to 014 and cross sections. The contour / drawing also contains information from third party boreholes and no reliance can be provided for this data. WA cannot be liable for any errors within the third party data.

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TEN ACRES LANE

DRAWING TITLE

INDICATIVE GLACIAL TILL THICKNESS CONTOUR PLAN

DRG No.	REV
LD10385-007	A

DRG SIZE	SCALE	DATE
A3	1:7,000	23/09/2022

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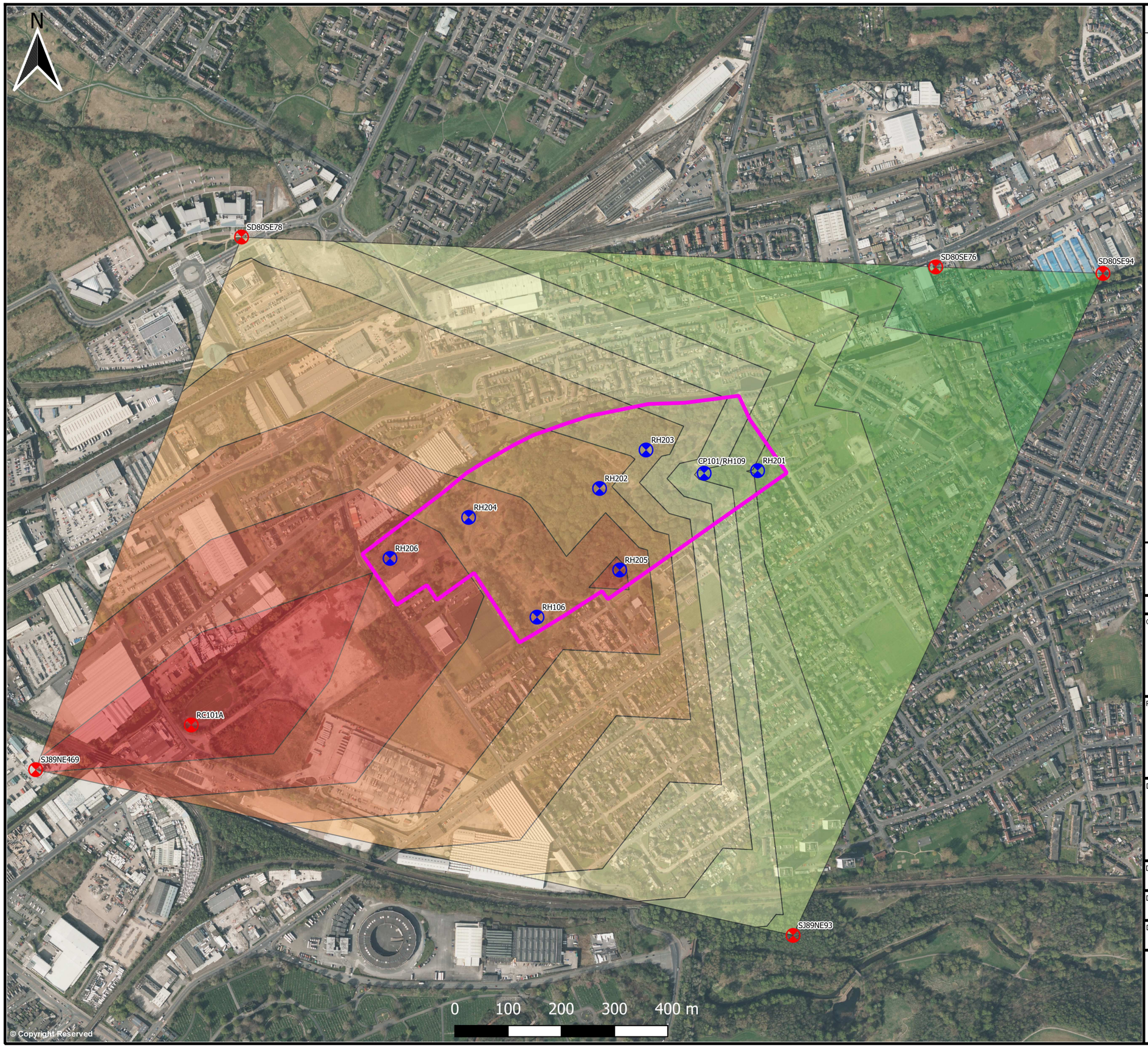

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Conjectured Fault

Boreholes Proving Rockhead

- WA Boreholes Proving Rock
- Third Party Boreholes Proving Rock

Indicative Rockhead Contour mAOD

- 29.5 - 31.7
- 31.7 - 33.9
- 33.9 - 36.1
- 36.1 - 38.4
- 38.4 - 40.6
- 40.6 - 42.8
- 42.8 - 45.0
- 45.0 - 47.2
- 47.2 - 49.4
- 49.4 - 51.7
- 51.7 - 53.9

Notes

mAOD = metres above ordnance datum

Drawing is for illustrative purposes only and is an interpolation between points where the depth to rockhead is indicated. Due to the faulting that is present on-site the contours should be used with caution. The contour / drawing also contains information from third party boreholes and no reliance can be provided for this data. WA cannot be liable for any errors within the third party data.

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

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PROJECT

TEN ACRES LANE

DRAWING TITLE

INDICATIVE ROCKHEAD CONTOUR PLAN mAOD

DRG No.	REV
LD10385-008	A

DRG SIZE	SCALE	DATE
A3	1:7,000	23/09/2022

DRAWN BY	CHECKED BY	APPROVED BY
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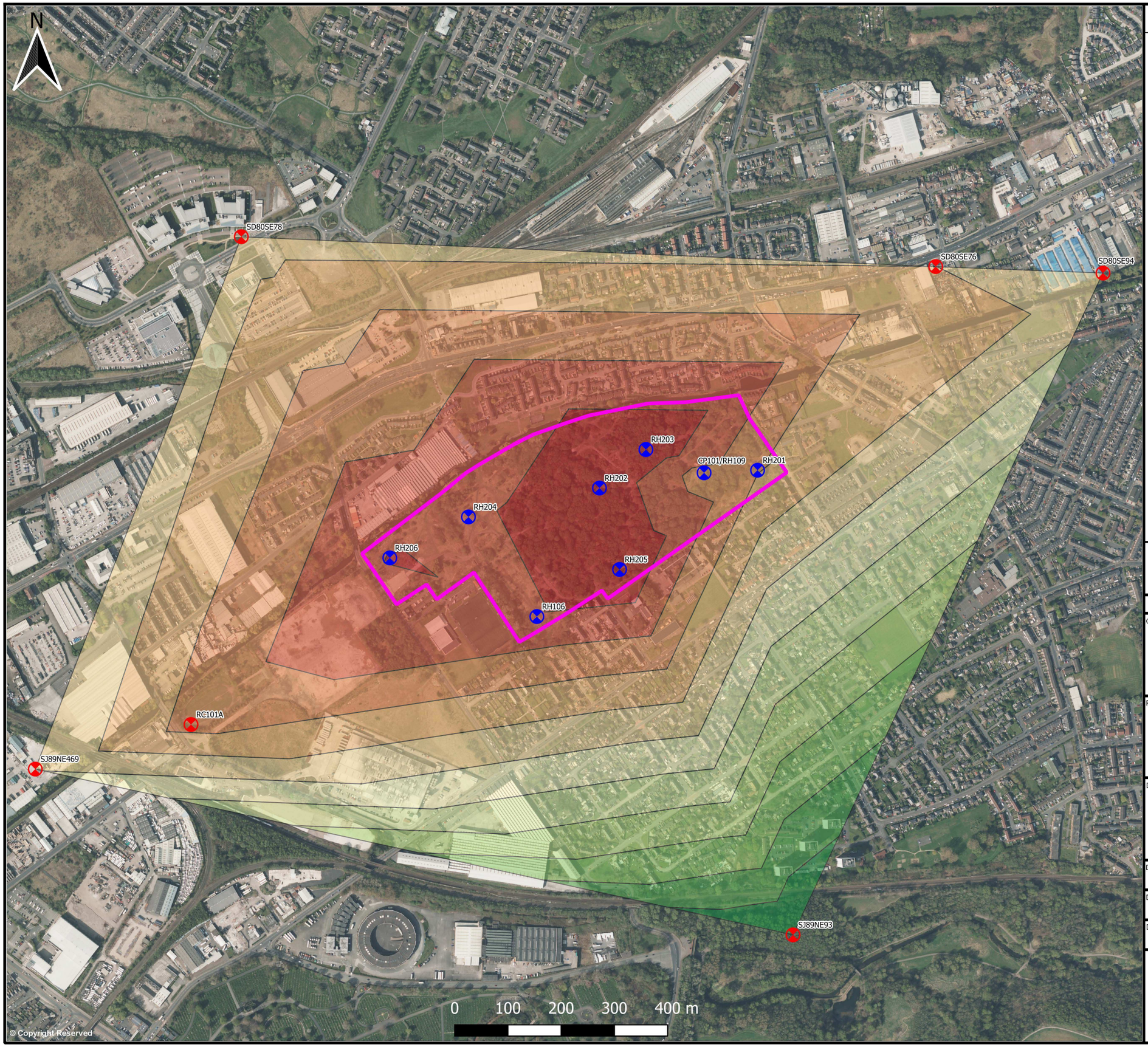

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Conjectured Fault

Boreholes Proving Rockhead

- WA Boreholes Proving Rock
- Third Party Boreholes Proving Rock

Indicative Rockhead Contour mbgl

- 12.2 - 15.5
- 15.5 - 18.7
- 18.7 - 22.0
- 22.0 - 25.2
- 25.2 - 28.5
- 28.5 - 31.8
- 31.8 - 35.0
- 35.0 - 38.3
- 38.3 - 41.6
- 41.6 - 44.8
- 44.8 - 48.1

Notes

mbgl = metres below ground level

Drawing is for illustrative purposes only and is an interpolation between points where the depth to rockhead is indicated. Due to the faulting that is present on-site the contours should be used with caution. The contour / drawing also contains information from third party boreholes and no reliance can be provided for this data. WA cannot be liable for any errors within the third party data.

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TEN ACRES LANE

DRAWING TITLE

INDICATIVE ROCKHEAD CONTOUR PLAN MBGL

DRG No.	REV
LD10385-009	A

DRG SIZE	SCALE	DATE
A3	1:7,000	23/09/2022

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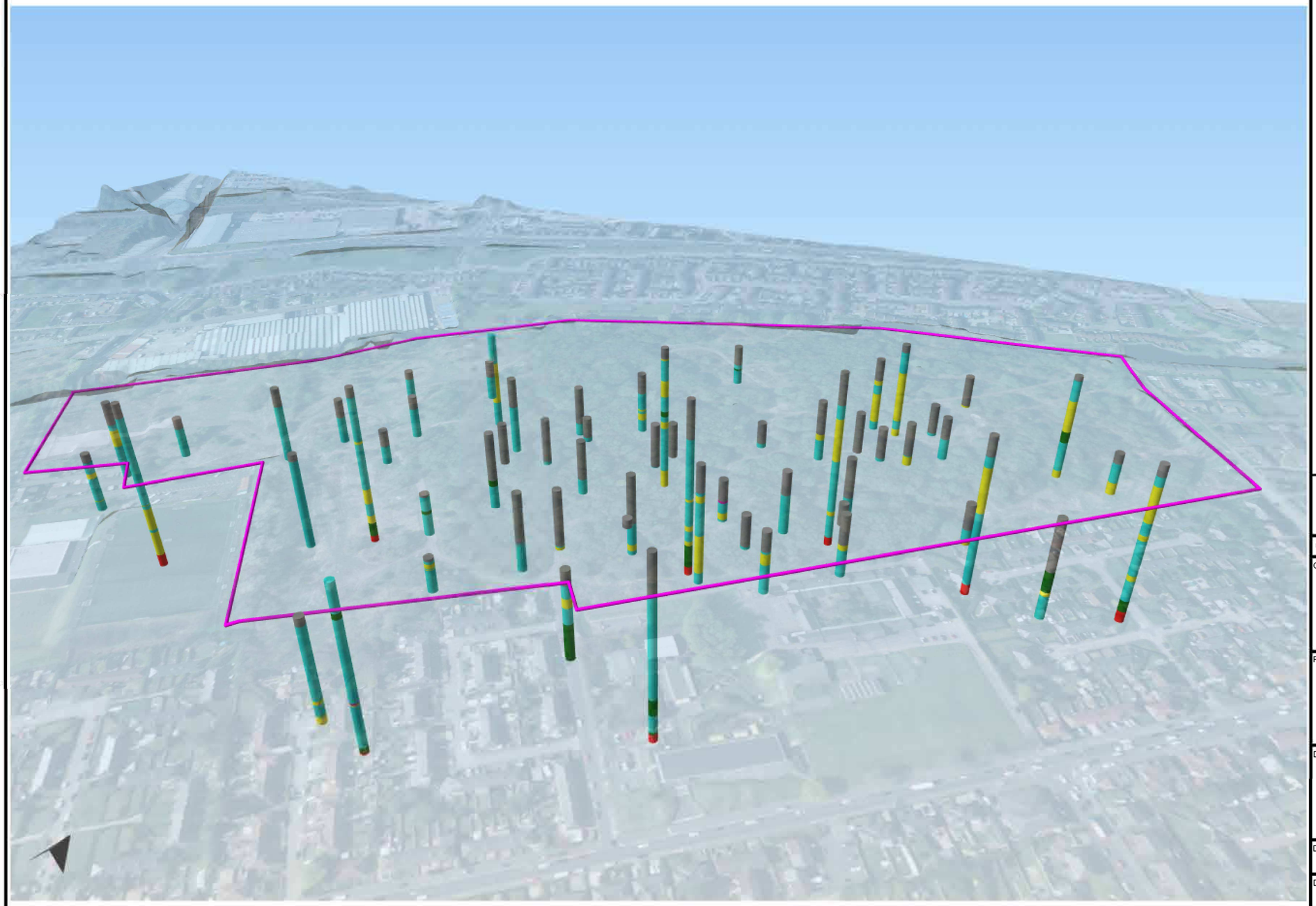

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Made Ground
- Cohesive Glacial Till (Clay)
- Cohesive Glacial Till (Silts)
- Granular Glacial Till (Sands)
- Granular Glacial Till (Gravels & Cobbles)
- Bedrock

Notes

Drawing is for illustrative pruposes only and the strata have been simplified and only shows cable percussion or rotary boreholes. Please refer to the exploratory hole logs for further detailed information.
The model also contains information from third party boreholes and no reliance can be provided for this data. Where data from third parties has been used, WA cannot be liable for any errors within the third party data. LIDAR Composite DTM - 1m: © Environment Agency copyright and/or database right 2022. All rights reserved. Open Government License.
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TEN ACRES LANE

DRAWING TITLE

SIMPLIFIED 3D MODEL BOREHOLES
VIEW LOOKING NORTH

DRG No.	REV
LD10385-010	

DRG SIZE	SCALE	DATE
A3	-	08/07/2022

DRAWN BY	CHECKED BY	APPROVED BY
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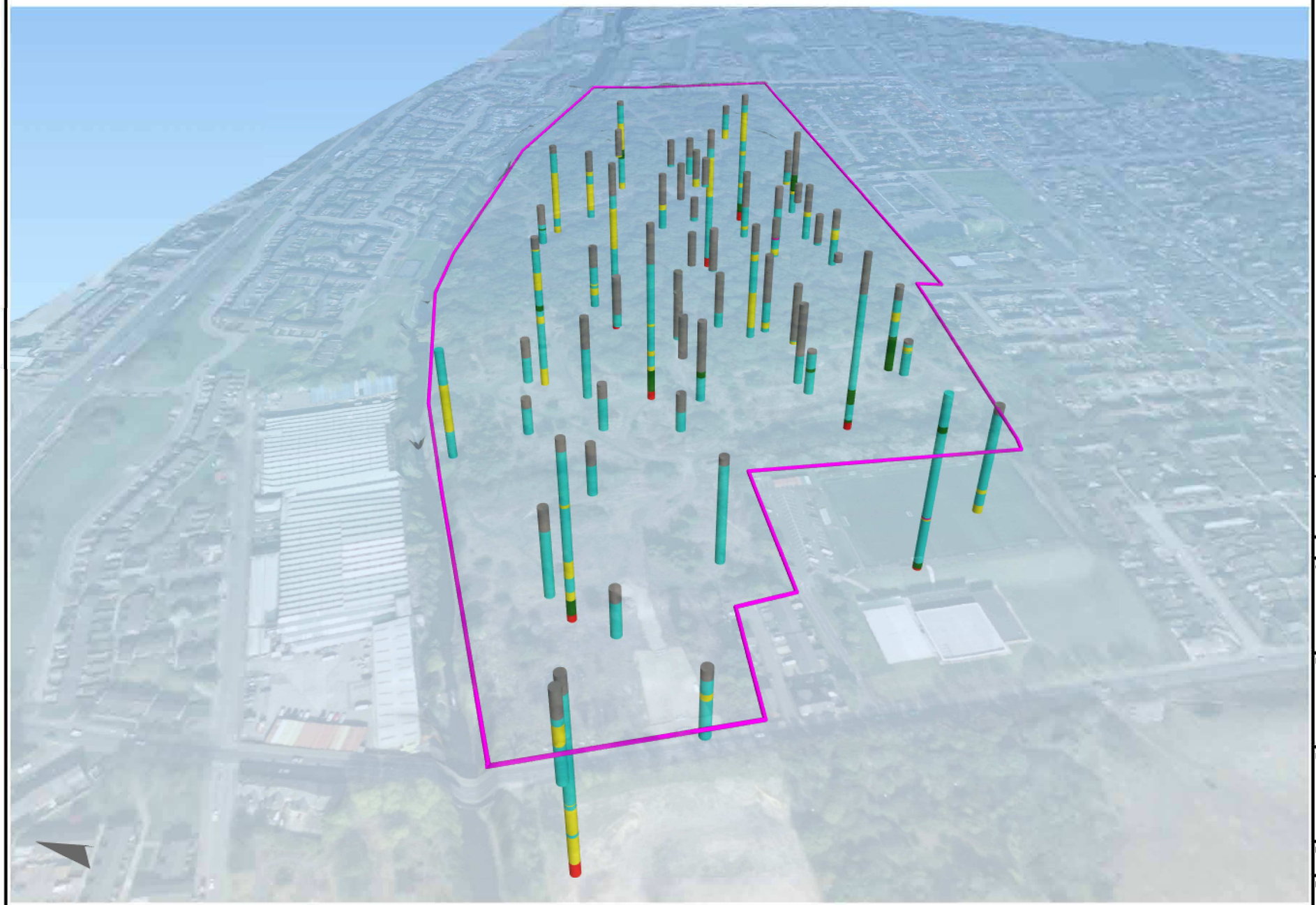

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Made Ground
- Cohesive Glacial Till (Clay)
- Cohesive Glacial Till (Silts)
- Granular Glacial Till (Sands)
- Granular Glacial Till (Gravels & Cobbles)
- Bedrock

Notes

Drawing is for illustrative pruposes only and the strata have been simplified and only shows cable percussion or rotary boreholes. Please refer to the exploratory hole logs for further detailed information.
The model also contains information from third party boreholes and no reliance can be provided for this data. Where data from third parties has been used, WA cannot be liable for any errors within the third party data. LIDAR Composite DTM - 1m: © Environment Agency copyright and/or database right 2022. All rights reserved. Open Government License.
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TEN ACRES LANE

DRAWING TITLE

SIMPLIFIED 3D MODEL BOREHOLES
VIEW LOOKING EAST

DRG No.	REV
LD10385-011	

DRG SIZE	SCALE	DATE
A3	-	08/07/2022

DRAWN BY	CHECKED BY	APPROVED BY
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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Made Ground
- Cohesive Glacial Till (Clay)
- Cohesive Glacial Till (Silts)
- Granular Glacial Till (Sands)
- Granular Glacial Till (Gravels & Cobbles)
- Bedrock

Notes

Drawing is for illustrative pruposes only and the strata have been simplified and only shows cable percussion or rotary boreholes. Please refer to the exploratory hole logs for further detailed information.
The model also contains information from third party boreholes and no reliance can be provided for this data. Where data from third parties has been used, WA cannot be liable for any errors within the third party data. LIDAR Composite DTM - 1m: © Environment Agency copyright and/or database right 2022. All rights reserved. Open Government License.
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PROJECT

TEN ACRES LANE

DRAWING TITLE

SIMPLIFIED 3D MODEL BOREHOLES
VIEW LOOKING SOUTH EAST

DRG No.	REV
LD10385-012	

DRG SIZE	SCALE	DATE
A3	-	08/07/2022

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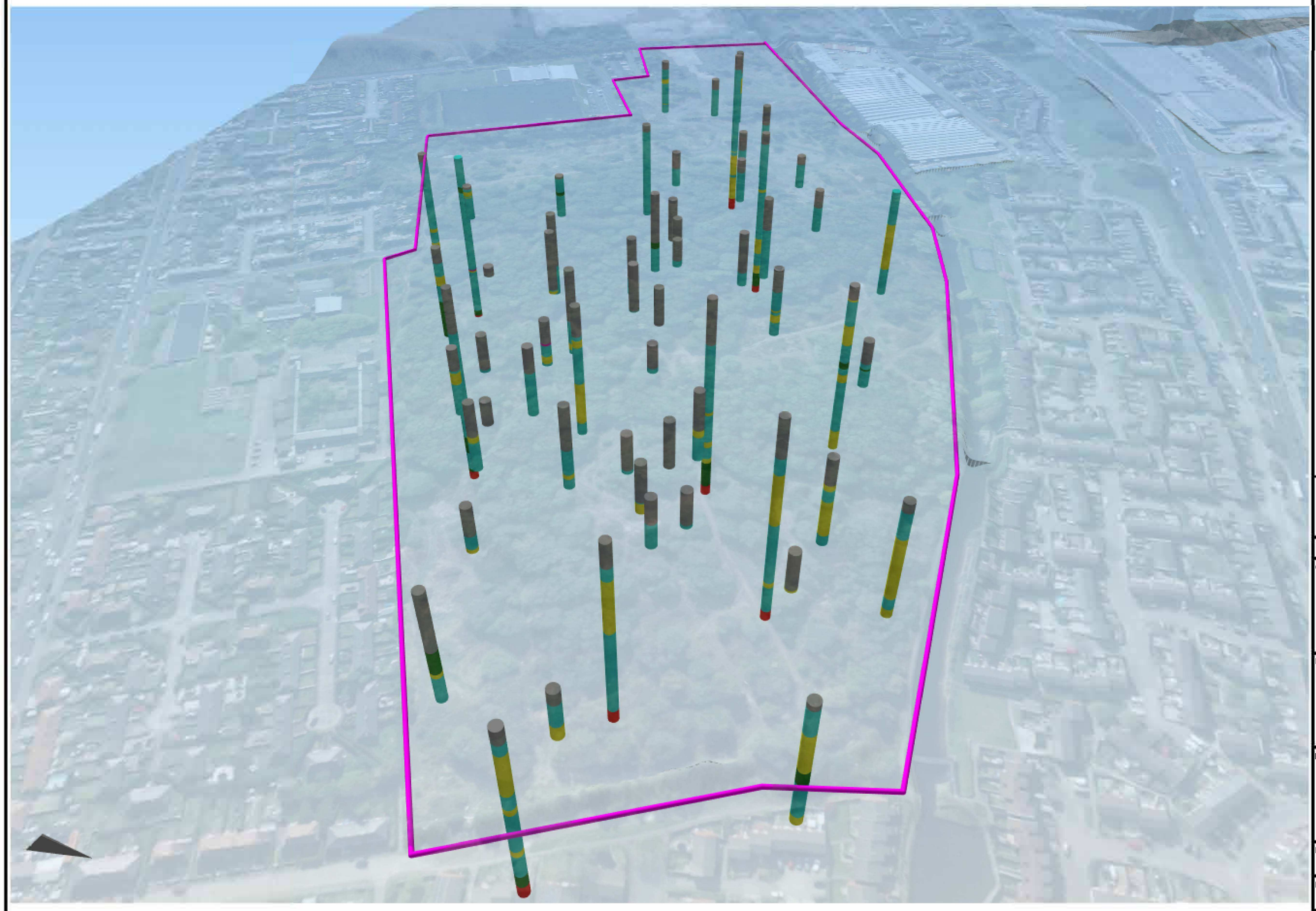

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Made Ground
- Cohesive Glacial Till (Clay)
- Cohesive Glacial Till (Silts)
- Granular Glacial Till (Sands)
- Granular Glacial Till (Gravels & Cobbles)
- Bedrock

Notes

Drawing is for illustrative pruposes only and the strata have been simplified and only shows cable percussion or rotary boreholes. Please refer to the exploratory hole logs for further detailed information.
The model also contains information from third party boreholes and no reliance can be provided for this data. Where data from third parties has been used, WA cannot be liable for any errors within the third party data. LIDAR Composite DTM - 1m: © Environment Agency copyright and/or database right 2022. All rights reserved. Open Government License.
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TEN ACRES LANE

DRAWING TITLE

SIMPLIFIED 3D MODEL BOREHOLES
VIEW LOOKING WEST

DRG No.	REV
LD10385-013	

DRG SIZE	SCALE	DATE
A3	-	08/07/2022

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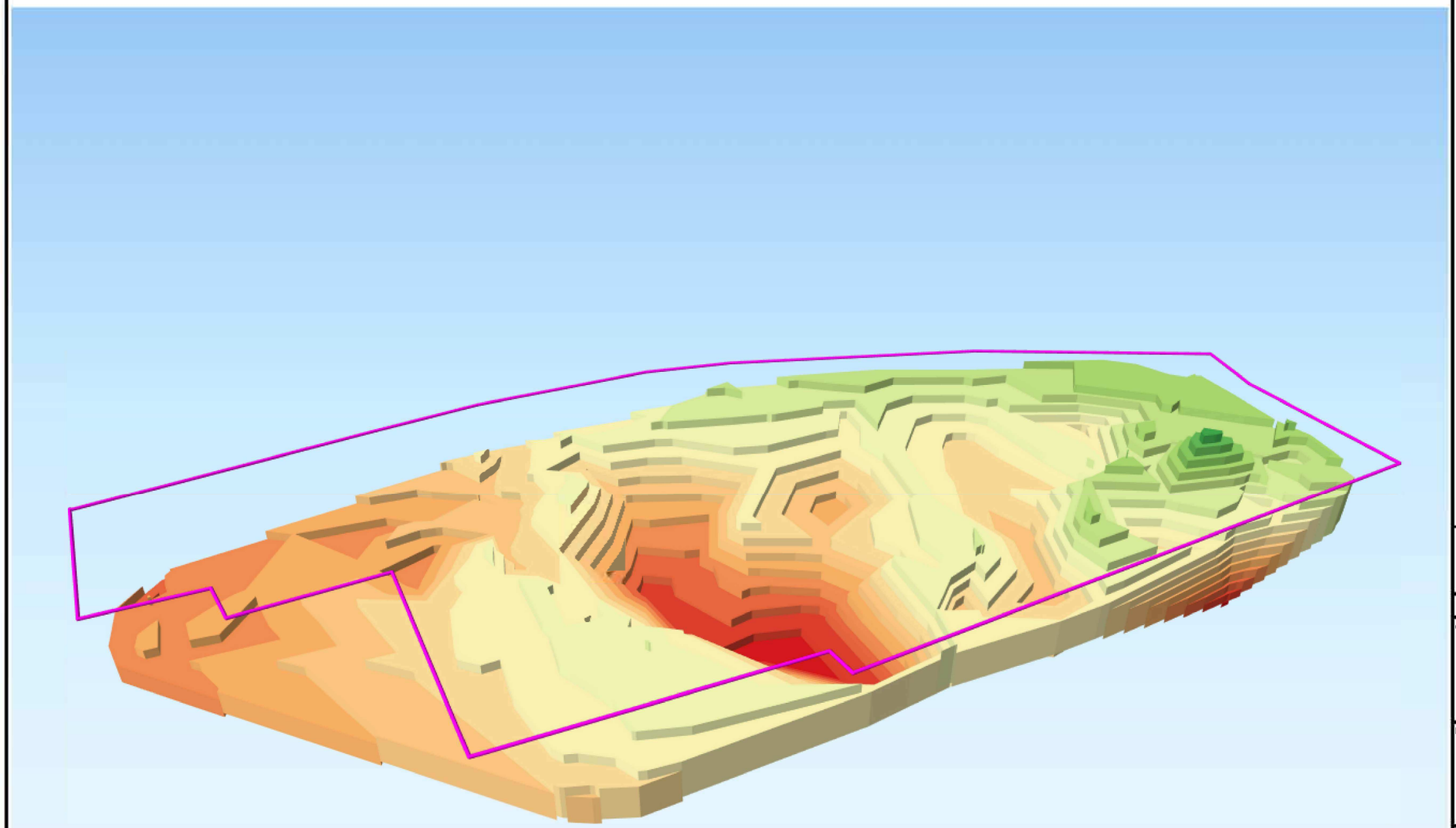

DO NOT SCALE FROM THIS DRAWING

Legend

Site Boundary

Made Ground Contour mAOD

- 68.8 - 70.1
- 70.1 - 71.5
- 71.5 - 72.9
- 72.9 - 74.2
- 74.2 - 75.6
- 75.6 - 77.0
- 77.0 - 78.3
- 78.3 - 79.7
- 79.7 - 81.1
- 81.1 - 82.4
- 82.4 - 83.8
- 83.8 - 85.2
- 85.2 - 86.5
- 86.5 - 87.9
- 87.9 - 89.3

Notes

mAOD = metres above ordnance datum.

Contours are indicative only and have been interpolated between those exploratory holes where the full depth of Made Ground has been proved. Due to the likley complex geometry of of the historic clay pit excavations the contours should be used with caution. The contour / drawing also contains information from third party boreholes and no reliance can be provided for this data. WA cannot be liable for any errors within the third party data.

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NUVU DEVELOPMENTS LIMITED

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TEN ACRES LANE

DRAWING TITLE

3D MODEL VIEW MADE GROUND CONTOUR

DRG No.	REV
LD10385-014	

DRG SIZE	SCALE	DATE
A3	-	25/08/2022

DRAWN BY	CHECKED BY	APPROVED BY
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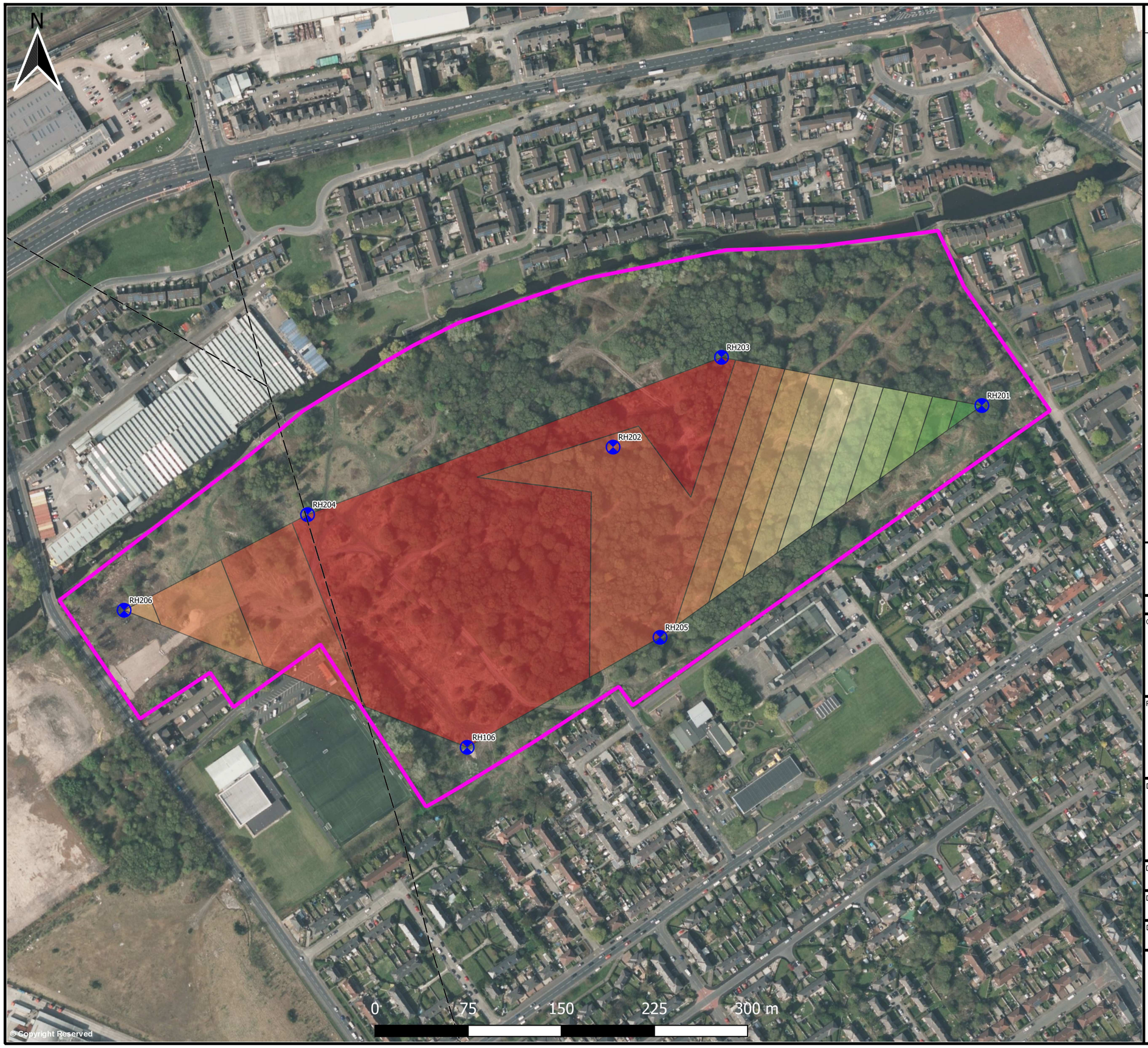

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Conjectured Fault
- WA Boreholes With Response Zones In Bedrock

Groundwater Contour Bedrock mAOD

- 54.4 - 54.6
- 54.6 - 54.8
- 54.8 - 55.0
- 55.0 - 55.2
- 55.2 - 55.5
- 55.5 - 55.7
- 55.7 - 55.9
- 55.9 - 56.1
- 56.1 - 56.3
- 56.3 - 56.5
- 56.5 - 56.7

Notes

Contours are indicative only and have been interpolated between monitoring wells with the average groundwater level being used from the visits to date. Due to the faulting that is present at the site the contours shown should be used with caution.
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TEN ACRES LANE

DRAWING TITLE

INDICATIVE GROUNDWATER FLOW CONTOUR WITHIN BEDROCK

DRG No.	REV
LD10385-015	

DRG SIZE	SCALE	DATE
A3	1:2,750	08/07/2022

DRAWN BY	CHECKED BY	APPROVED BY
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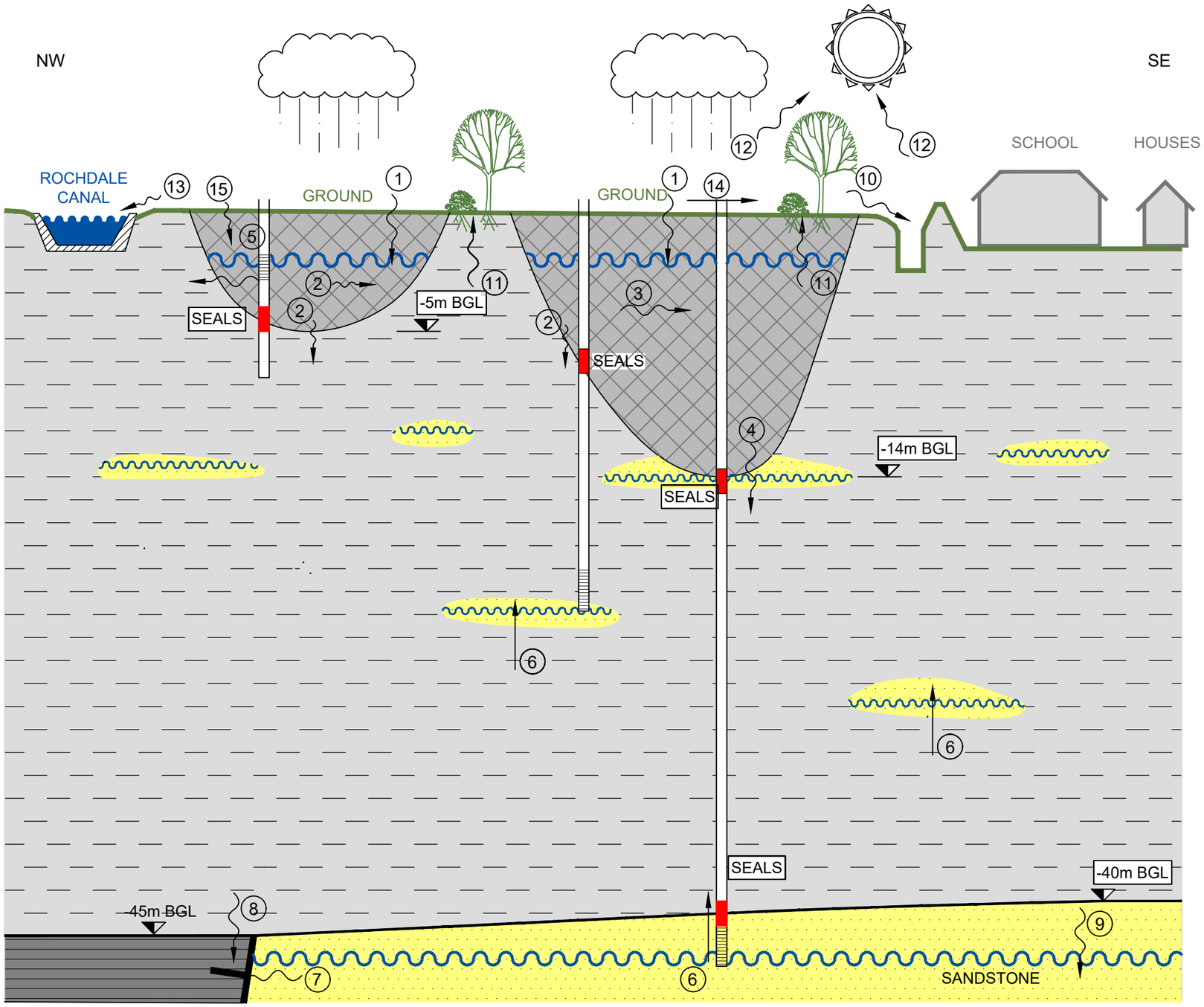

1. VERTICAL MIGRATION FROM SURFACE AND THROUGH MADE GROUND.
2. LIMITED VERTICAL MIGRATION DUE TO LOW PERMEABILITY GLACIAL TILL.
3. LATERAL MIGRATION WITHIN MADE GROUND WHERE COHESIVE LAYERS ARE PRESENT AT THE BASE OF THE GLACIAL TILL.
4. LIMITED VERTICAL MIGRATION THROUGH MADE GROUND INTO DISCONTINUOUS SAND LENSES WITH GLACIAL TILL.
5. LACK OF CONTINUITY BETWEEN THE SITE AND THE CANAL DUE TO LOW PERMEABILITY GLACIAL TILL AND/OR CLAY LINING TO THE CANAL.
6. SUB ARTESIAN CONDITIONS REDUCING DOWNWARD MIGRATION OF SOME CONTAMINANTS.
7. LATERAL MIGRATION THROUGH BEDROCK IN A DOWN DIP DIRECTION BUT FAULT AND MUDSTONE ACTING AS BARRIER TO GROUNDWATER FLOW.
8. VERTICAL MIGRATION VIA FAULT.
9. VERTICAL MIGRATION THROUGH SANDSTONE BEDROCK.
10. GROUNDWATER DUE TO OVERSPILL OF PERCHED WATERS WITHIN MADE GROUND OVER THE BURIED HIGHWALL, FOLLOWED BY LATERAL MIGRATION DOWN GRADIENT TO CUT OFF TRENCH AND/OR OFFSITE RECEPTORS.
11. INTERCEPTION OF RAINWATER/SURFACE WATER AND UPTAKE OF GROUNDWATER VIA ROOTS.
12. EVAPORATION OF RAINWATER/SURFACE WATER.
13. LIMITED SURFACE WATER RUNOFF TO AND POTENTIAL LEACHING TO THE CANAL.
14. SURFACE WATER RUNOFF/OVERLAND FLOW DOWN GRADIENT TO THE SOUTH WEST.
15. LOCALIZED SHALLOW PERCHED GROUNDWATER FLOW DIRECTIONS ARE INDICATED TO BE AWAY FROM THE ROCHDALE CANAL

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KEY

- MADE GROUND
- CLAY
- MUDSTONE
- SAND LENSES
- SANDSTONE
- WATER
- CLAY CAPPING
- BOREHOLE LOCATION
- DATUM - BELOW GROUND LEVEL (BGL)
- FAULT WITH TICK SHOWING DOWN THROW DIRECTION TO SW

NOTE: DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO SCALE

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

NUVU DEVELOPMENTS LIMITED

PROJECT

TEN ACRES LANE

DRAWING TITLE

CONCEPTUAL SITE MODEL

DRG No.	REV
LD10385-016	A

DRG SIZE	SCALE	DATE
A3	NTS	06/09/22

DRAWN BY	CHECKED BY	APPROVED BY
CT	JC	AR

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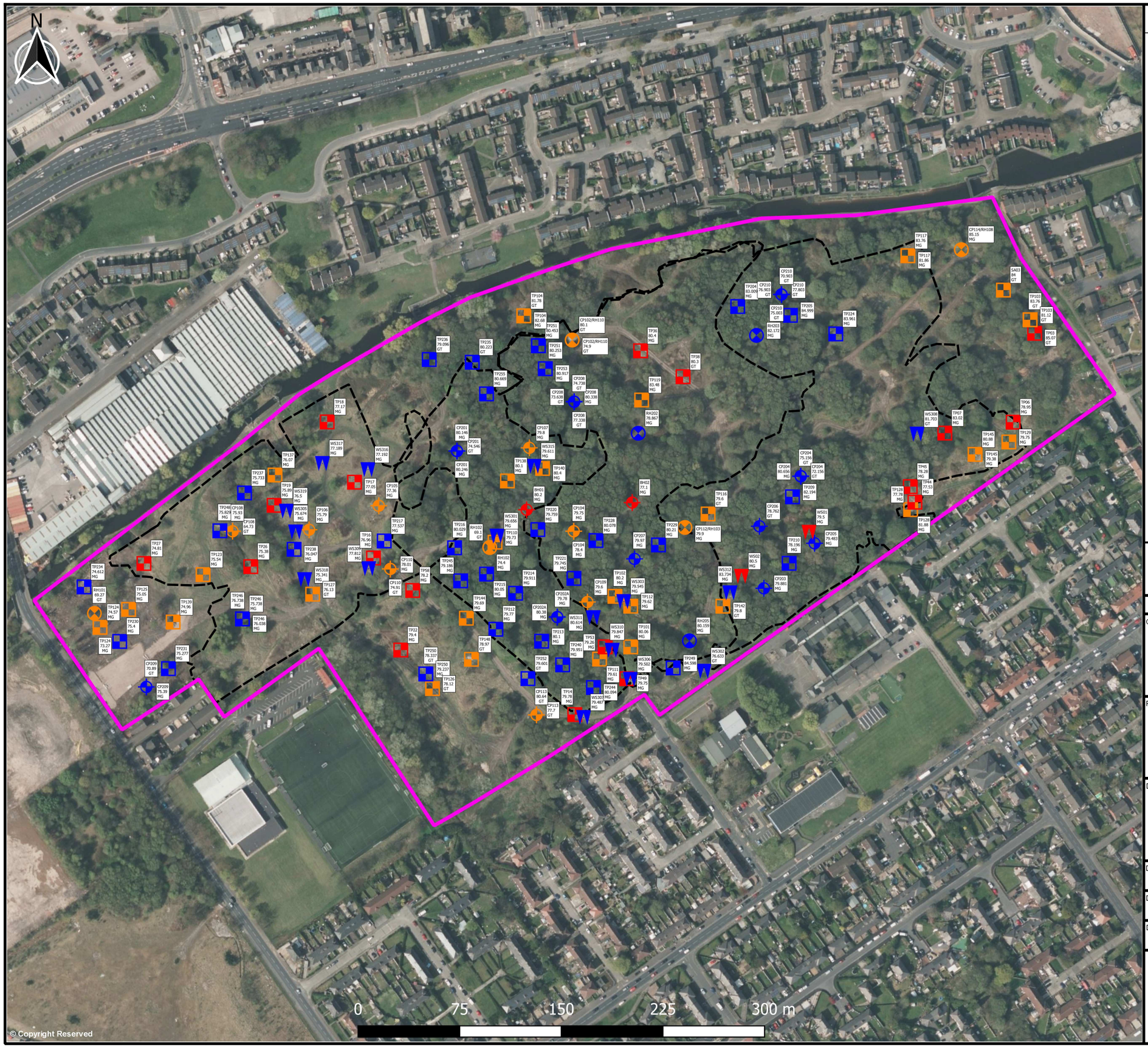
N:\LD\LD10385 - TEN ACRES FURTHER SI WORKS\03 - DESIGN\AUTOCAD\LD10385-016 REV A CONCEPTUAL SITE MODEL.DWG



DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations from Historical Maps

Groundwater Strike 2022

- WA Rotary Boreholes 2022
- WA Cable Percussion Boreholes 2022
- WA Windowless Sample Hole 2022
- WA Trial Pits 2022
- WA Rotary Boreholes 2020
- WA Cable Percussion Boreholes 2020
- WA Trial Pits 2020
- WA Cable Percussion Boreholes 2019
- WA Windowless Sample Holes 2019
- WA Trial Pits 2019

Notes

WA = Wardell Armstrong
mAOD = Metres Above Ordnance Datum
Exploratory Hole Labels = Location, Water Strike in mAOD and Strata.
LIDAR Labels = mAOD
MG = Made Ground
GT = Glacial Till

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT
NUVU DEVELOPMENTS LTD

PROJECT
TEN ACRES LANE

DRAWING TITLE
GROUNDWATER STRIKE ELEVATIONS mAOD

DRG No.	REV
LD10385-017	

DRG SIZE	SCALE	DATE
A3	1:2,750	25/08/22

DRAWN BY	CHECKED BY	APPROVED BY
JC	VC	AR

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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations
- Exploratory Hole Locations

Notes

WA = Wardell Armstrong
mAOD = Metres Above Ordnance Datum

Exploratory Hole Labels = Location, Water Strike in mAOD, Reponse Zone and Strata.

MG = Made Ground
GT = Glacial Till
BR = Bedrock

Reported value is the average groundwater monitoring elevation per borehole. For those boreholes that were monitored between November 2020 and July 2022, seasonal variations have been noted, and reference should be made to the accompanying report (ref: LD10385-RPT-001).
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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT
NUVU DEVELOPMENTS LTD

PROJECT
TEN ACRES LANE

DRAWING TITLE
GROUNDWATER MONITORING ELEVATIONS mAOD

DRG No.	REV
LD10385-018	

DRG SIZE	SCALE	DATE
A3	1:2,750	29/08/22

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N:\LD\LD10385 - Ten Acres Further SI Works\03 - Design\QGIS\Output\Drawings 2022

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations
- Indicative Groundwater Flow Direction

Groundwater Elevations Monitoring Updated

- WA Rotary Boreholes 2022
- WA Cable Percussion Boreholes 2022
- WA Windowless Sample Holes 2022
- WA Rotary Boreholes 2020
- WA Cable Percussion Boreholes 2020
- WA Windowless Sample Holes 2020
- WA Boreholes 2019

Notes

WA = Wardell Armstrong
mAOD = Metres Above Ordnance Datum

Exploratory Hole Labels = Location, Water Strike in mAOD, Response Zone and Strata.

MG = Made Ground
GT = Glacial Till
BR = Bedrock

This drawing is for illustrative purposes only and is based on the average monitoring levels recorded from each borehole. For those boreholes that were monitored between November 2020 and July 2022, seasonal variations have been noted and reference should be made to the accompanying report (LD10385-RPT-001).
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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT
NUVU DEVELOPMENTS LTD

PROJECT
TEN ACRES LANE

DRAWING TITLE
INDICATIVE GROUNDWATER FLOW DIRECTION IN PERCHED WATERS WITHIN MADE GROUND

DRG No.	REV
LD10385-019	

DRG SIZE	SCALE	DATE
A3	1:2,750	29/08/22

DRAWN BY	CHECKED BY	APPROVED BY
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N:\LD\LD10385 - Ten Acres Further SI Works\03 - Design\QGIS\Output\Drawings 2022

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations
- Indicative Groundwater Flow Direction

Groundwater Elevations Monitoring Updated

- WA Rotary Boreholes 2022
- WA Cable Percussion Boreholes 2022
- WA Windowless Sample Holes 2022
- WA Rotary Boreholes 2020
- WA Cable Percussion Boreholes 2020
- WA Windowless Sample Holes 2020
- WA Boreholes 2019

Notes

WA = Wardell Armstrong
mAOD = Metres Above Ordnance Datum

Exploratory Hole Labels = Location, Water Strike in mAOD, Response Zone and Strata.

MG = Made Ground
GT = Glacial Till
BR = Bedrock

This drawing is for illustrative purposes only and is based on the average monitoring levels recorded from each borehole. For those boreholes that were monitored between November 2020 and July 2022, seasonal variations have been noted and reference should be made to the accompanying report (LD10385-RPT-001).
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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT
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PROJECT
TEN ACRES LANE

DRAWING TITLE
INDICATIVE GROUNDWATER FLOW DIRECTION IN PERCHED WATERS WITHIN GLACIAL TILL

DRG No.	REV
LD10385-020	

DRG SIZE	SCALE	DATE
A3	1:2,750	29/08/22

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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations
- Areas of Largely Suspected Combustion Waste
- Areas of Largely Suspected Construction & Demolition Waste
- Areas of Largely Suspected Combustion Waste >1m Thick
- Areas of Largely Suspected Colliery Spoil
- Areas of Suspected Household Waste
- Significant Areas of Largely Unknown Ground Conditions

Notes

Please refer to Drawing LD10385-003A for the exploratory hole legend.
Areas outlined are indicative and are for illustrative purposes only.
Only predominant Made Ground types are indicated. Vertical extent is not represented.
Suspected household waste materials are centred on the areas in which they were encountered and are not indicative of the lateral and vertical extent.
Actual ground conditions may vary between exploratory hole locations due to the inherent variability that would be expected within a historical landfill of this nature.
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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

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PROJECT

TEN ACRES LANE

DRAWING TITLE

INDICATIVE MADE GROUND TYPES

DRG No.	REV
LD10385-021	

DRG SIZE	SCALE	DATE
A3	1:2,750	29/08/22

DRAWN BY	CHECKED BY	APPROVED BY
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N:\LD\LD10162 - Ten Acres Lane Newton Heath\03 - Design\QGIS\Output\Drawings

DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Approxiate Area of Groundwater Seepage 2020
- Recorded Extent of Clay Pit Excavations

Notes

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REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

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PROJECT

TEN ACRES LANE

DRAWING TITLE

INDICATIVE AREA OF GROUNDWATER SEEPAGE

DRG No.	REV
LD10385-022	

DRG SIZE	SCALE	DATE
A3	1:2,750	29/08/22

DRAWN BY	CHECKED BY	APPROVED BY
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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Recorded Extent of Clay Pit Excavations

WA Cone Penetration Test (CPT) Locations 2021

- CPT Location - No Blip
- CPT Location - Notable Blips

Notes

WA = Wardell Armstrong

"Blips" = Denotes locations where fluorescence has been induced by fuel polycyclic aromatic hydrocarbons (PAHs) during the push of the ultraviolet probe.

Drawing is for illustrative purposes only and areas highlighted are indicative only. Depths of "blips" are not indicated and reference should be made to the results contained within Appendix Q of the report.
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REVISION	DETAILS	DATE	DRN	CHKD	APP'D

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PROJECT

TEN ACRES LANE

DRAWING TITLE

OPTICAL IMAGE PROFILE (OIP)
"BLIPS"

DRG No.	REV
LD10385-024	

DRG SIZE	SCALE	DATE
A3	1:2,750	06/09/22

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DO NOT SCALE FROM THIS DRAWING

Legend

- Site Boundary
- Japanese Knotweed Extents Surveyed 2007
- Japanese Knotweed Extents Surveyed 2010
- Japanese Knotweed Extents Surveyed 2021

Notes

Drawing is for illustrative purposes only and has been produced via georeferencing techniques. Consequently, areas highlighted are indicative only.
The drawing also contains third party data and no reliance can be provided for this data. WA cannot be liable for any errors within third party data.
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NUVU DEVELOPMENTS LTD

PROJECT

TEN ACRES LANE

DRAWING TITLE

JAPANESE KNOTWEED OVERLAY PLAN

DRG No.	REV
LD10385-025	

DRG SIZE	SCALE	DATE
A3	1:2,750	09/09/22

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APPENDIX A

Standard Terms and Conditions and Limitations to Report

STANDARD TERMS AND CONDITIONS AND LIMITATIONS TO REPORT

General

This Report is provided for the stated purpose and for the sole use of the client in accordance with the Terms and Conditions of Appointment under which the services were performed. The Report is confidential to the client and no other warranty, expressed or implied, is made as to the professional advice included in the Report or any other services provided by Wardell Armstrong LLP. This Report may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of Wardell Armstrong LLP.

Wardell Armstrong LLP disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to Wardell Armstrong LLP's attention after the date of the Report.

Where any site observations have been carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results from any site observations made may vary and further confirmatory work should be made after the issuance of this Report. Wardell Armstrong LLP does not guarantee or warrant any estimates or projections contained in this Report.

The findings and recommendations are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. Wardell Armstrong LLP will not be liable if any findings are used by third parties, without written agreement of the company, or if an interpretation is made and action taken without further consultation.

The conclusions and recommendations contained in this Report provide an overview and guidance only and should not be specifically relied upon without considering the context of the reporting fully. They are also based upon information provided by others including details supplied by the client and/or professional advisors on the assumption that all relevant information from whom it has been requested and/or supplied is accurate. Information so provided and/or supplied has not been verified independently by Wardell Armstrong LLP, unless otherwise stated in the Report.

Should any third party wish to use or rely upon the contents of this report, written approval must be sought, and a charge may be levied accordingly.

Wardell Armstrong LLP accepts no responsibility or liability for the consequences of this document being used:

- For any purpose or project other than for which it was commissioned, and
- By any third party with whom an agreement has not been executed.

Desk Study

The methodology adopted and the sources of information used by Wardell Armstrong LLP in providing the services are outlined in this Report. The work described in this Report is based on the conditions and information as stated at the date the Report was completed. The scope of this Report and the services are accordingly limited by these circumstances. The findings outlined in the Report together with any opinions expressed and recommendations made are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended.

Wardell Armstrong LLP disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to Wardell Armstrong LLP's attention after the date of the Report. Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

The report does not constitute or contain a valuation nor is it a full rigorous environmental audit. In this instance the report is prepared for a proposed residential land use that will also incorporate a new school and playing fields and includes a review of past investigations, environmental reports and relevant correspondence supplied for review.

A site walkover survey has been completed and while reasonable effort has been made to obtain an overview of the site conditions, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible. The walkover survey does not constitute an asbestos, archaeological or ecological survey and not all areas of the site may have been visited or made available for inspection.

The opinions given in this report have been based on finite data and are relevant only to the purpose for which the report was commissioned.

The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data indicative of site conditions. Should additional information become available which may affect the opinions expressed in this report, Wardell Armstrong LLP, reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in a Phase 1 report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Site Investigation

The findings within this report are based on those light percussion boreholes, rotary open and cored boreholes, windowless sampling holes, trial pits and soakaways. The results from this site assessment

are indicative of the ground conditions encountered at the positions the boreholes were drilled and/or where the trial pits were excavated and only represent a fraction of the site. Whilst reasonable inferences have been made between the site investigation locations, ground conditions for a site of this nature are inherently variable and their physical/chemical conditions can only be inferred between investigation locations. Localised conditions may vary, and the opinions expressed are for guidance only.

It should be noted that some of the proposed site investigation locations could not be drilled because of access restrictions or due to the presence of Japanese Knotweed.

The number of sampling points, methods of sampling and testing do not preclude the existence of other more variable ground conditions and/or "hotspots" of contamination elsewhere on the site where physical and/or chemical concentrations may be higher than those encountered. Contamination may vary spatially and temporally. The absence of certain ground, contamination or groundwater conditions at the positions tested is not a guarantee that such conditions do not exist anywhere across the site or could exist at these locations at a later date.

Observations made in respect of soil gas and/or groundwater conditions are based on monitoring work carried out over a relatively short period of time. It should be noted the gas and/or groundwater levels will vary due to seasonal, tidal and/or weather-related effects. These effects may not be reflected fully in relation to the monitoring works carried out to date.

The scope of the investigation was selected on the basis of the Client's general development proposals and may be inappropriate to any other form of development or scheme that may be considered at the site in the future.

There may be exceptional ground conditions elsewhere on the site which may not have been encountered during this phase of investigation that have not been considered as part of this report.

The risk assessment(s) and opinion(s) provided are based on current guidance; no liability can be accepted for the retrospective effects of any future changes or amendments that may be relevant in the future.

APPENDIX B

Landmark Envirocheck Reports and Maps

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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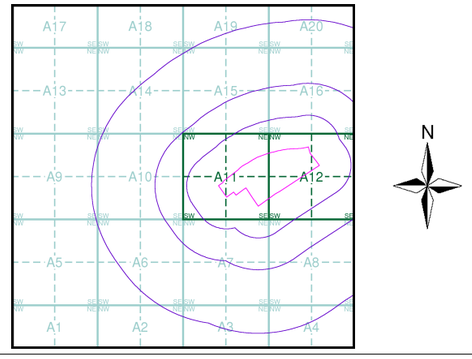
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909 - 1910	7
Cheshire	1:10,560	1911	8
Lancashire And Furness	1:10,560	1923	9
Lancashire And Furness	1:10,560	1932 - 1933	10
Cheshire	1:10,560	1938	11
Lancashire And Furness	1:10,560	1938	12
Ordnance Survey Plan	1:10,000	1956	13
Ordnance Survey Plan	1:10,000	1966 - 1968	14
Manchester	1:25,000	1975	15
Ordnance Survey Plan	1:10,000	1978	16
Ordnance Survey Plan	1:10,000	1981 - 1982	17
Ordnance Survey Plan	1:10,000	1987	18
Ordnance Survey Plan	1:10,000	1990 - 1993	19
10K Raster Mapping	1:10,000	1999	20
10K Raster Mapping	1:10,000	2006	21
VectorMap Local	1:10,000	2020	22

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 — Values for prominent elevations

186.0 — Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 — Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (–)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Direction and velocity of current
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

SD80_Manchester

No.	Description
24	Depot (Railway)
75	Factory (Locomotives And Railway Carriage Repairs)
136	Foundry (Cast Iron)
233	Factory (Textiles)

SJ89_Manchester

No.	Description
61	Factory (Gas)
83	Factory (Machinery)

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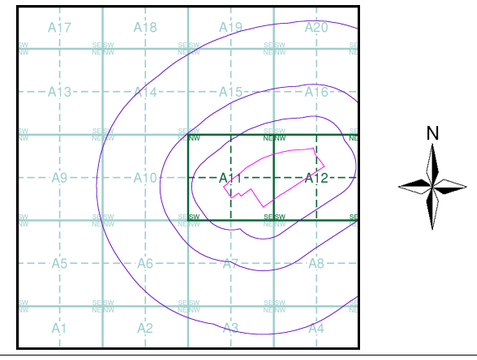
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909 - 1910	7
Cheshire	1:10,560	1911	8
Lancashire And Furness	1:10,560	1923	9
Lancashire And Furness	1:10,560	1932 - 1933	10
Cheshire	1:10,560	1938	11
Lancashire And Furness	1:10,560	1938	12
Ordnance Survey Plan	1:10,000	1956	13
Ordnance Survey Plan	1:10,000	1966 - 1968	14
Manchester	1:25,000	1975	15
Ordnance Survey Plan	1:10,000	1978	16
Ordnance Survey Plan	1:10,000	1981 - 1982	17
Ordnance Survey Plan	1:10,000	1987	18
Ordnance Survey Plan	1:10,000	1990 - 1993	19
10K Raster Mapping	1:10,000	1999	20
10K Raster Mapping	1:10,000	2006	21
VectorMap Local	1:10,000	2020	22

Russian Map - Slice A



Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

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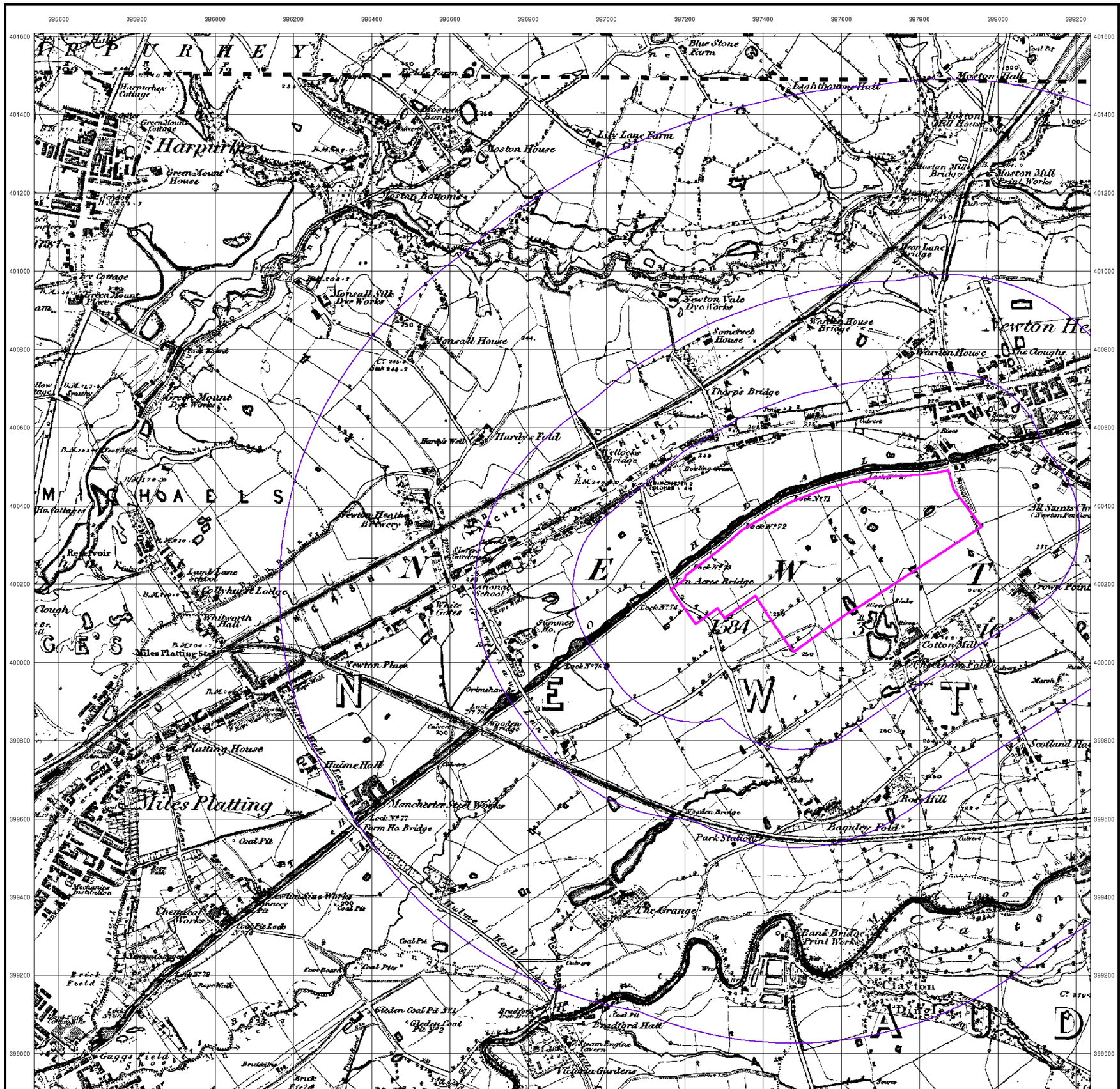
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Lancashire And Furness

Published 1848

Source map scale - 1:10,560

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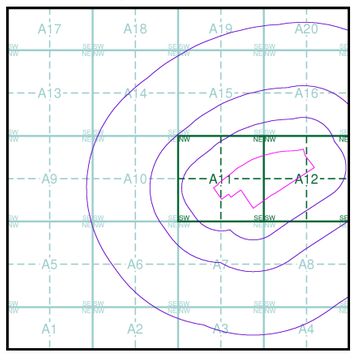
Map Name(s) and Date(s)

09600
1848
1:10,560

10400
1848
1:10,560

Historical Map - Slice A



Order Details

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Customer Ref:	Ten Acres
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Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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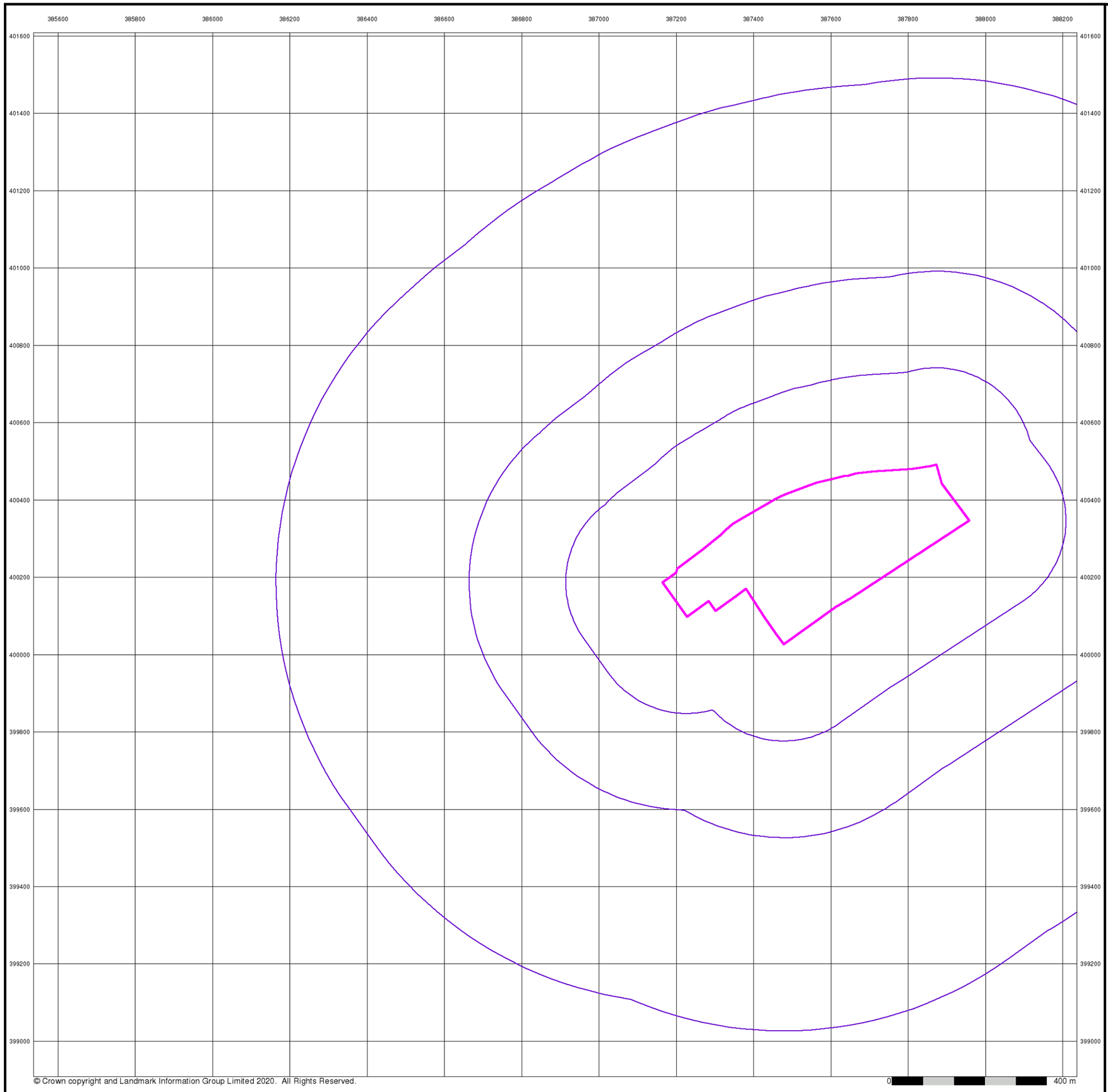

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Cheshire

Published 1882

Source map scale - 1:10,560

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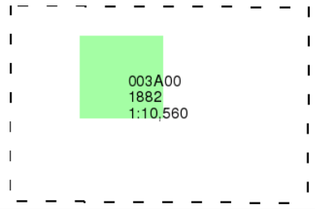
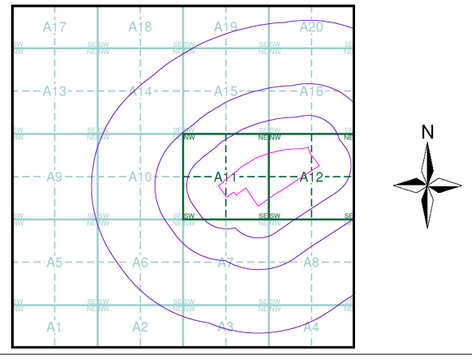
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

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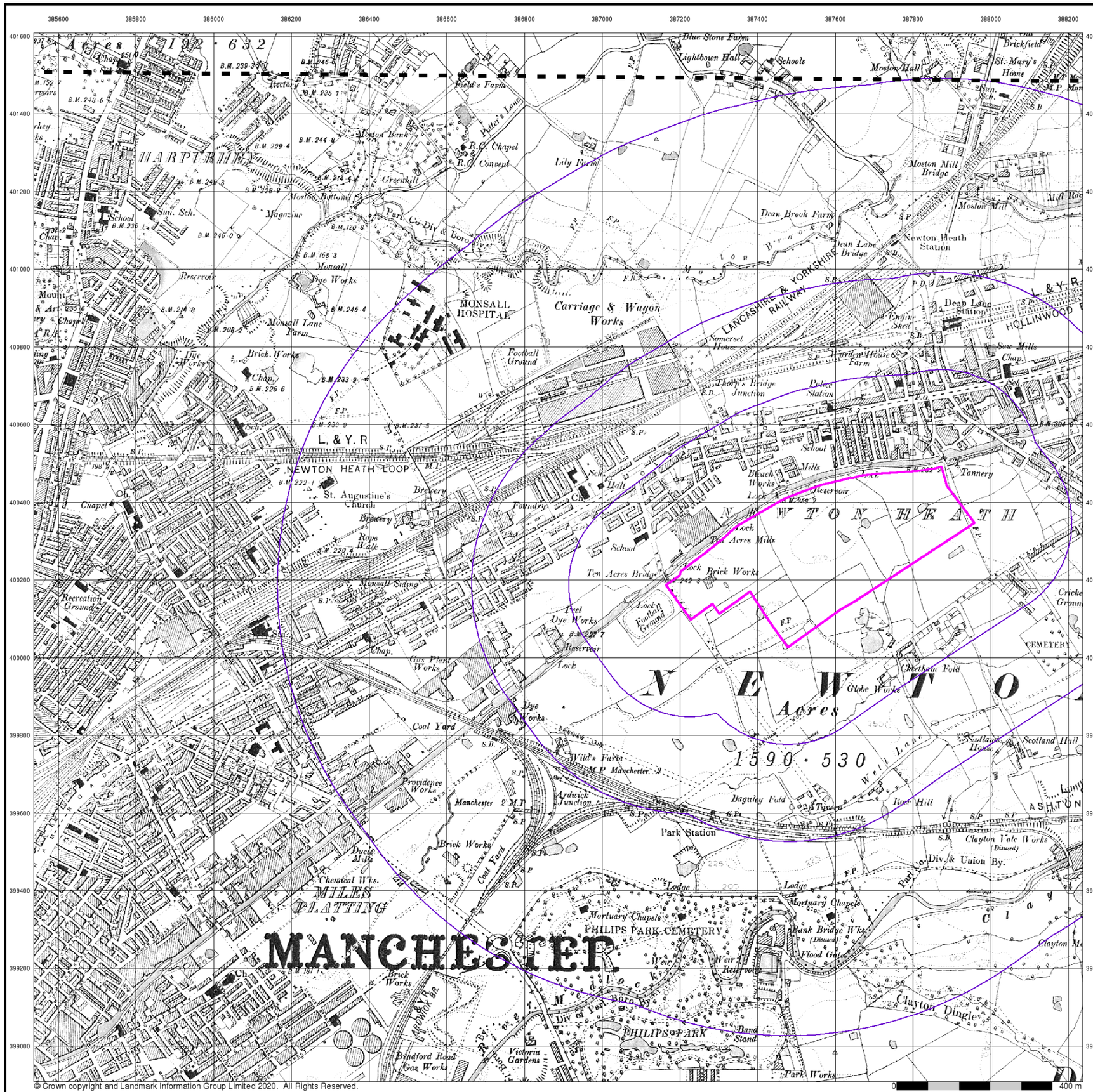

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Lancashire And Furness

Published 1894

Source map scale - 1:10,560

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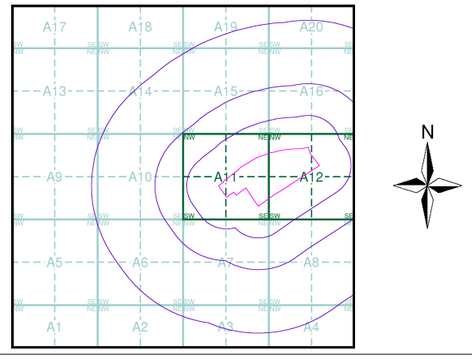
Map Name(s) and Date(s)

096SE
1894
1:10,560

104NE
1894
1:10,560

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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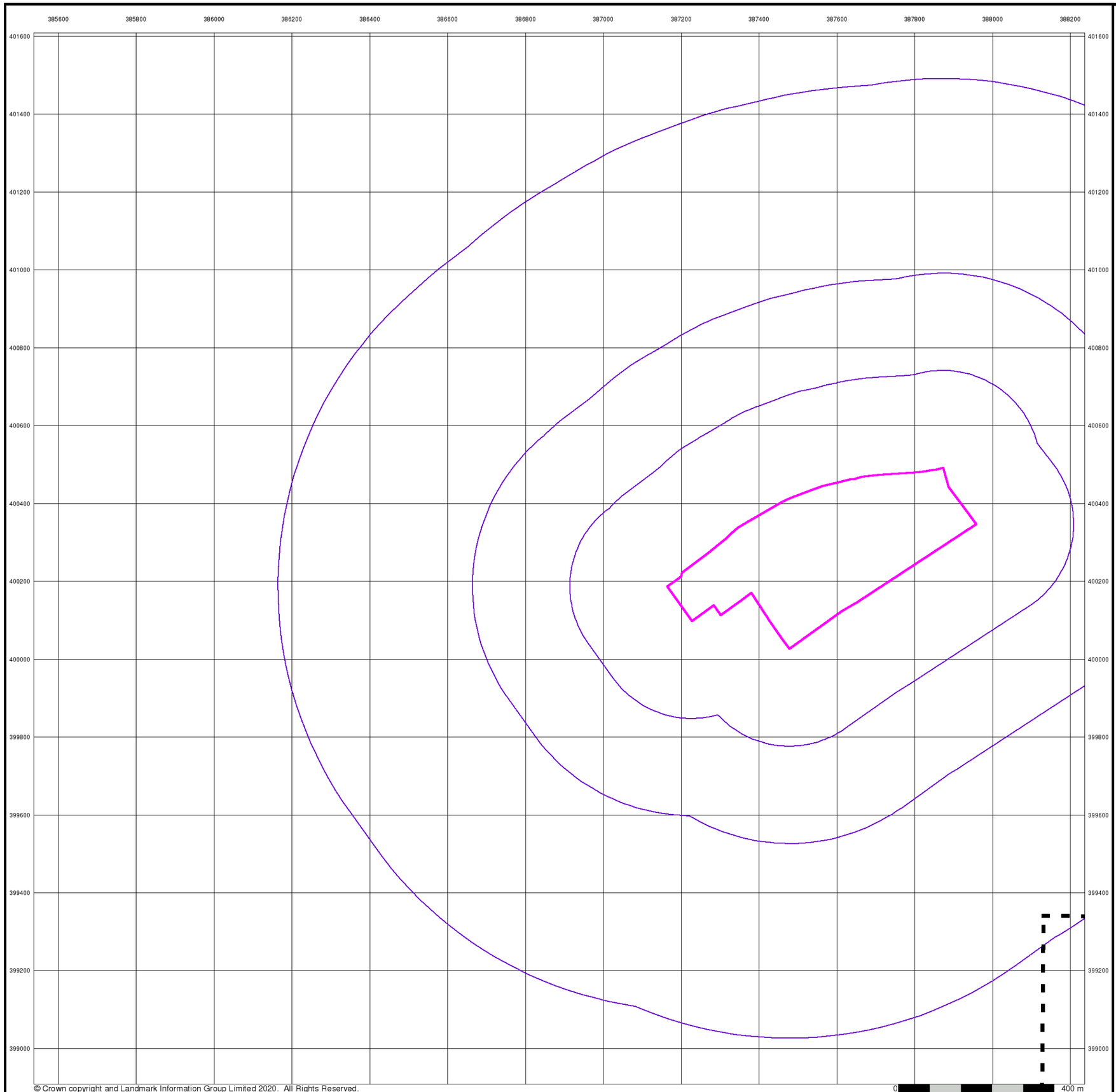

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Cheshire

Published 1899

Source map scale - 1:10,560

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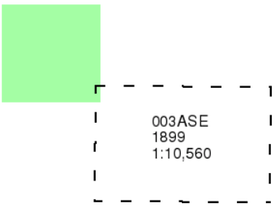
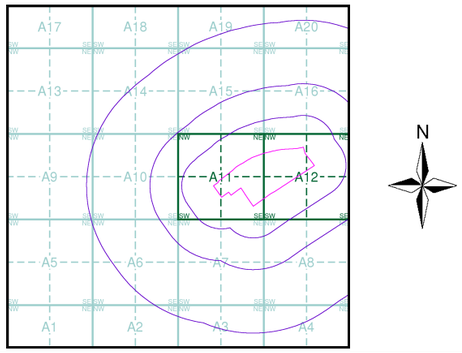
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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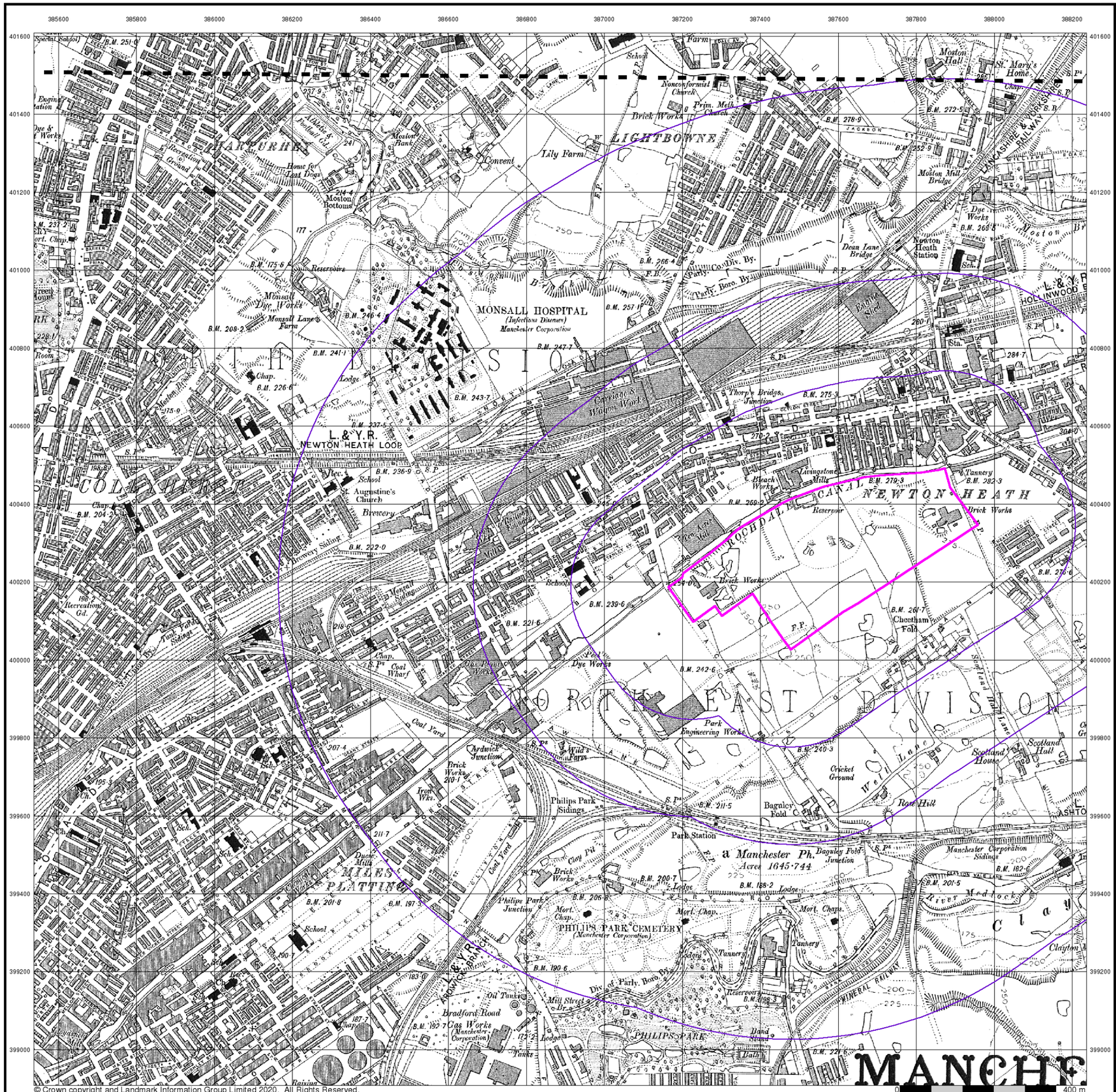

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Lancashire And Furness

Published 1909 - 1910

Source map scale - 1:10,560

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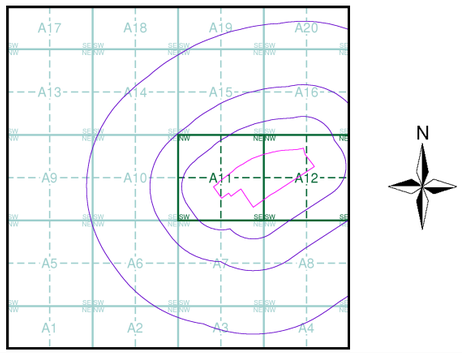
Map Name(s) and Date(s)

096SE
1910
1:10,560

104NE
1909
1:10,560

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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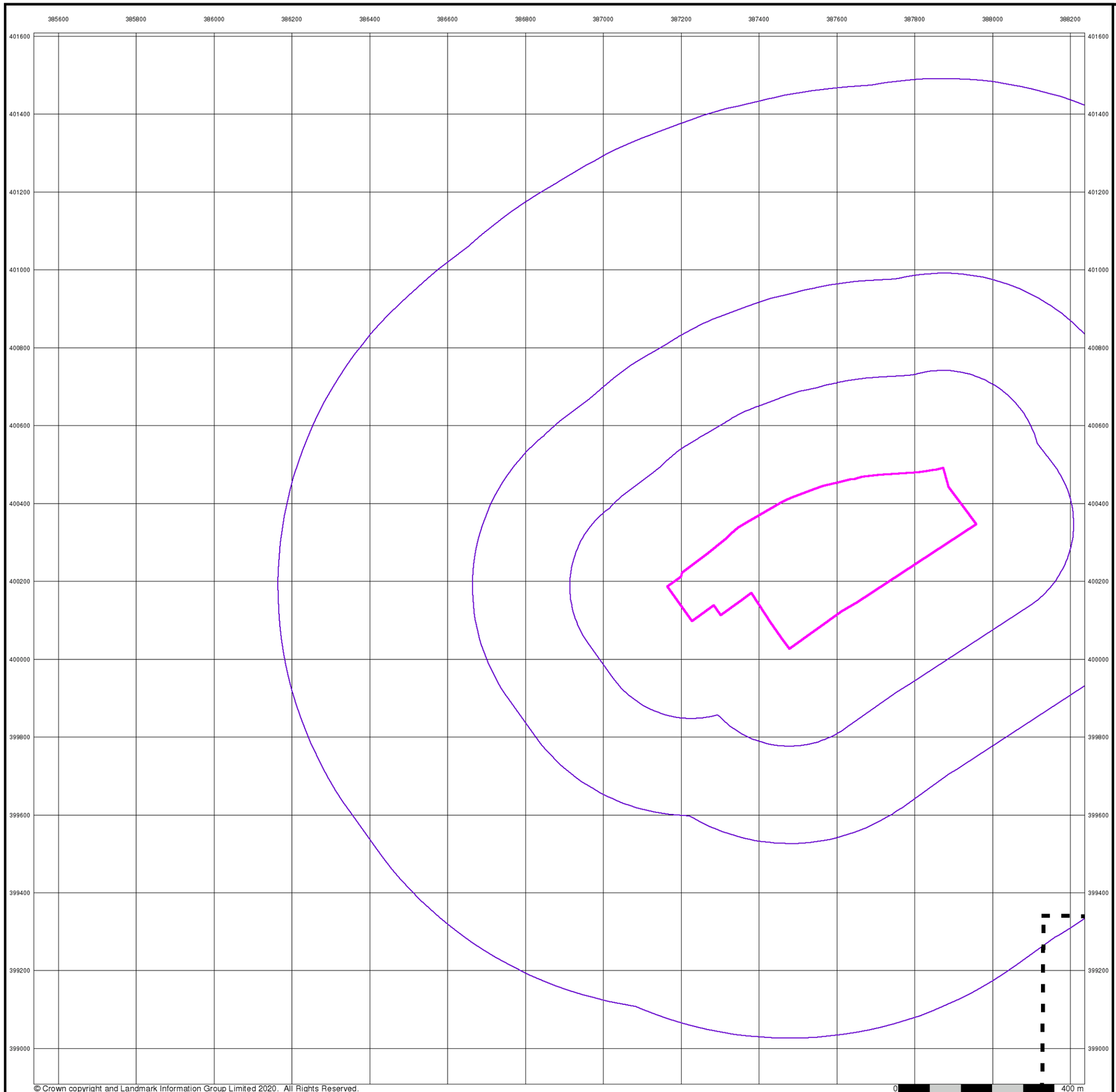

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Cheshire

Published 1911

Source map scale - 1:10,560

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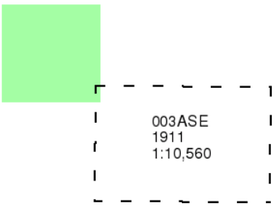
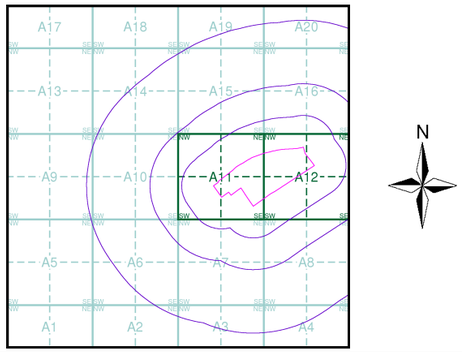
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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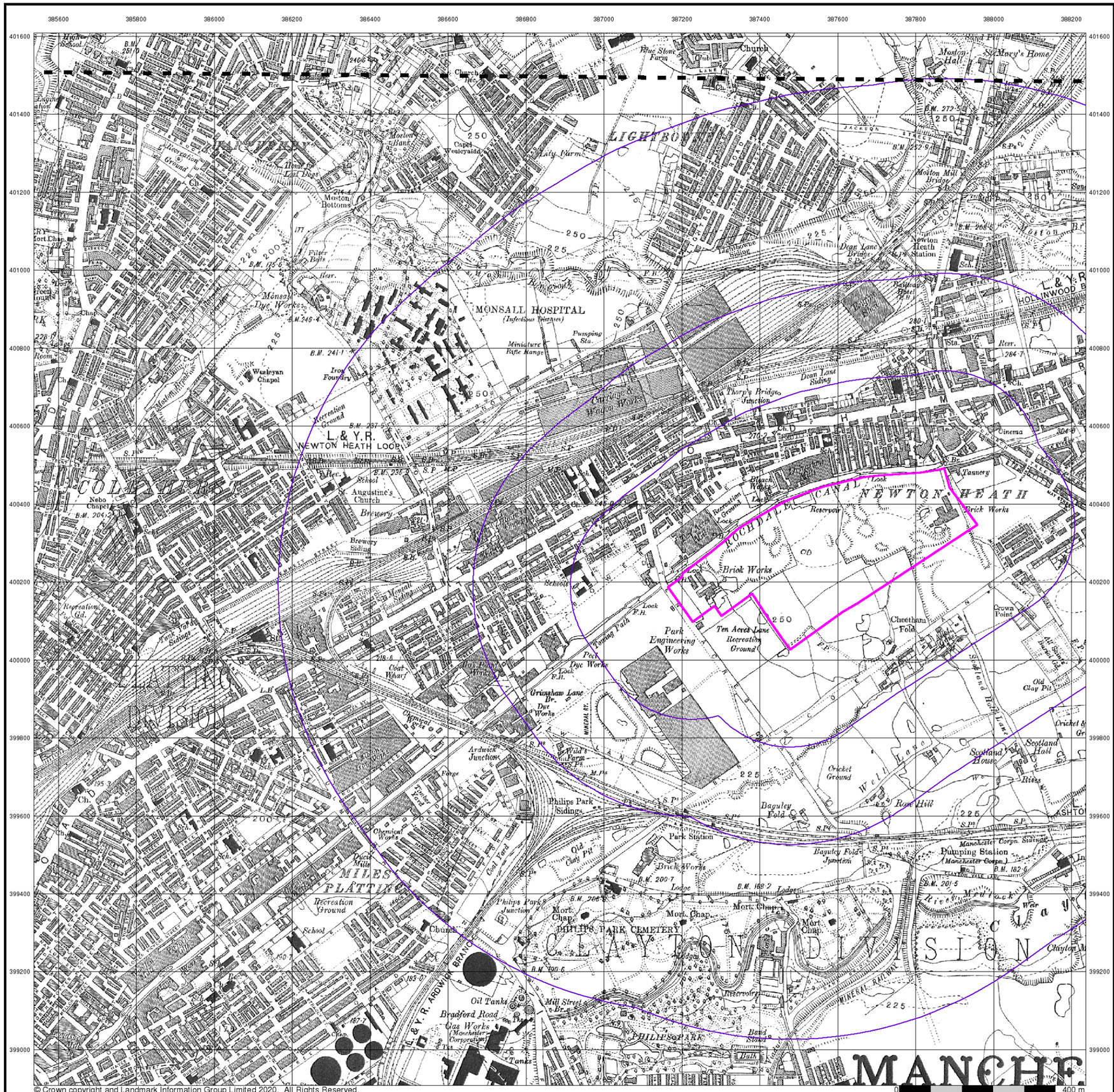

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Lancashire And Furness

Published 1923

Source map scale - 1:10,560

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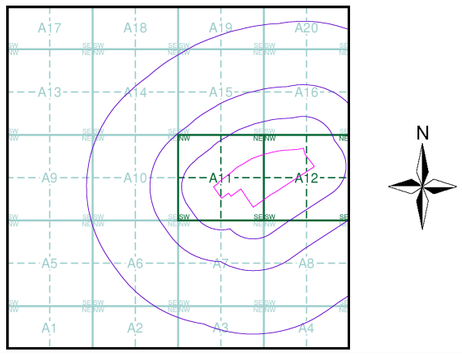
Map Name(s) and Date(s)

096SE
1923
1:10,560

104NE
1923
1:10,560

Historical Map - Slice A



Order Details

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Customer Ref:	Ten Acres
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Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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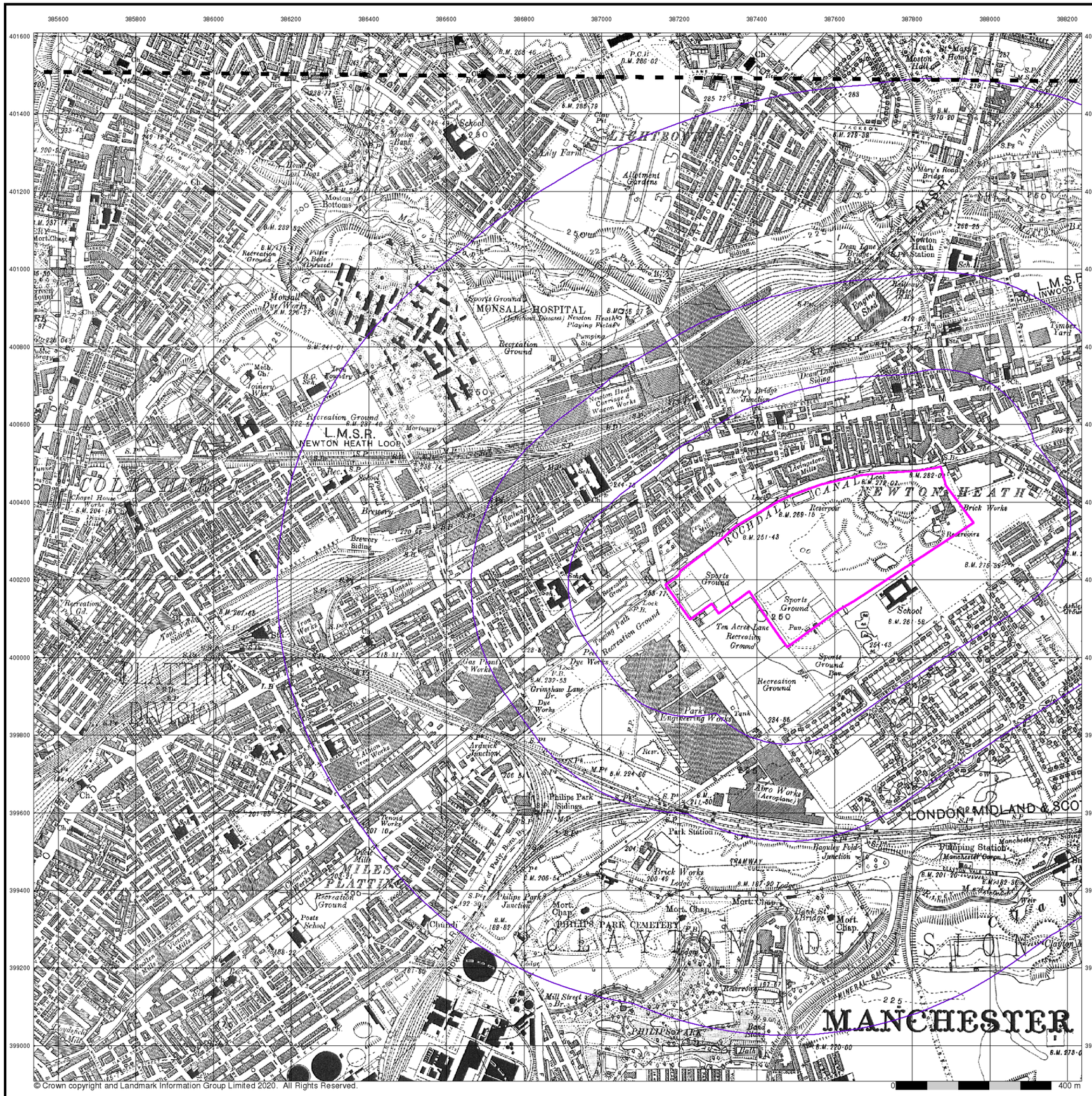

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Lancashire And Furness

Published 1932 - 1933

Source map scale - 1:10,560

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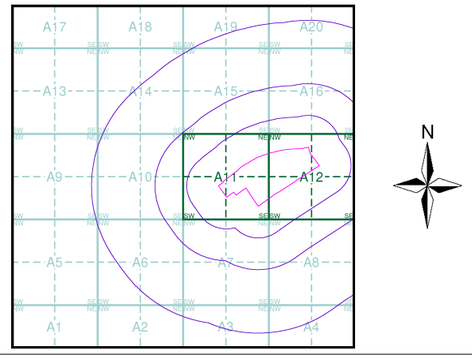
Map Name(s) and Date(s)

096SE
1933
1:10,560

104NE
1932
1:10,560

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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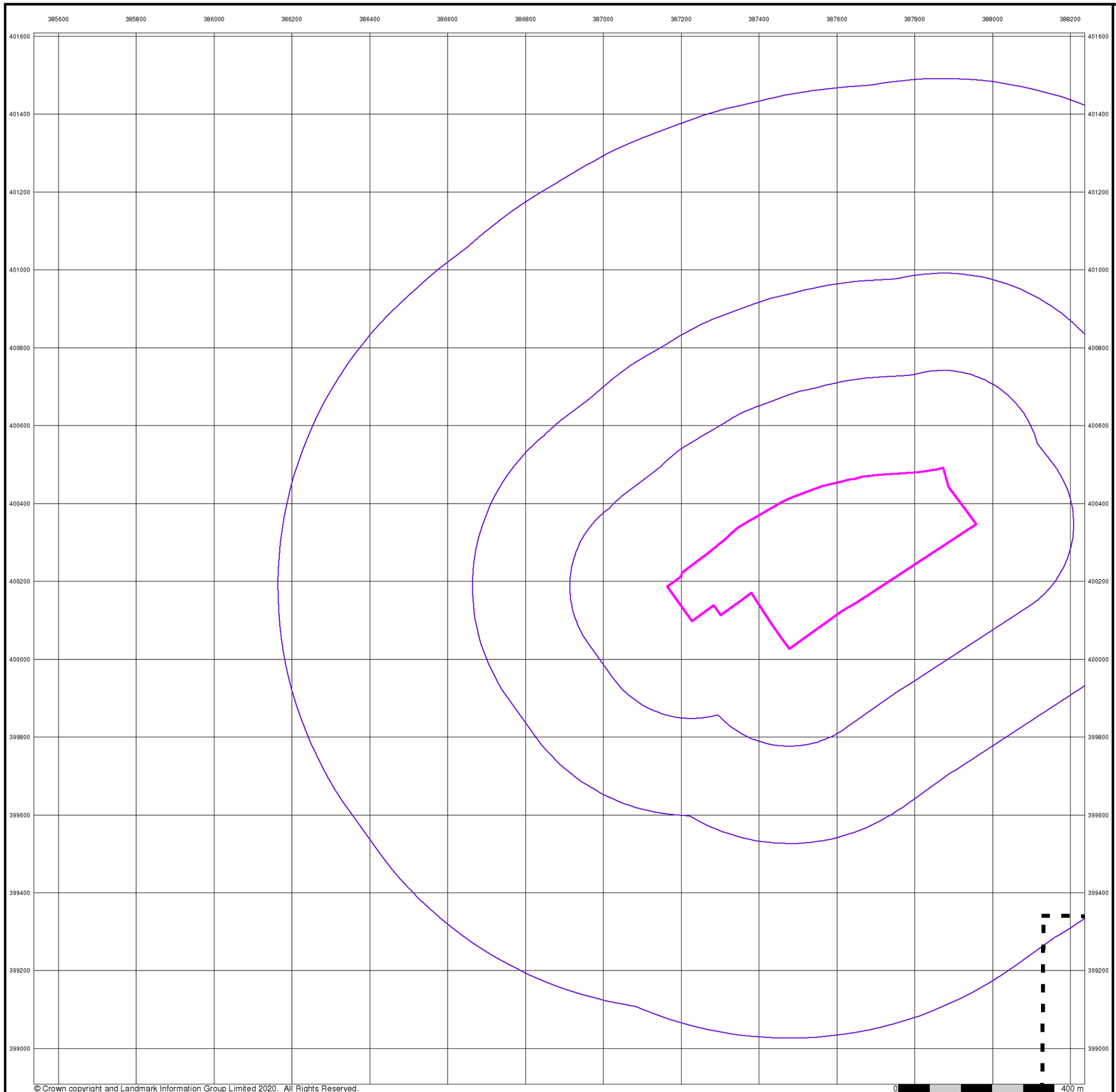

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Cheshire

Published 1938

Source map scale - 1:10,560

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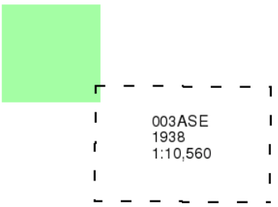
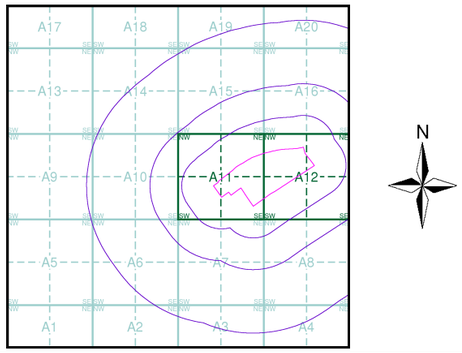
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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National Grid Reference:	387320, 400240
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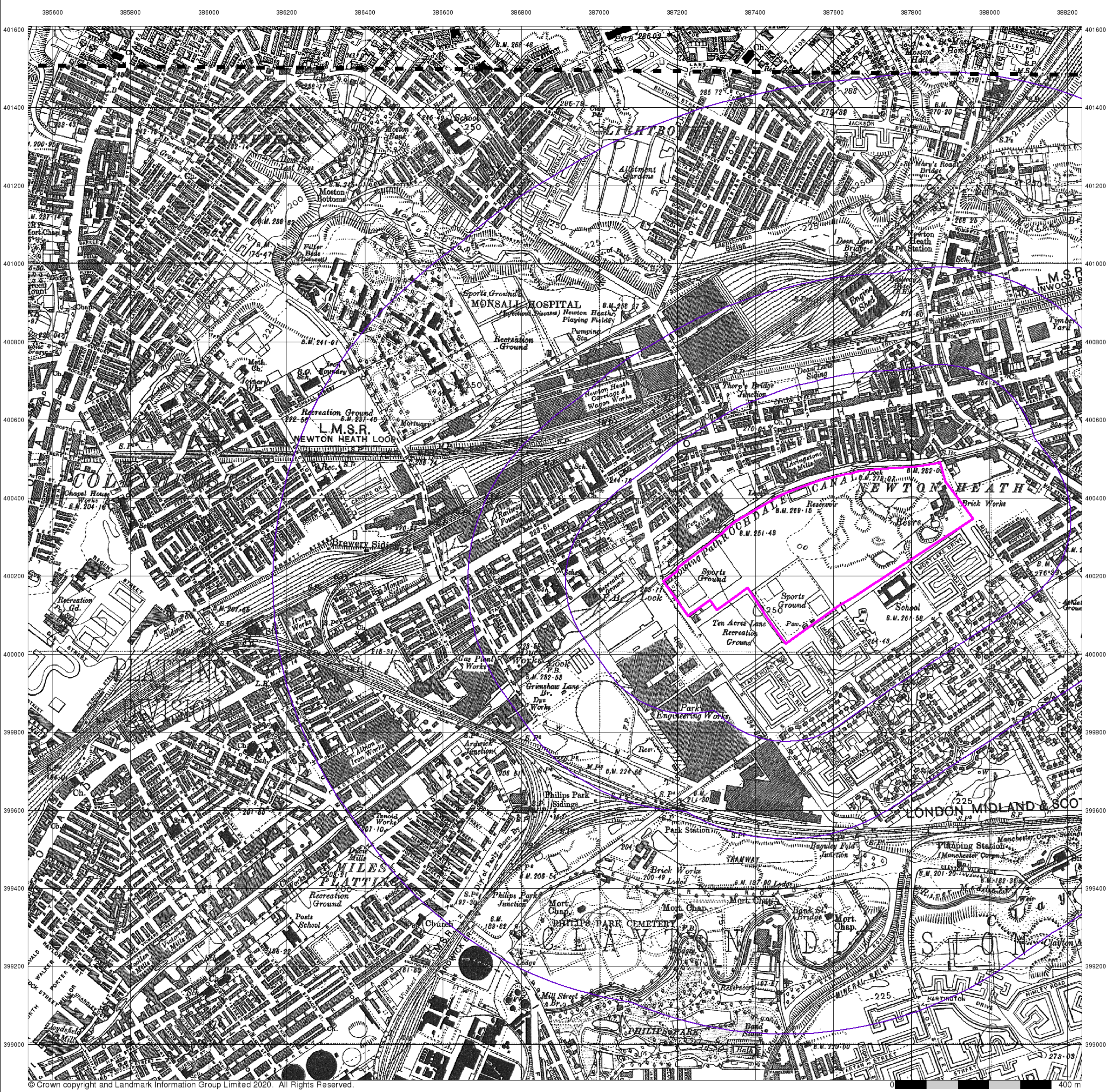
Web: www.envirocheck.co.uk



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Lancashire And Furness

Published 1938

Source map scale - 1:10,560

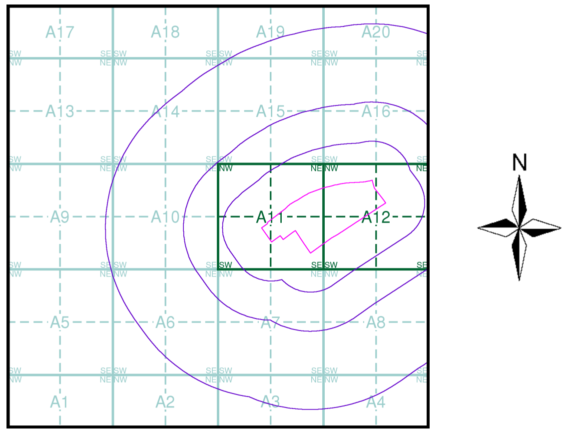
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

096SE
1938
1:10,560

104NE
1938
1:10,560

Historical Map - Slice A



Order Details

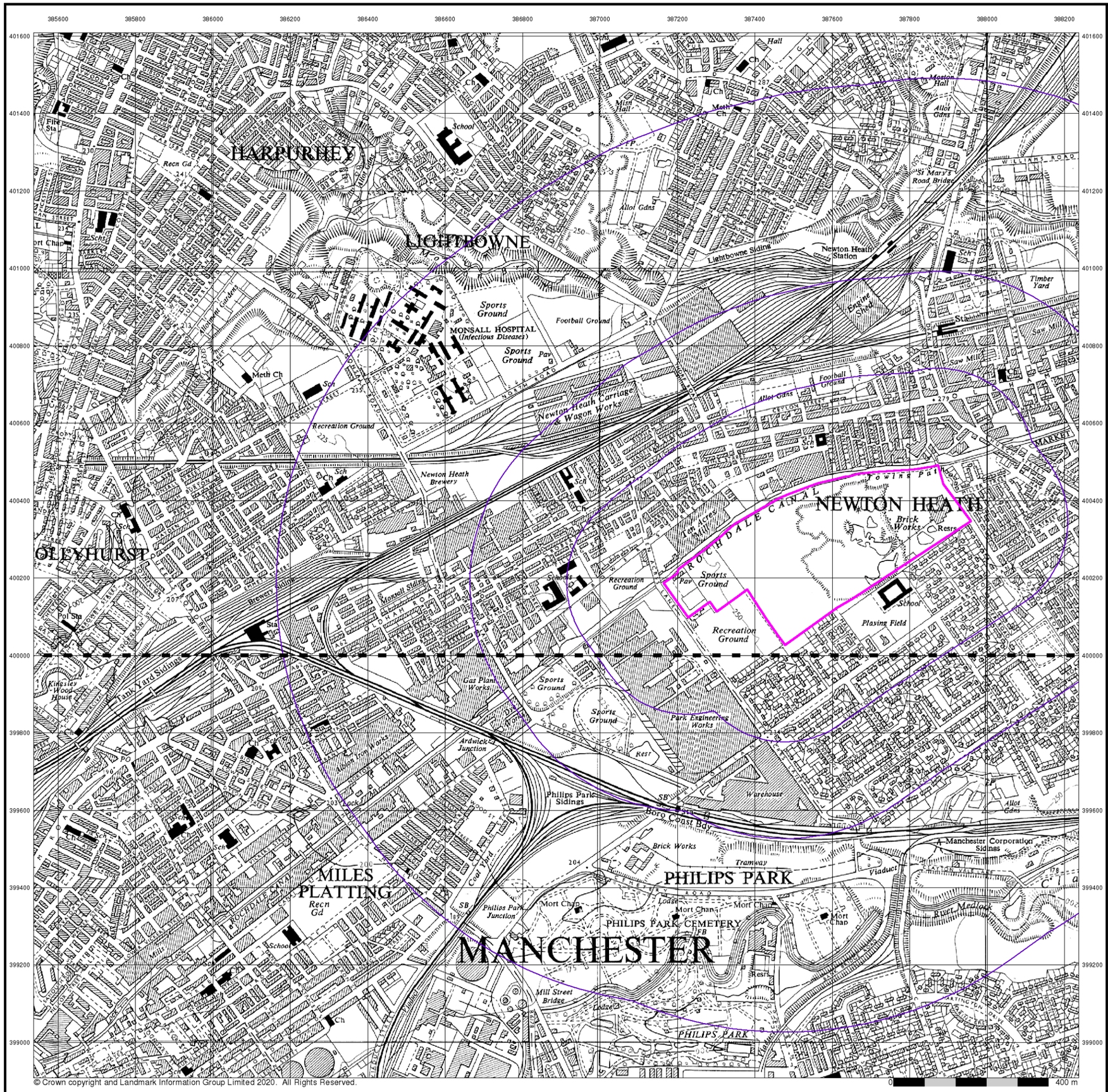
Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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wardell armstrong

Ordnance Survey Plan

Published 1956

Source map scale - 1:10,000

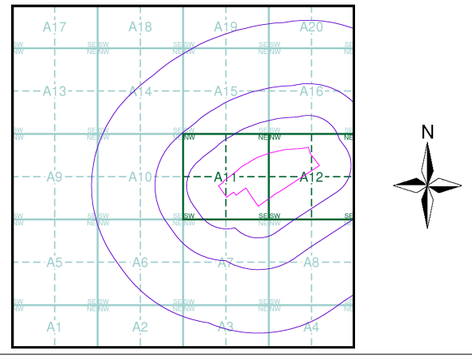
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD80SE
1956
1:10,560

SJ89NE
1956
1:10,560

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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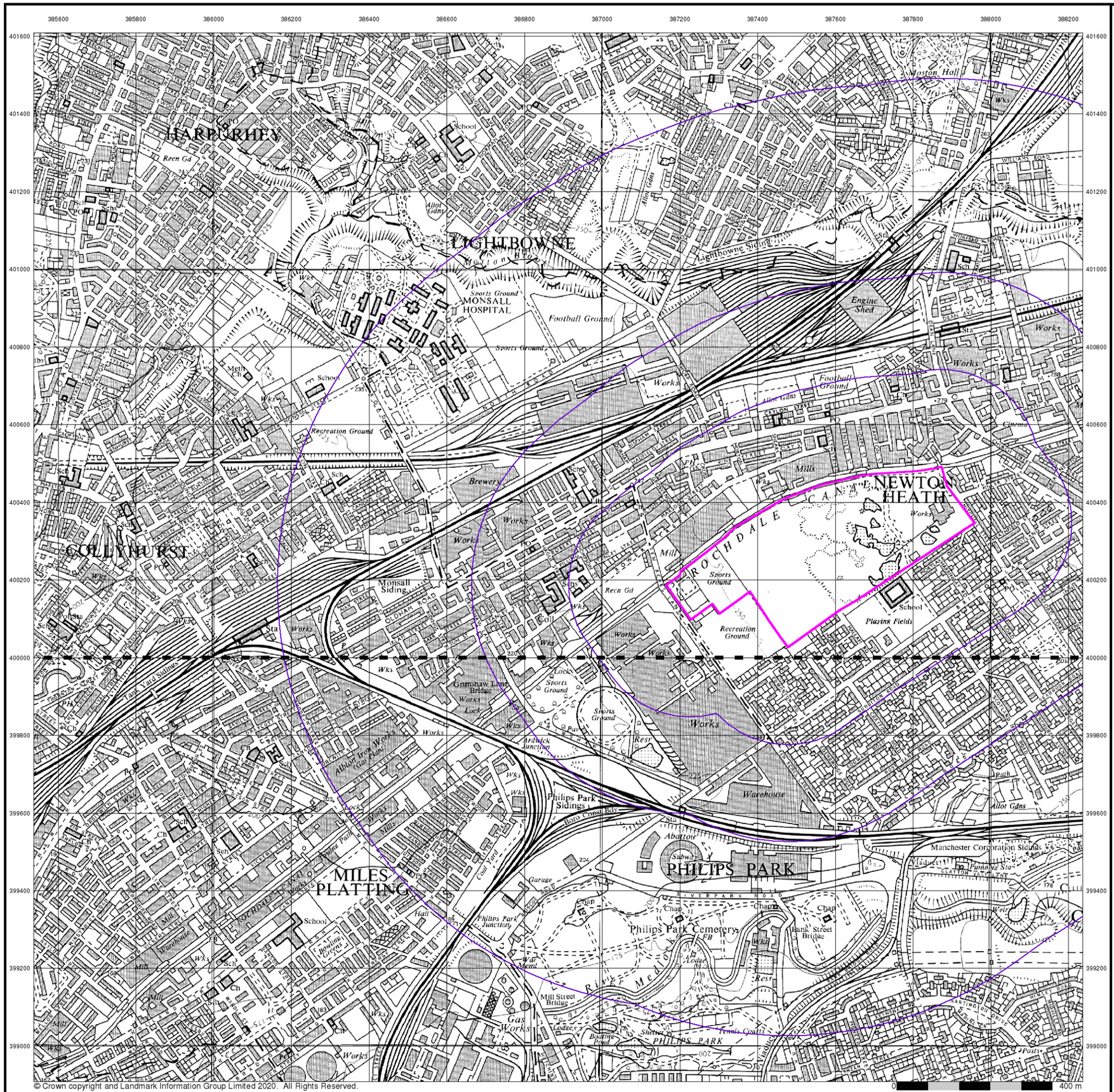
Web: www.envirocheck.co.uk



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Ordnance Survey Plan

Published 1966 - 1968

Source map scale - 1:10,000

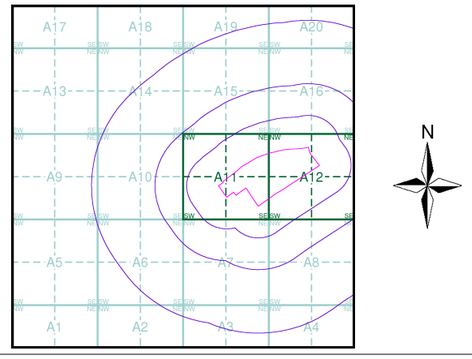
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD80SE
1966
1:10,560

SJ89NE
1968
1:10,560

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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Manchester

Published 1975

Source map scale - 1:25,000

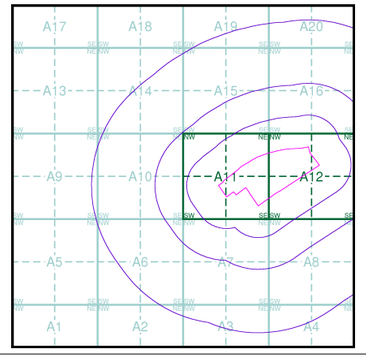
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SD80
1975
1:25,000

SJ89
1975
1:25,000

Russian Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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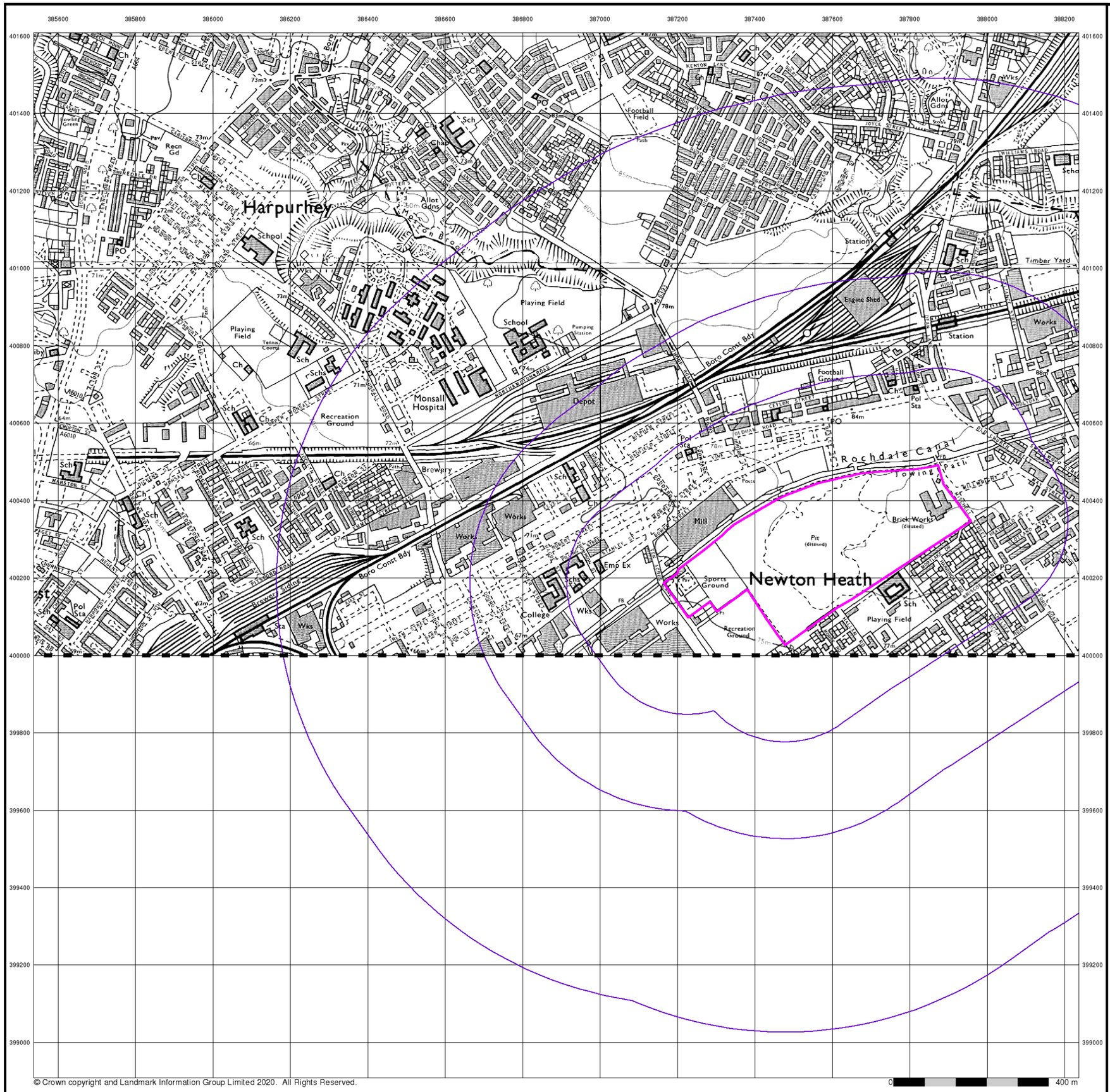
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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0 400 m

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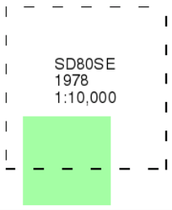
Ordnance Survey Plan

Published 1978

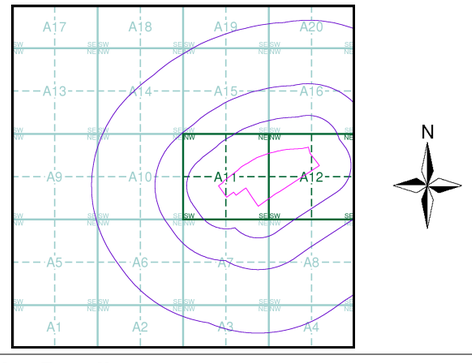
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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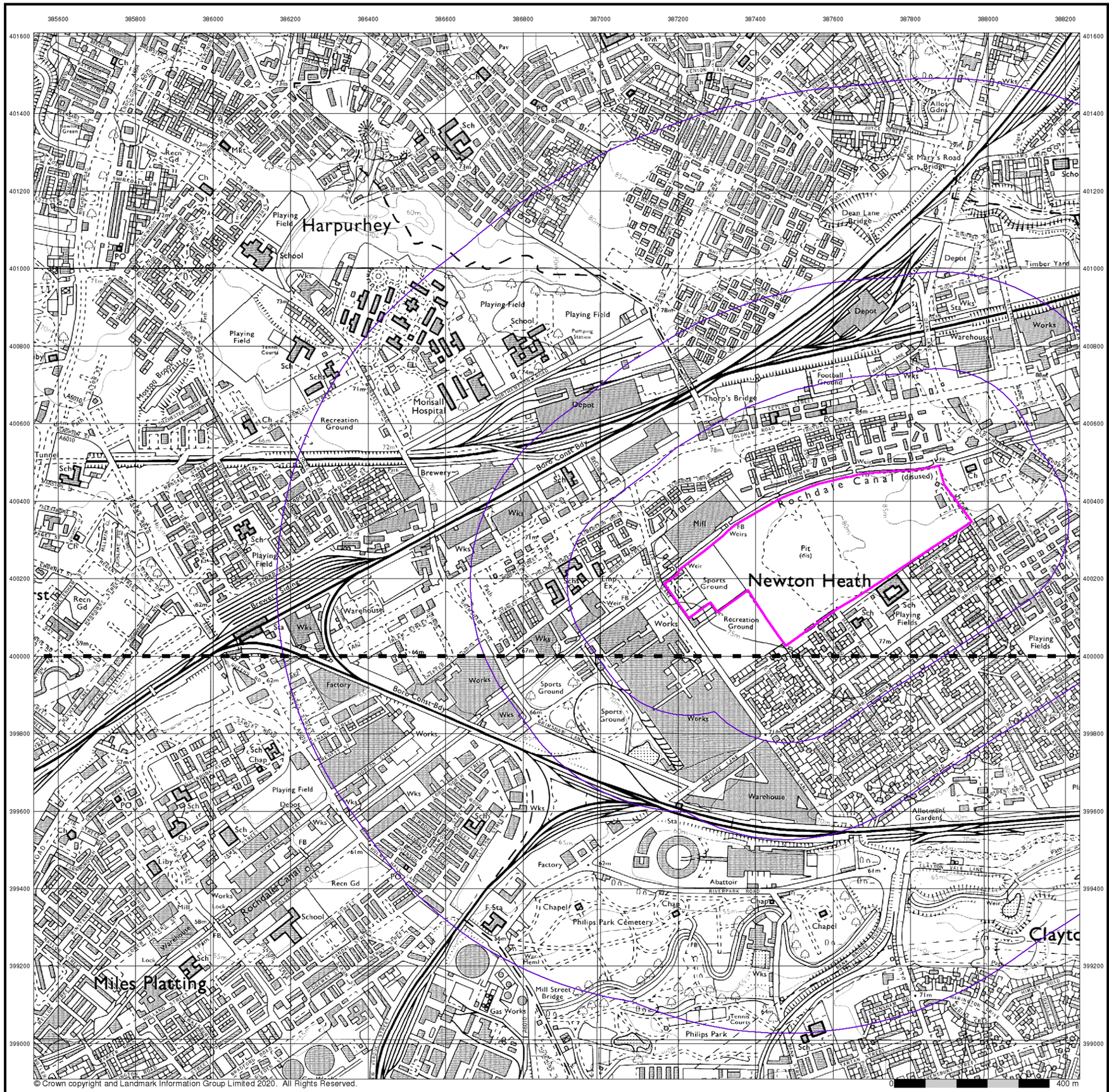
Web: www.envirocheck.co.uk



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Ordnance Survey Plan

Published 1981 - 1982

Source map scale - 1:10,000

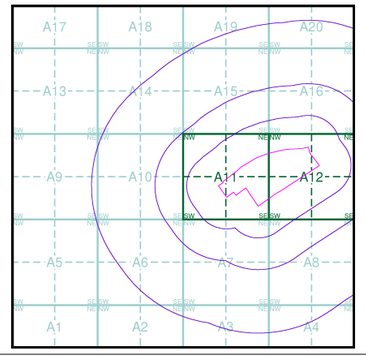
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD80SE
1982
1:10,000

SJ89NE
1981
1:10,000

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

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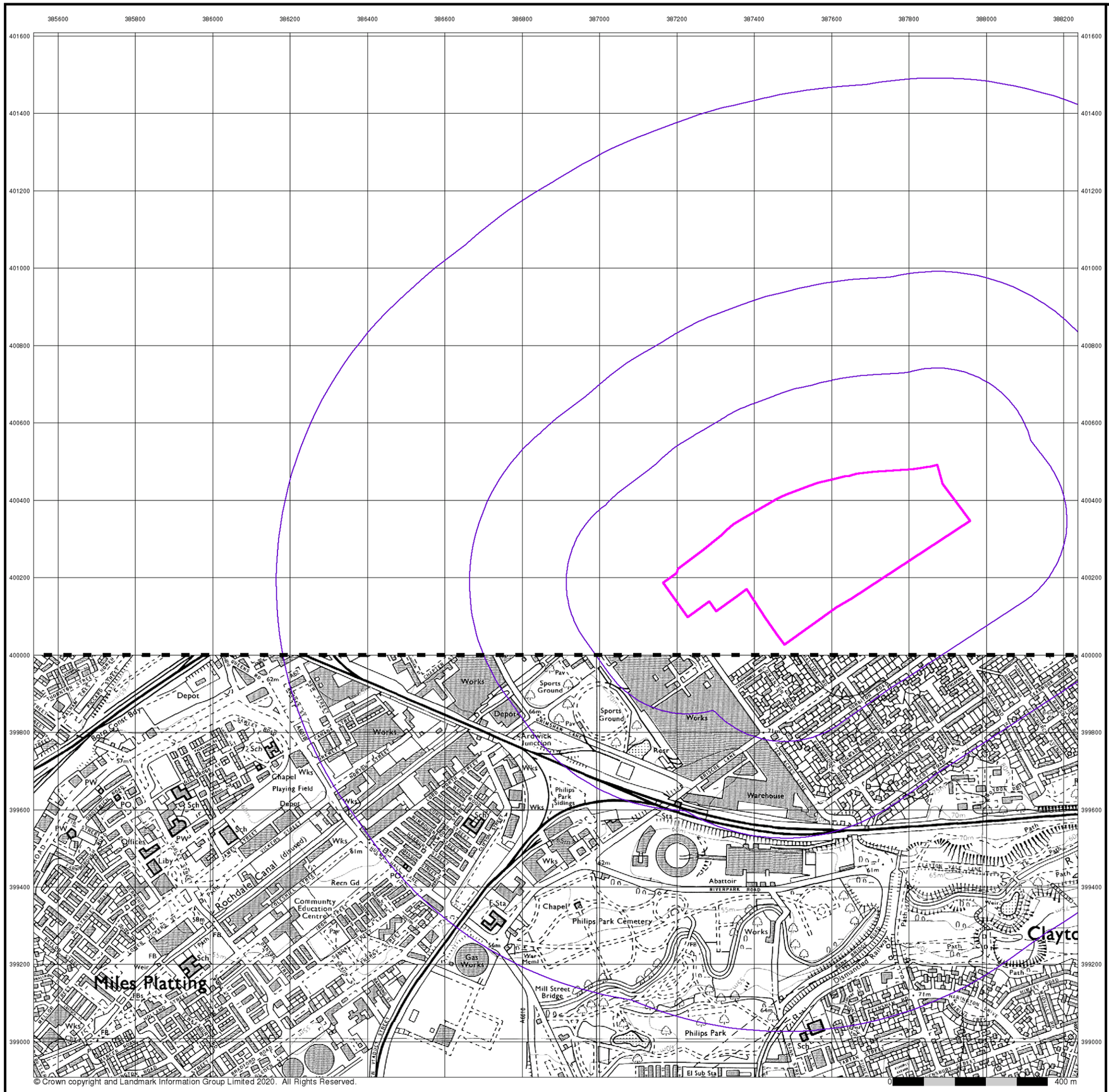
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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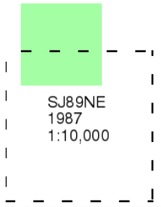
Ordnance Survey Plan

Published 1987

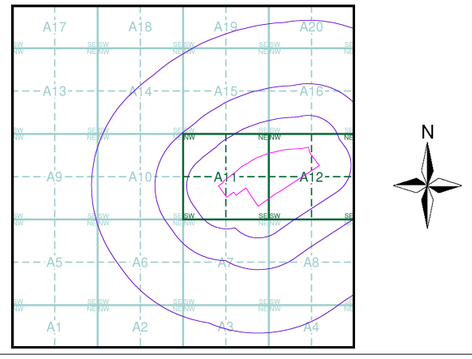
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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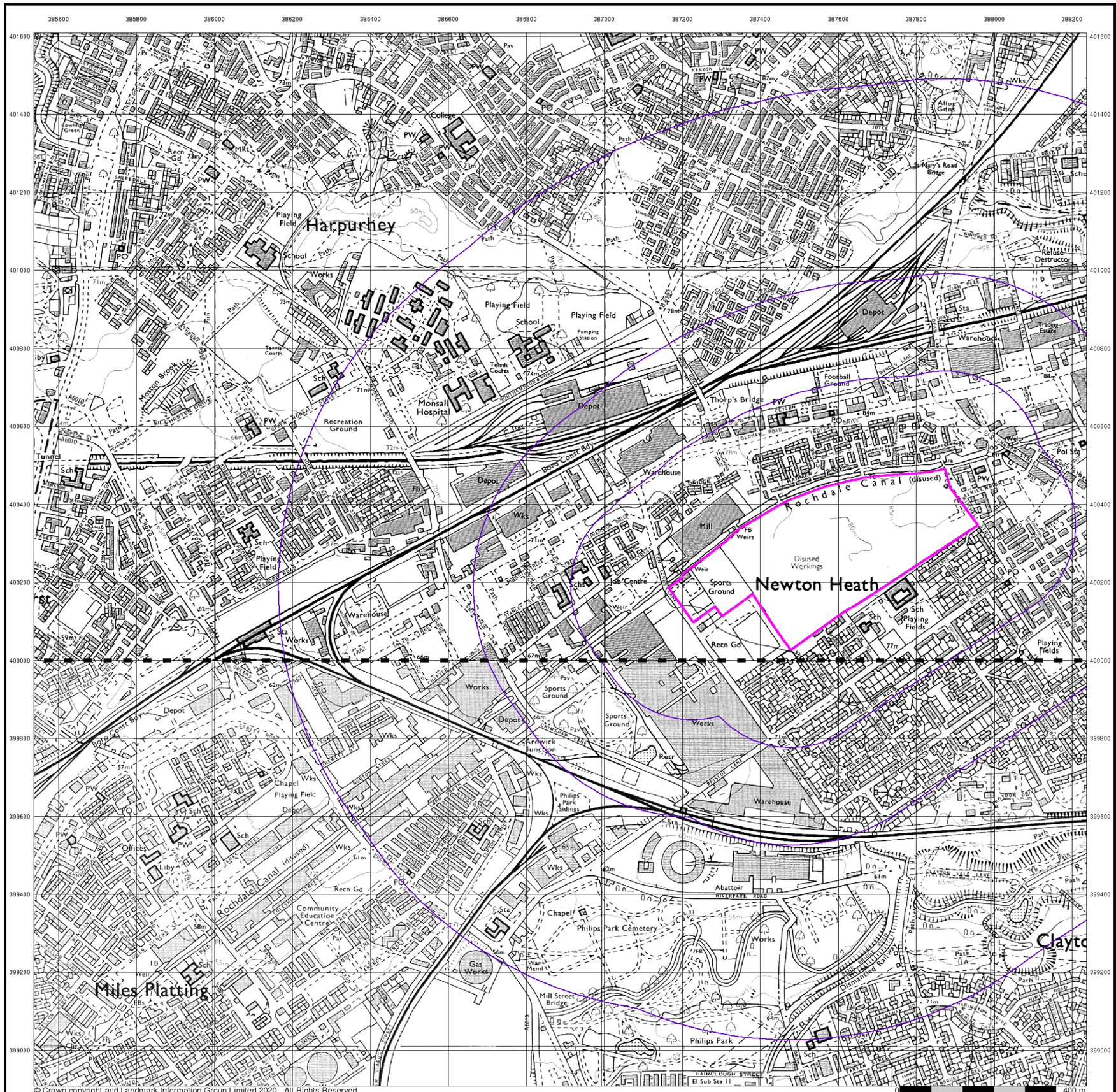

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Ordnance Survey Plan

Published 1990 - 1993

Source map scale - 1:10,000

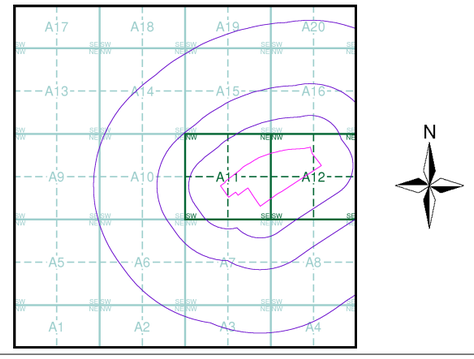
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840□s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940□s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD80SE
1990
1:10,000

SJ89NE
1993
1:10,000

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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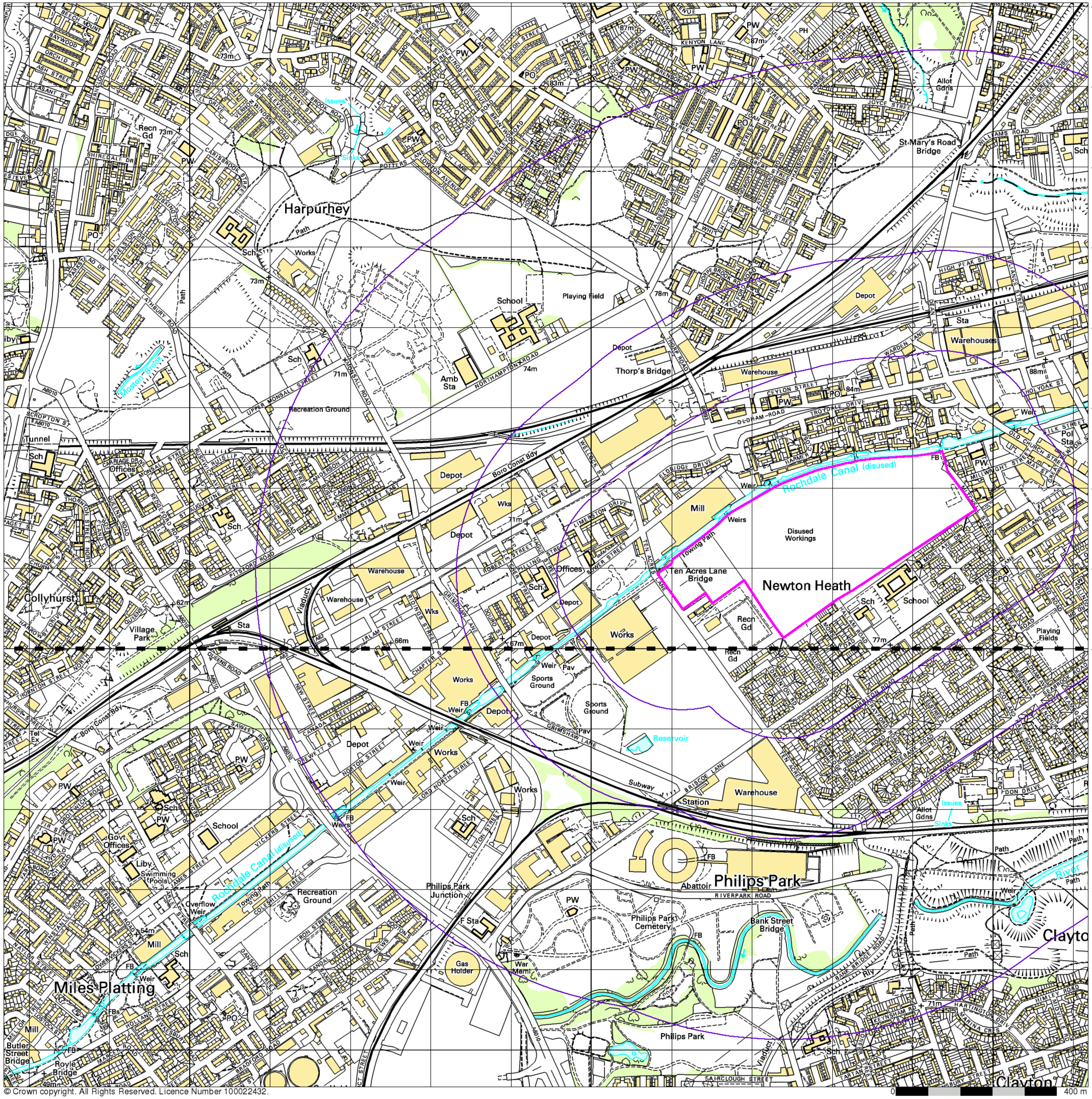
Web: www.envirocheck.co.uk



10k Raster Mapping

Published 1999

Source map scale - 1:10,000

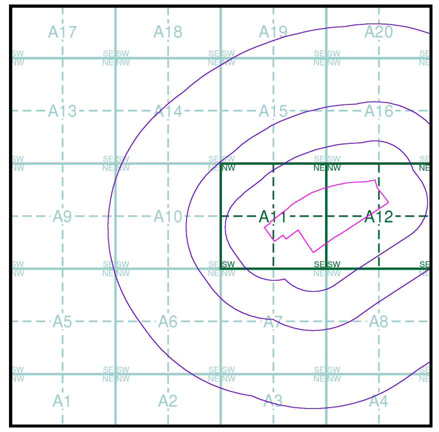
The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SD80SE
1999
1:10,000

SJ89NE
1999
1:10,000

Historical Map - Slice A



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Order Details

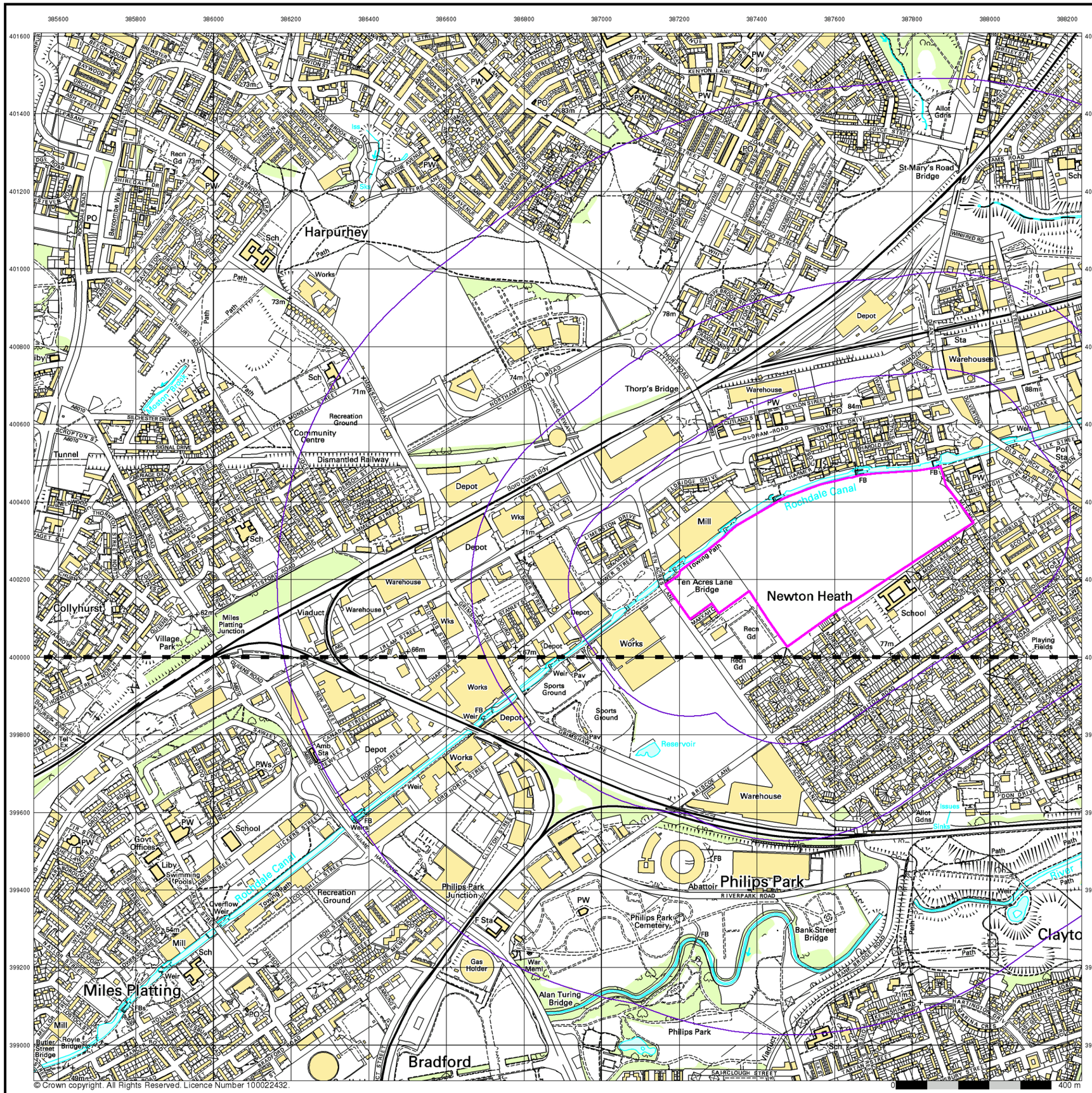
Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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0 400 m

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

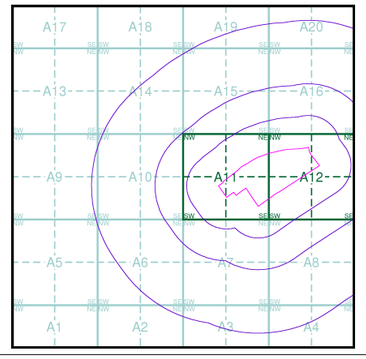
The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SD80SE
2006
1:10,000

SJ89NE
2006
1:10,000

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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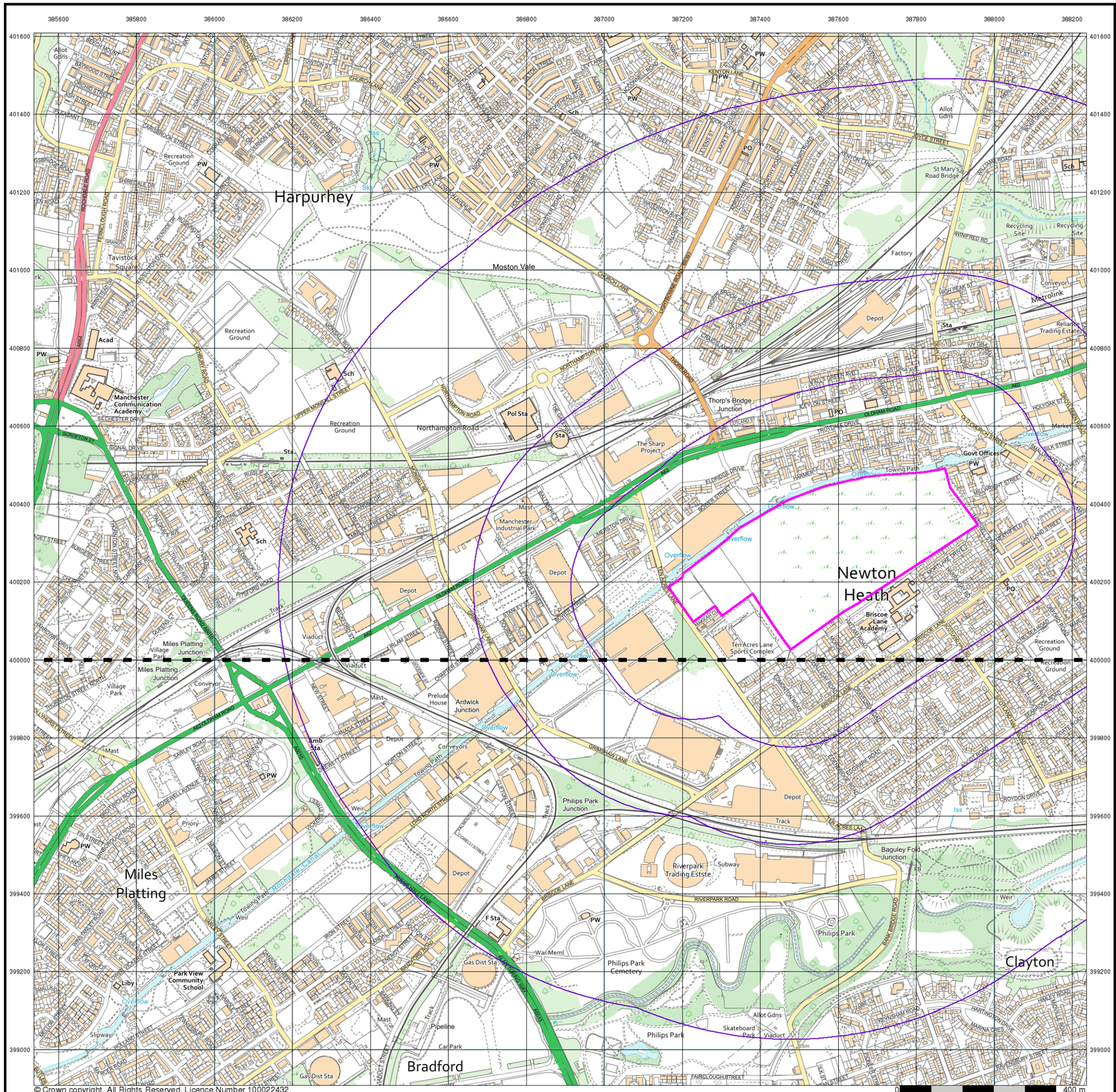

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wardell armstrong

VectorMap Local

Published 2020

Source map scale - 1:10,000

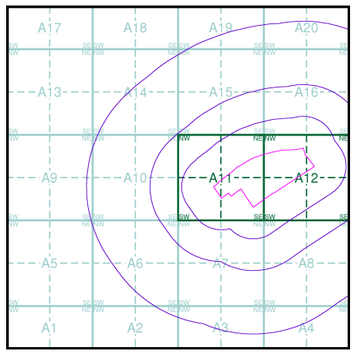
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SD80SE
2020
Variable

SJ89NE
2020
Variable

Historical Map - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Pole
Cutting
Embankment
Standard Gauge Multiple Track
Standard Gauge Single Track
Road Under
Road Over
Level Crossing
Foot Bridge
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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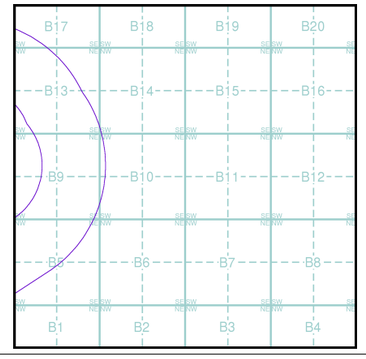
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1895	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909 - 1910	7
Cheshire	1:10,560	1911	8
Lancashire And Furness	1:10,560	1922 - 1923	9
Lancashire And Furness	1:10,560	1932 - 1933	10
Cheshire	1:10,560	1938	11
Lancashire And Furness	1:10,560	1938	12
Lancashire And Furness	1:10,560	1938	13
Ordnance Survey Plan	1:10,000	1954 - 1956	14
Ordnance Survey Plan	1:10,000	1966 - 1968	15
Ordnance Survey Plan	1:10,000	1970 - 1978	16
Manchester	1:25,000	1975	17
Ordnance Survey Plan	1:10,000	1981 - 1983	18
Ordnance Survey Plan	1:10,000	1987	19
Ordnance Survey Plan	1:10,000	1990 - 1993	20
10K Raster Mapping	1:10,000	1999	21
10K Raster Mapping	1:10,000	2006	22
VectorMap Local	1:10,000	2020	23

Historical Map - Slice B



Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

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Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 — Values for prominent elevations

186.0 — Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 — Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (–)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Direction and velocity of current
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1895	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909 - 1910	7
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Ordnance Survey Plan	1:10,000	1970 - 1978	16
Manchester	1:25,000	1975	17
Ordnance Survey Plan	1:10,000	1981 - 1983	18
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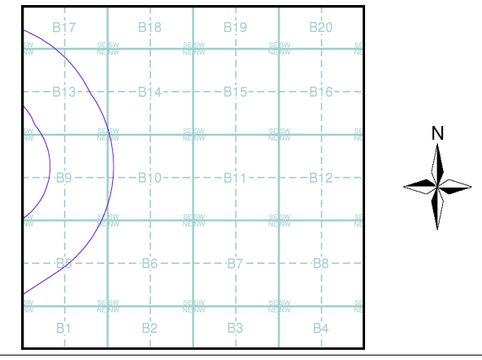
10K Raster Mapping	1:10,000	1999	21
10K Raster Mapping	1:10,000	2006	22
VectorMap Local	1:10,000	2020	23

Russian Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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Lancashire And Furness

Published 1848

Source map scale - 1:10,560

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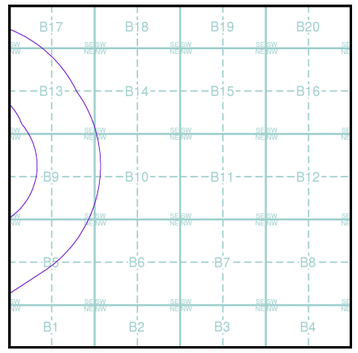
Map Name(s) and Date(s)

09600 1848 1:10,560	09700 1848 1:10,560
10400 1848 1:10,560	10500 1848 1:10,560

Historical Map - Slice B



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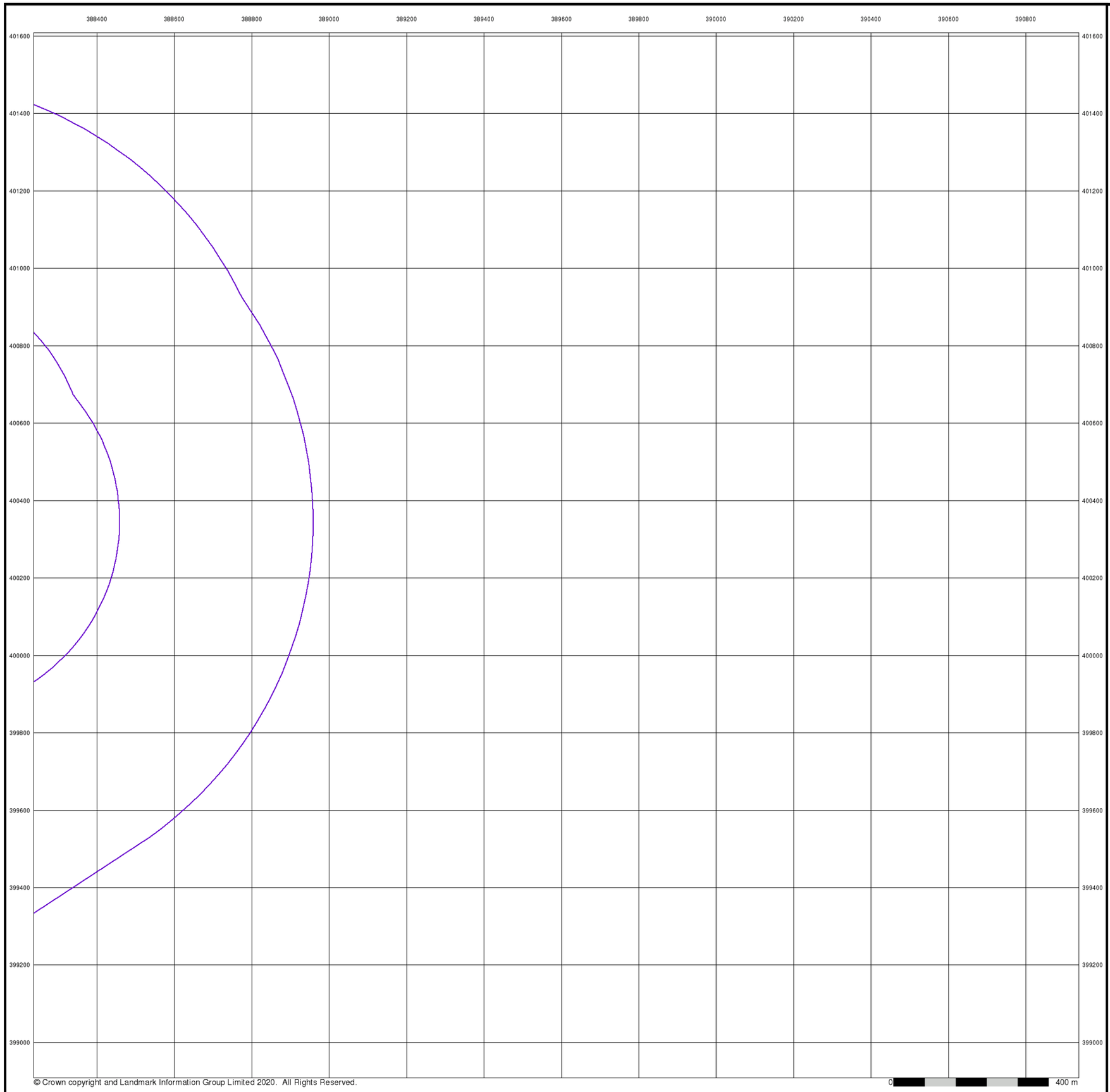

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Cheshire

Published 1882

Source map scale - 1:10,560

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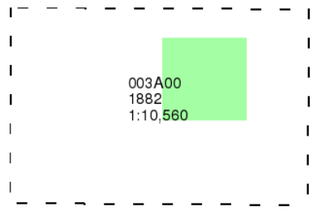
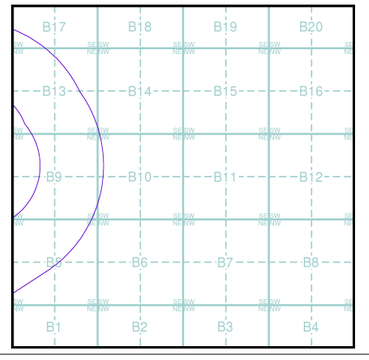
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
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Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

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Lancashire And Furness

Published 1894 - 1895

Source map scale - 1:10,560

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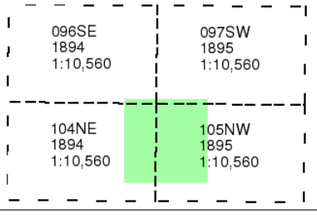
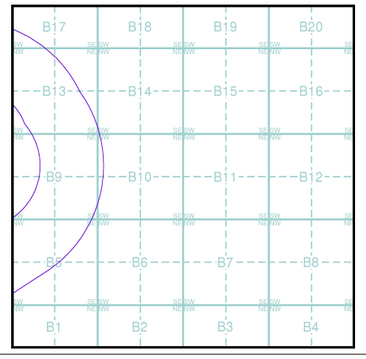
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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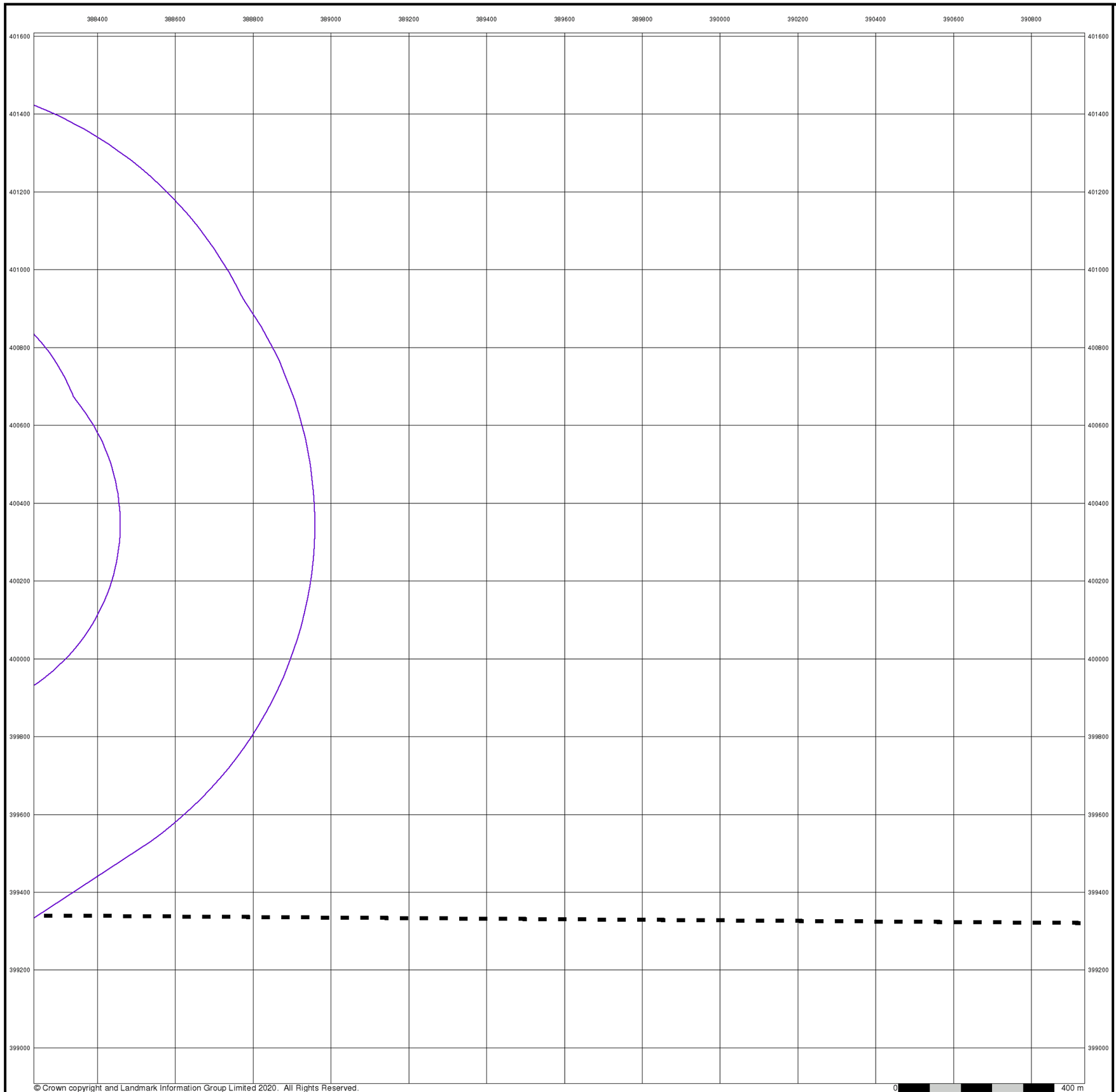

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Cheshire

Published 1899

Source map scale - 1:10,560

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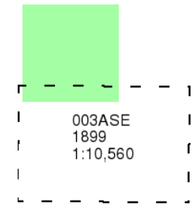
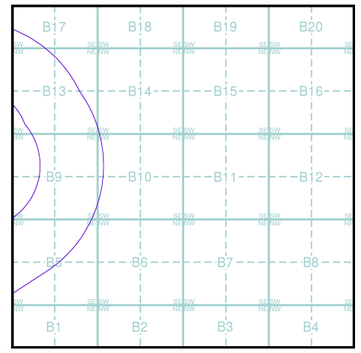
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
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Slice:	B
Site Area (Ha):	18.51
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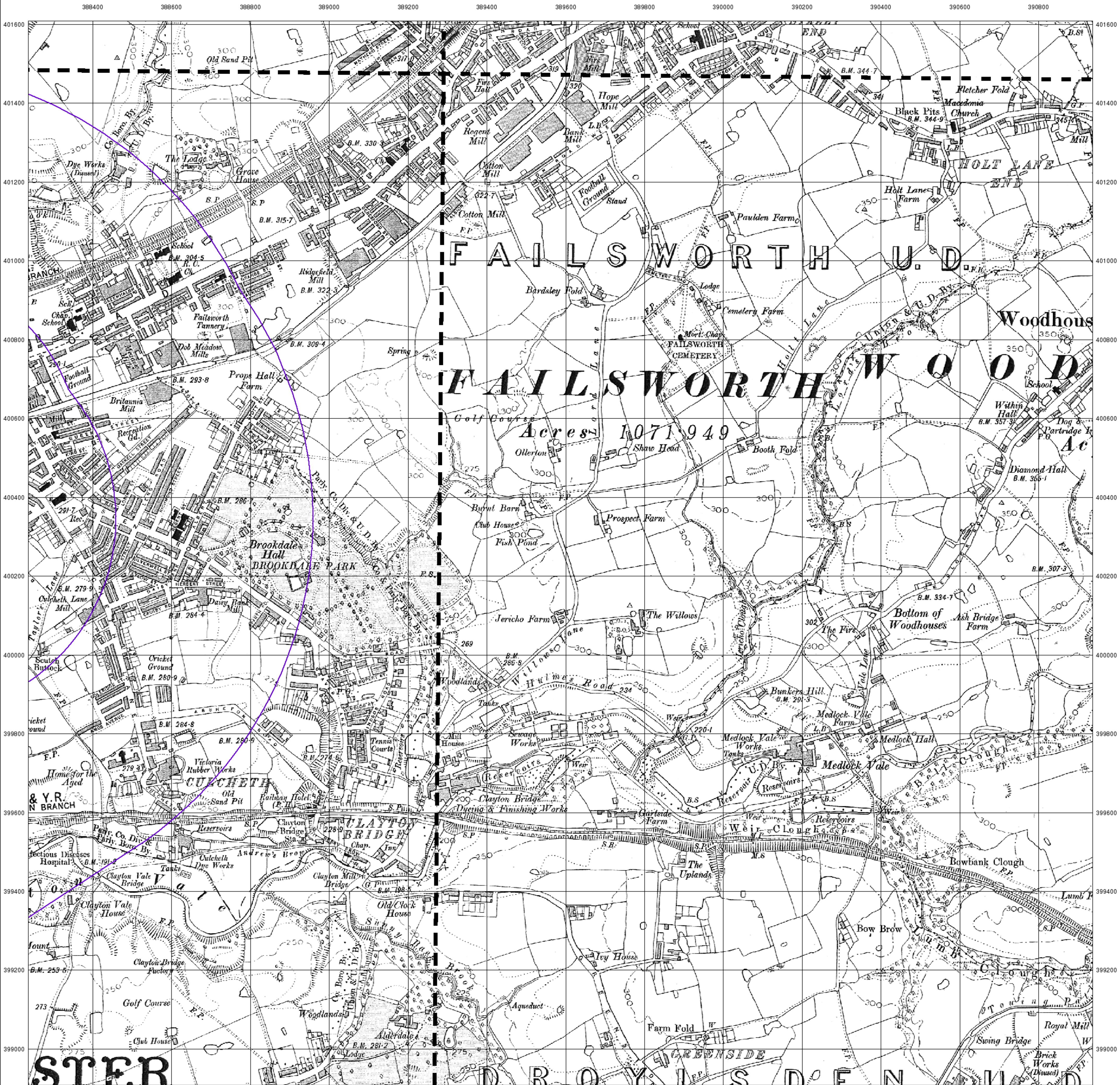

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Lancashire And Furness

Published 1909 - 1910

Source map scale - 1:10,560

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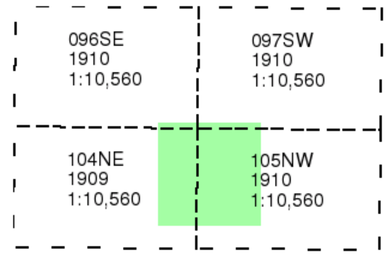
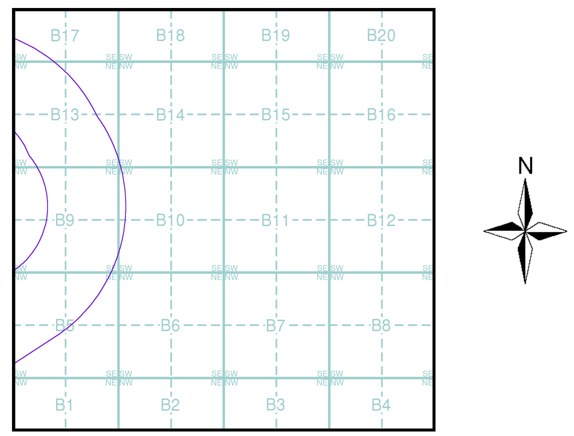
Map Name(s) and Date(s)



Historical Map - Slice B

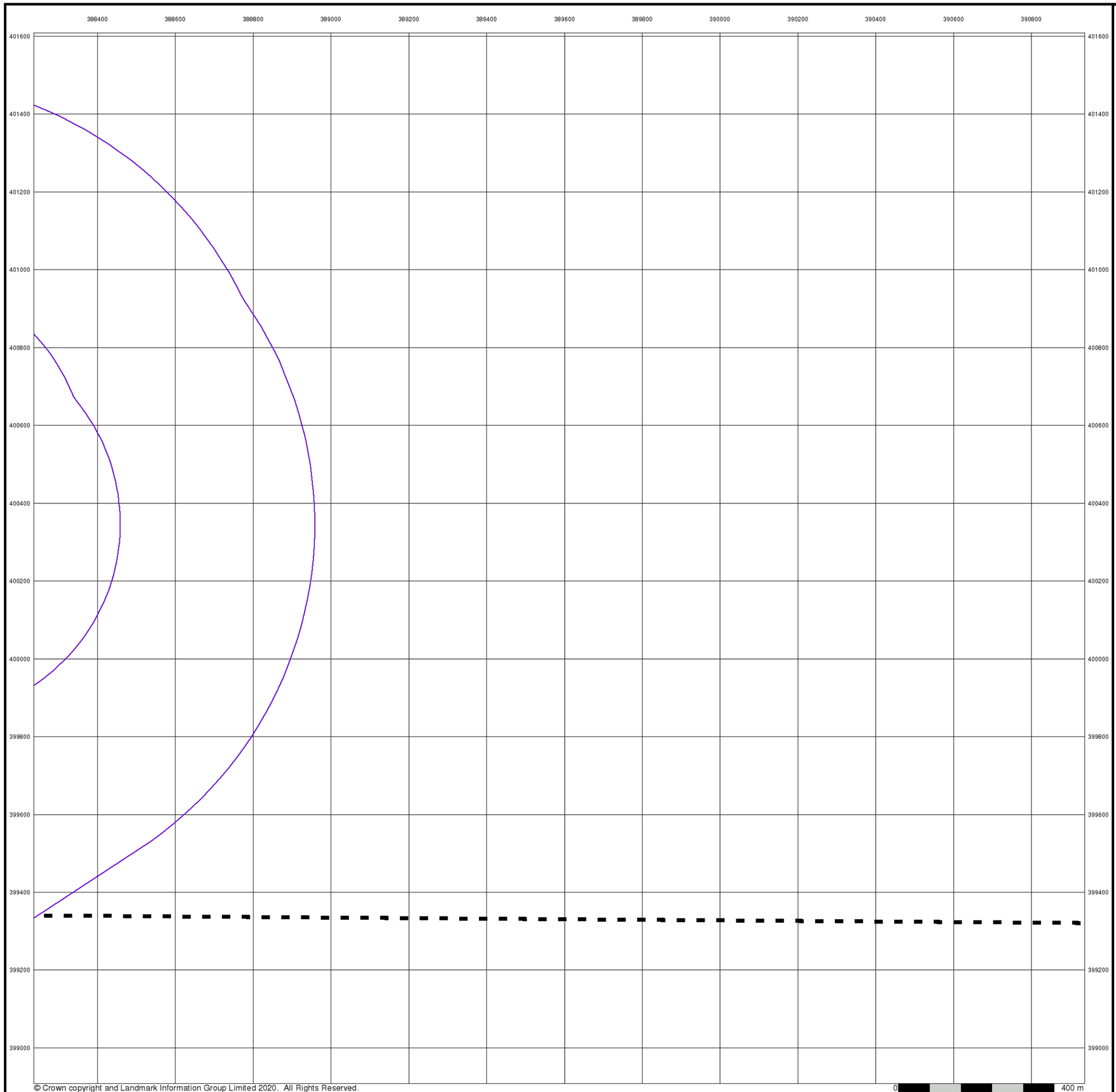


Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310



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Cheshire

Published 1911

Source map scale - 1:10,560

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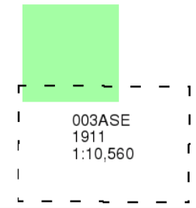
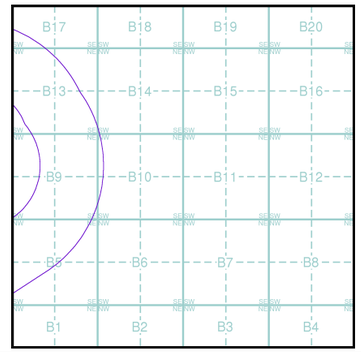
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
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Site Details

Site at 387600, 400310

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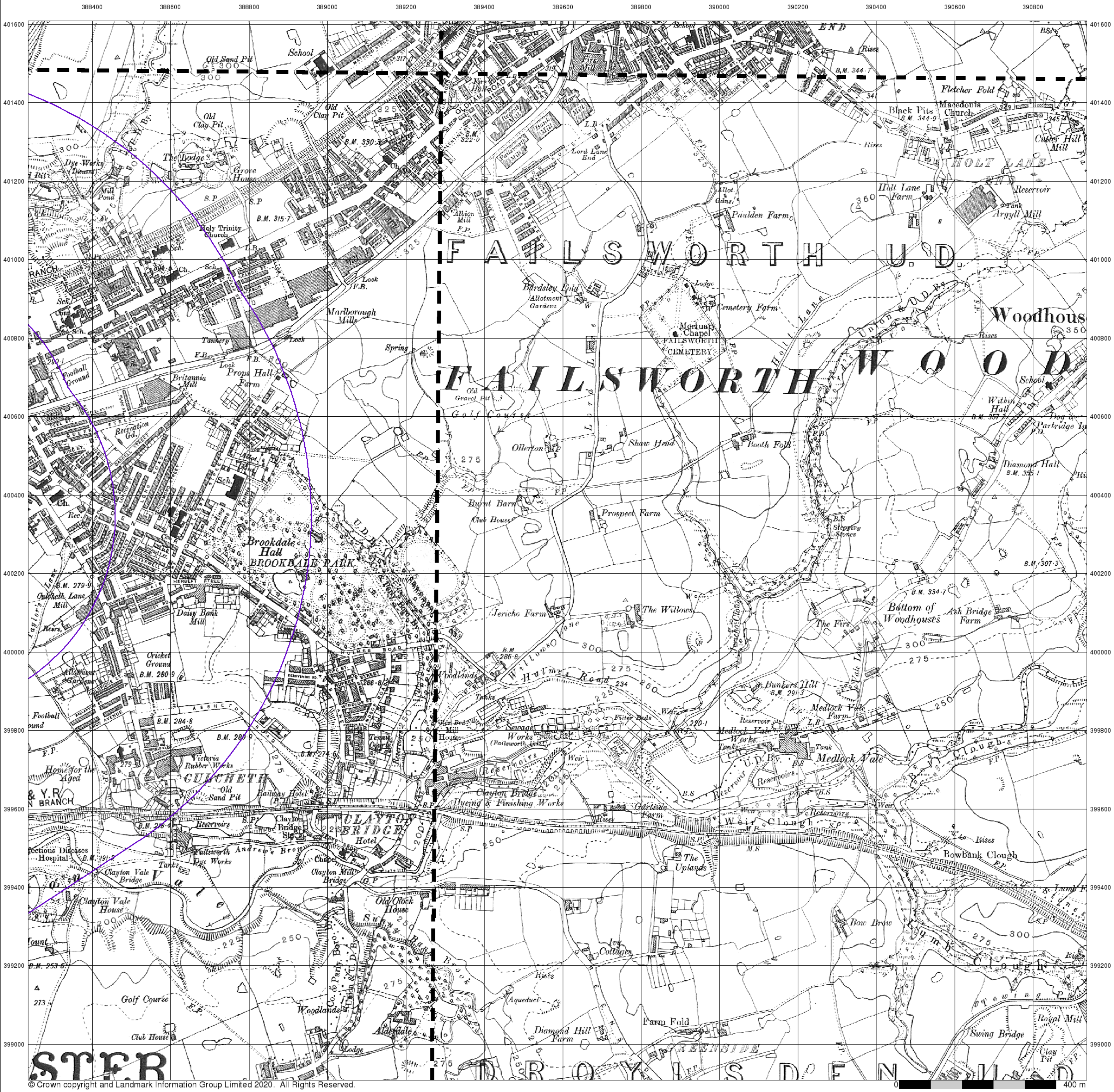

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Lancashire And Furness

Published 1922 - 1923

Source map scale - 1:10,560

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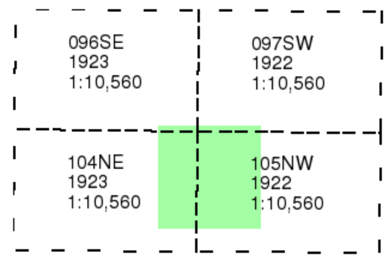
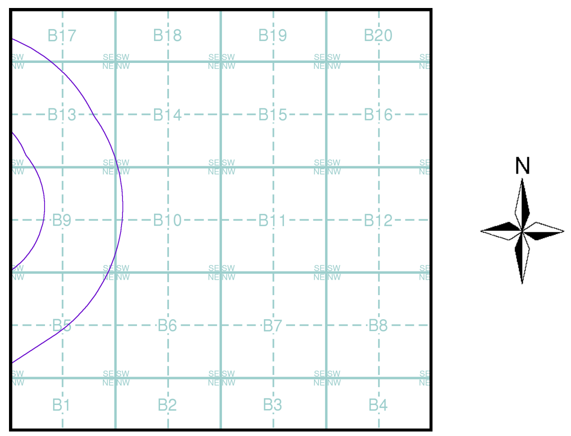
Map Name(s) and Date(s)



Historical Map - Slice B



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Fax: 0844 844 9951
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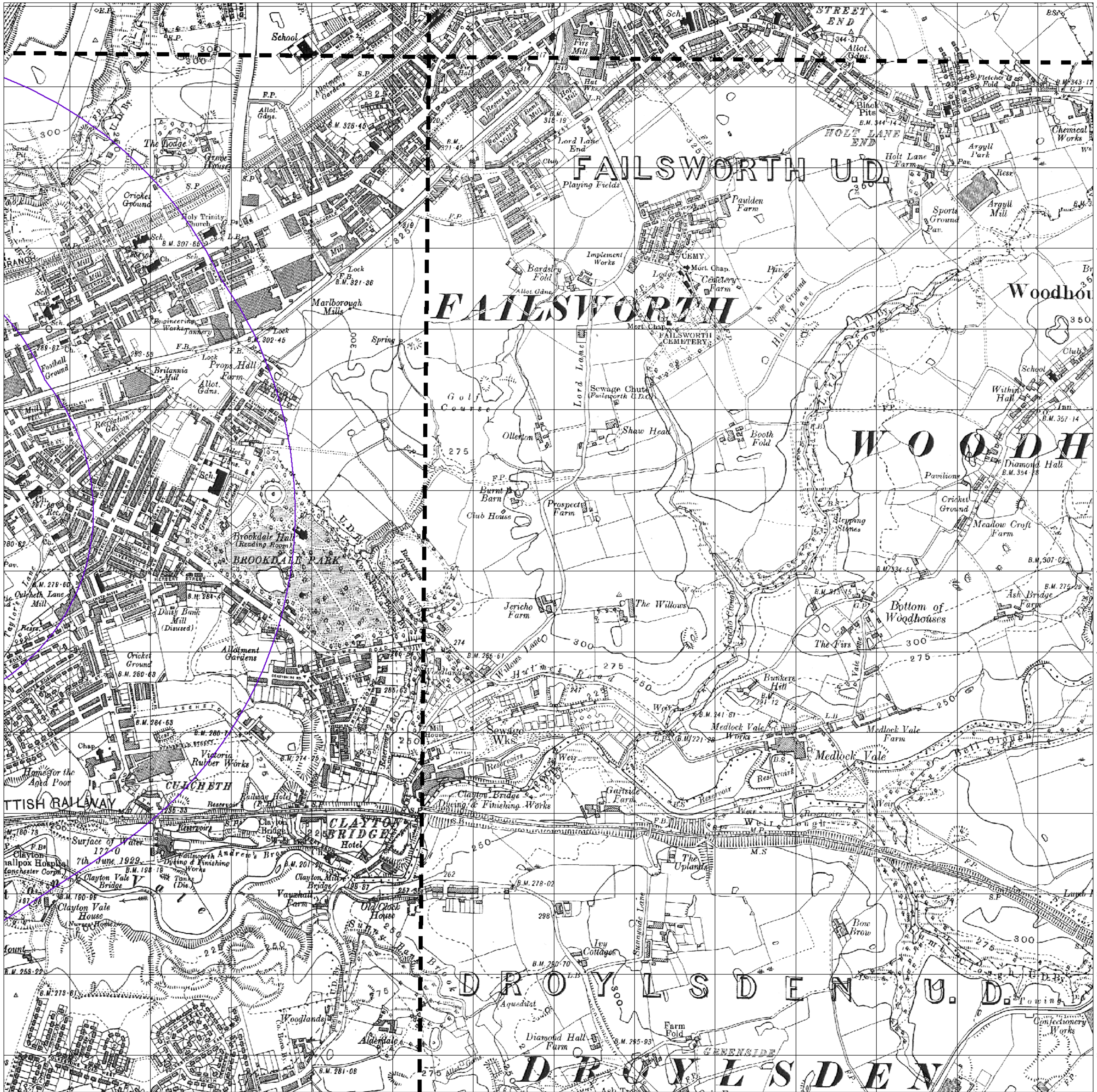


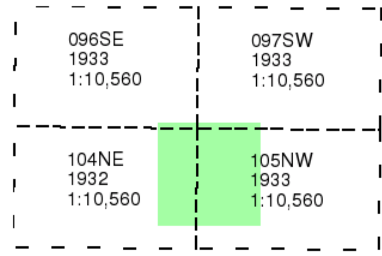
Lancashire And Furness

Published 1932 - 1933

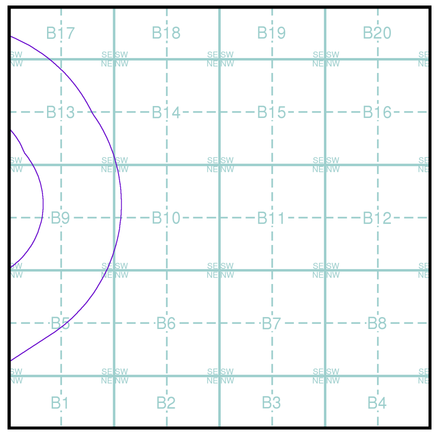
Source map scale - 1:10,560

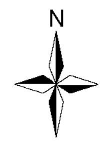
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B





Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

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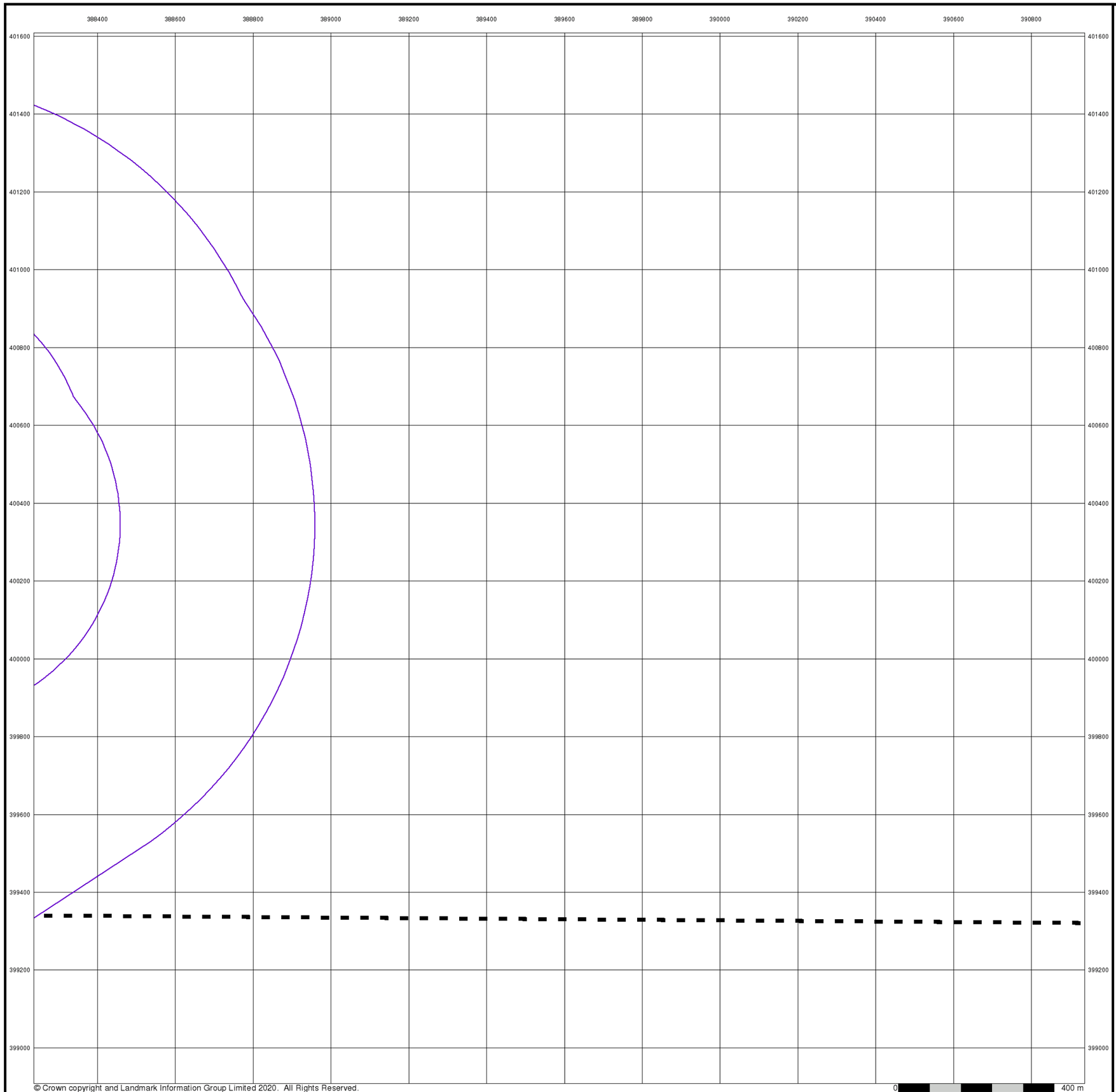

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wardell armstrong

Cheshire

Published 1938

Source map scale - 1:10,560

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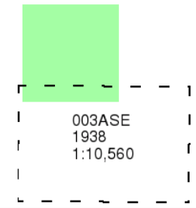
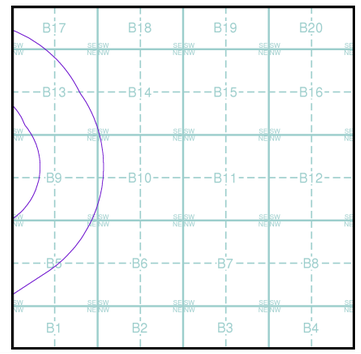
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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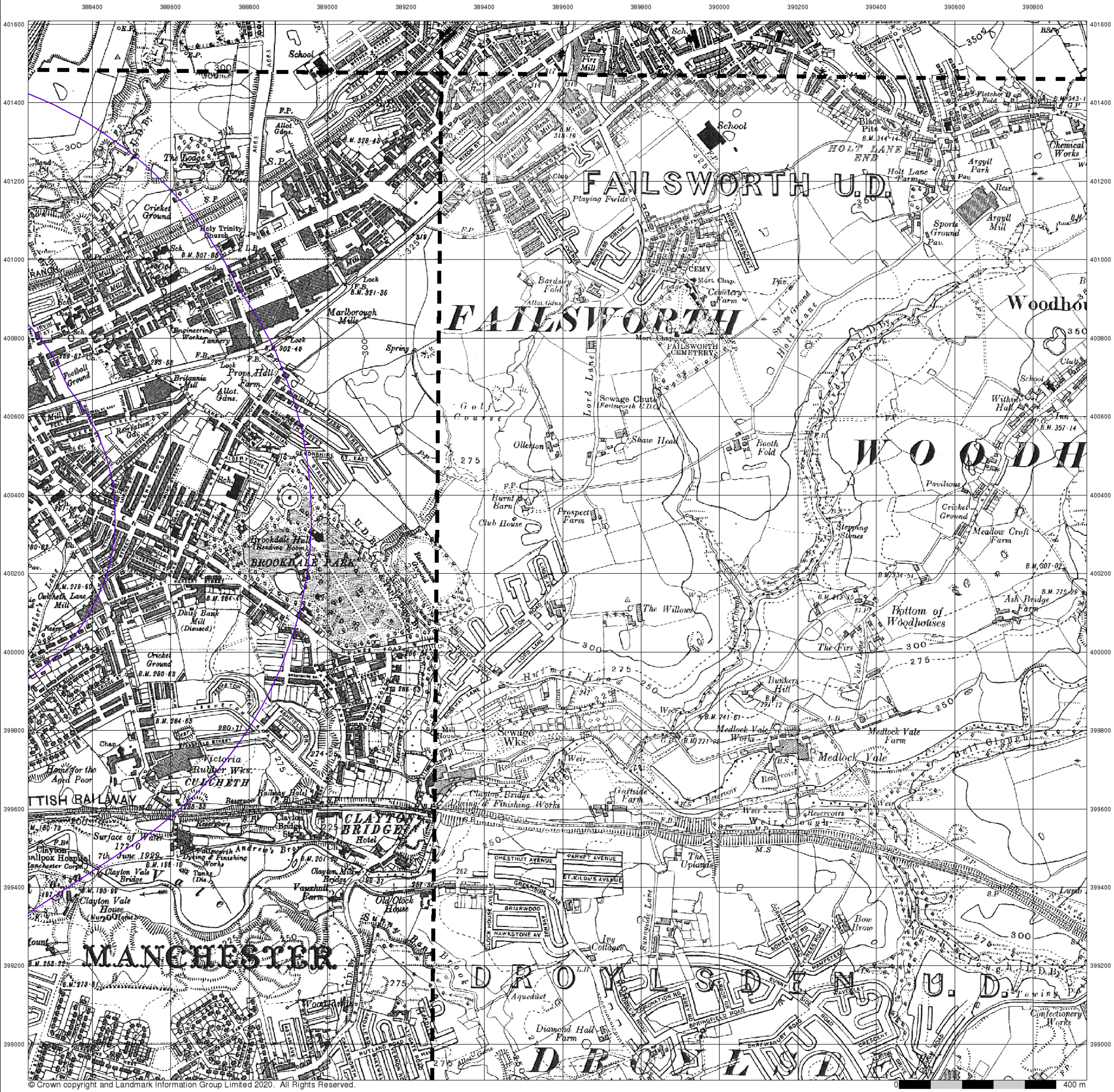

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Lancashire And Furness

Published 1938

Source map scale - 1:10,560

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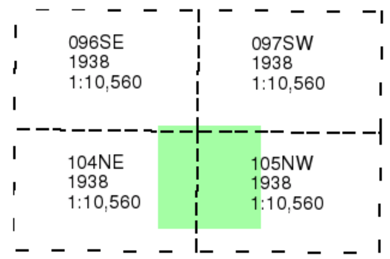
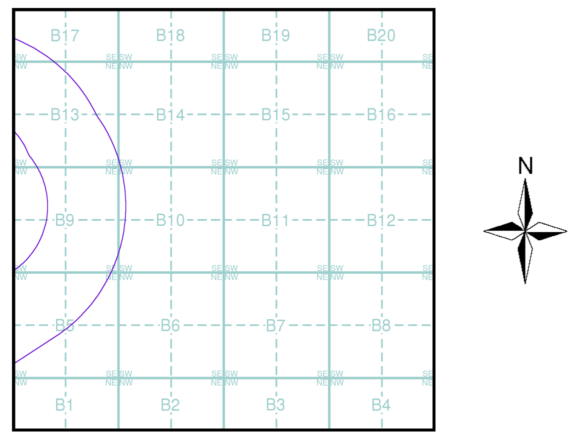


Historical Map - Slice B



Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

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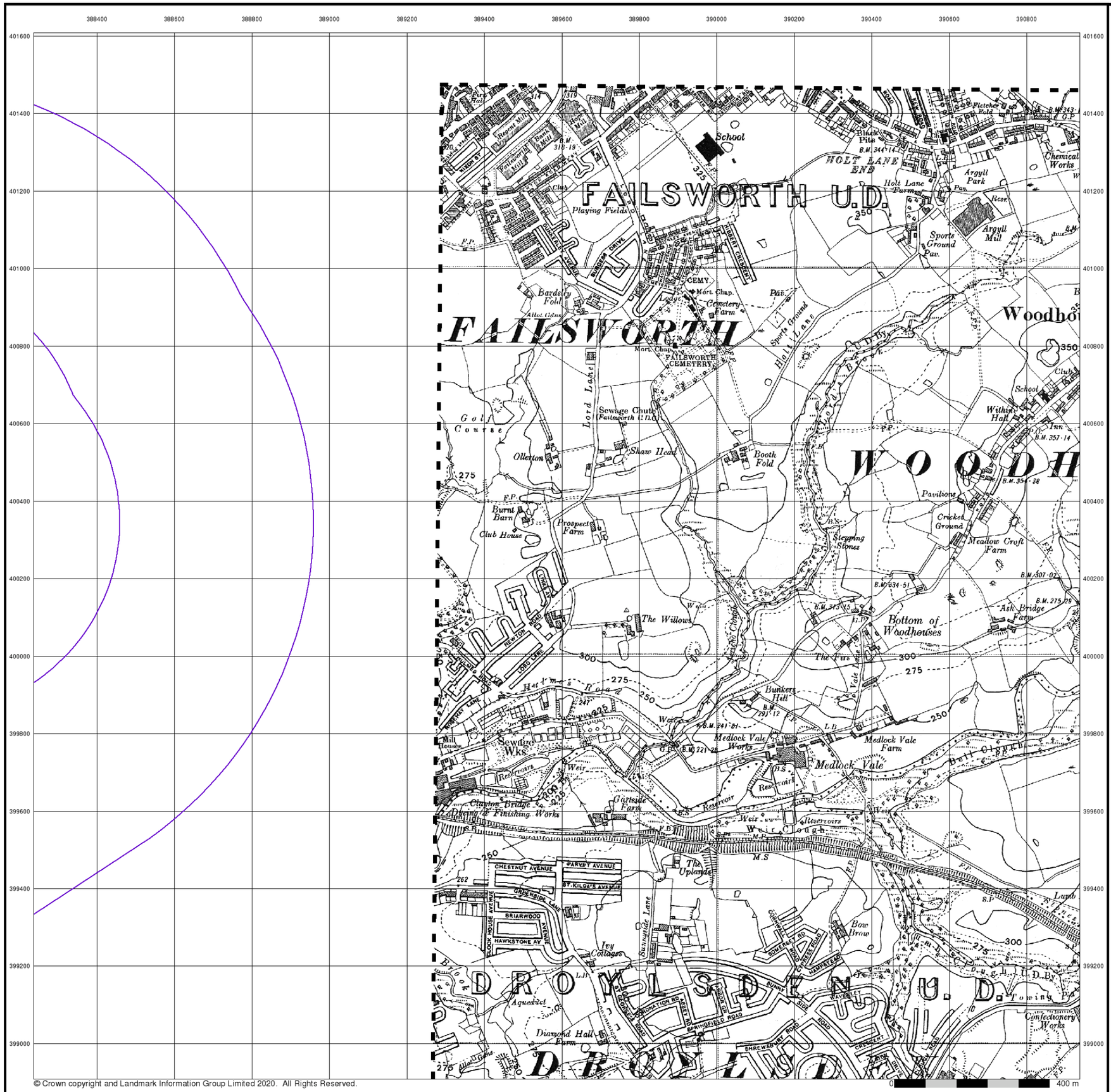

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0 400 m

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Lancashire And Furness

Published 1938

Source map scale - 1:10,560

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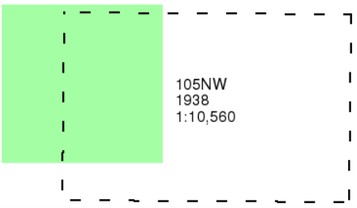
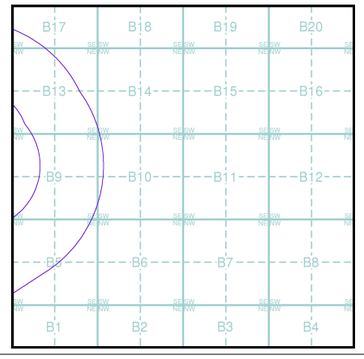


Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

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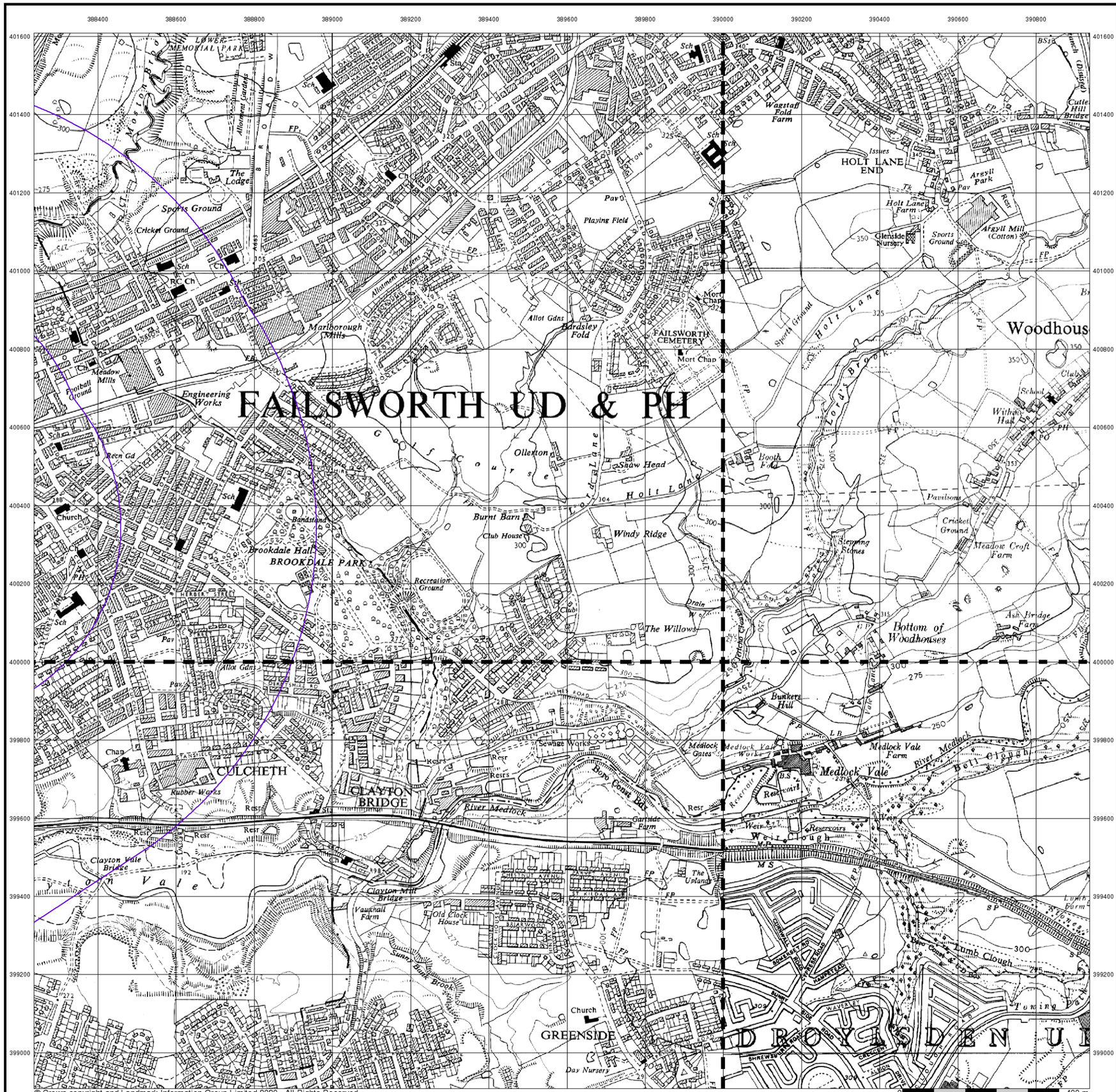

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Ordnance Survey Plan

Published 1954 - 1956

Source map scale - 1:10,000

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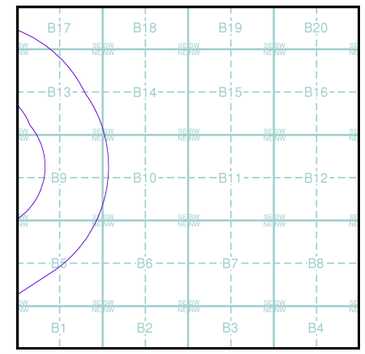
Map Name(s) and Date(s)

SD80SE 1956 1:10,560	SD90SW 1956 1:10,560
SJ89NE 1956 1:10,560	SJ99NW 1954 1:10,560

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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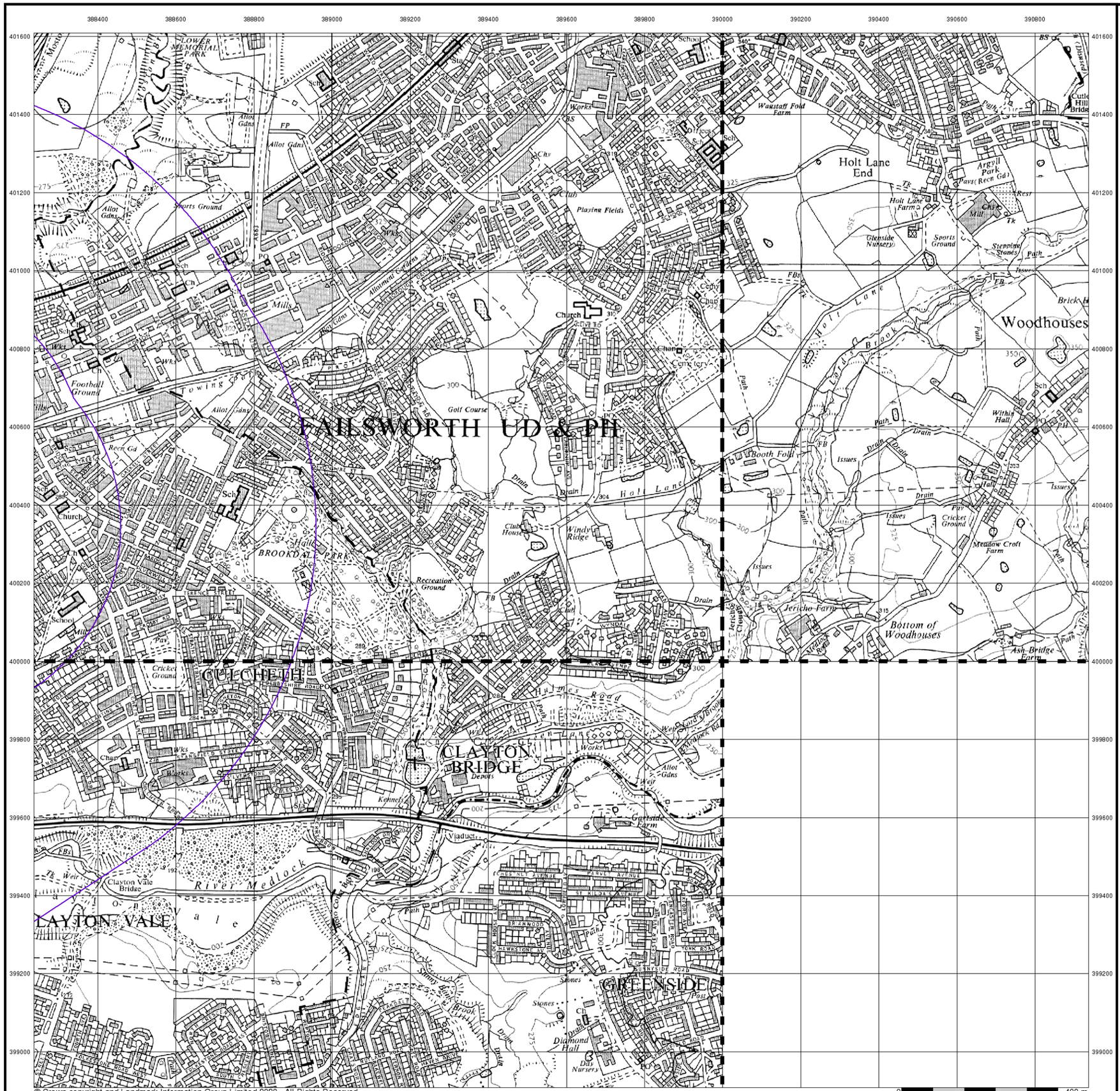

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Ordnance Survey Plan

Published 1966 - 1968

Source map scale - 1:10,000

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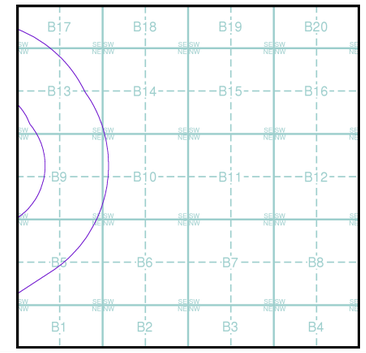
Map Name(s) and Date(s)

SD80SE 1966 1:10,560
SD90SW 1967 1:10,560
SJ89NE 1968 1:10,560

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

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Ordnance Survey Plan

Published 1970 - 1978

Source map scale - 1:10,000

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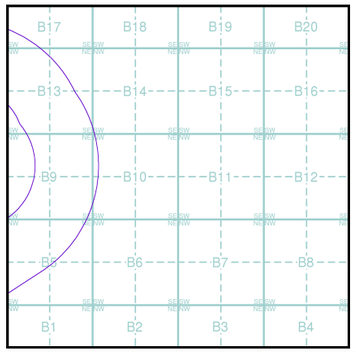
Map Name(s) and Date(s)

SD80SE 1978 1:10,000

SD90SW 1975 1:10,000

SJ99NW 1970 1:10,560

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

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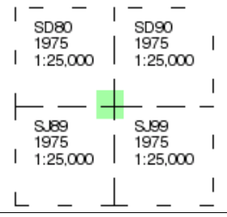
Manchester

Published 1975

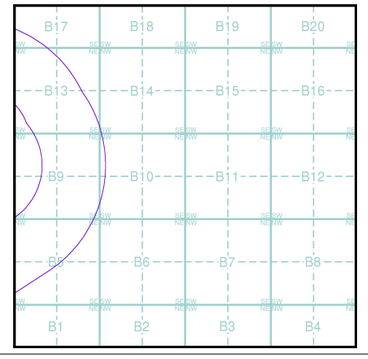
Source map scale - 1:25,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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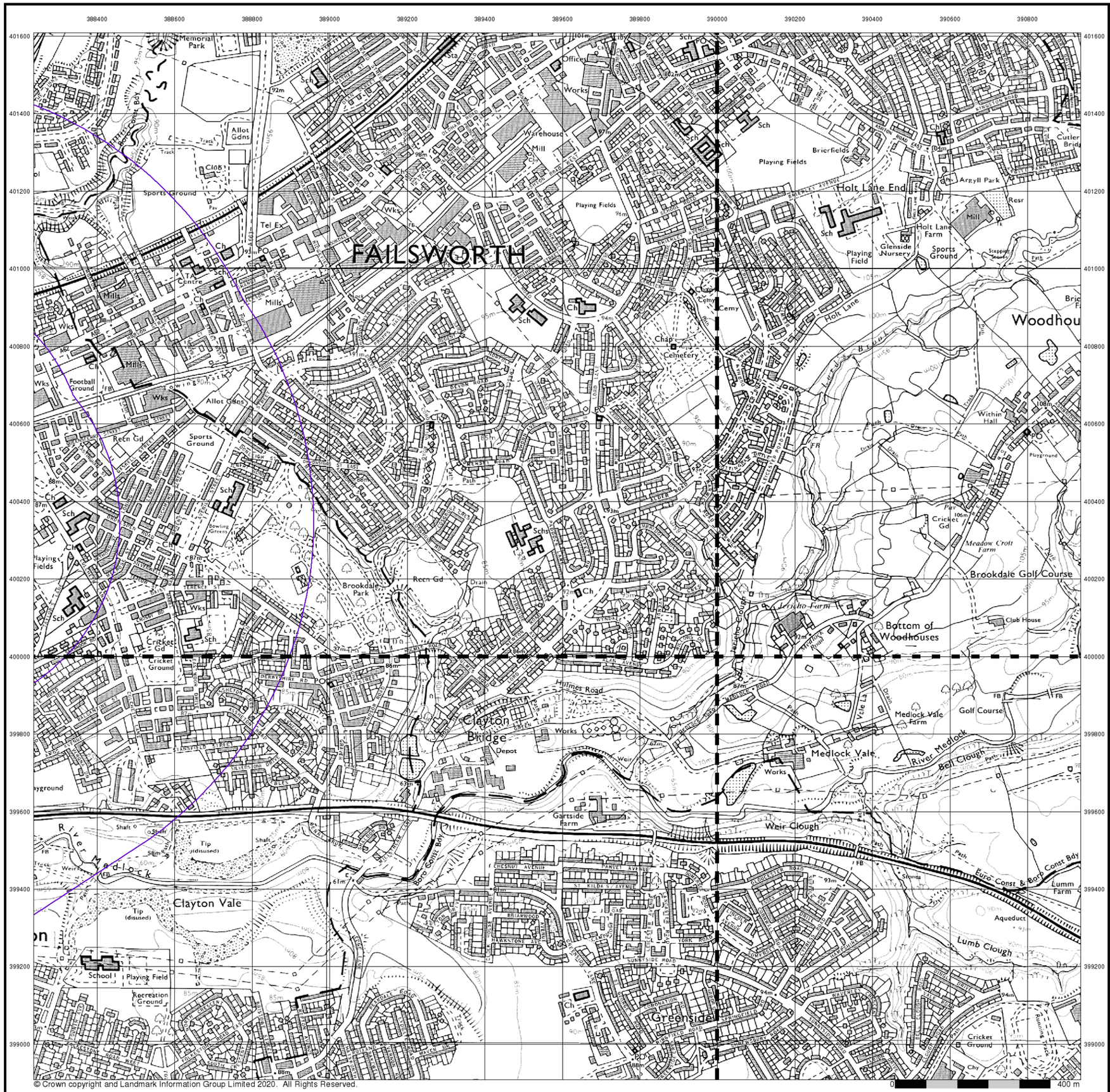

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Ordnance Survey Plan

Published 1981 - 1983

Source map scale - 1:10,000

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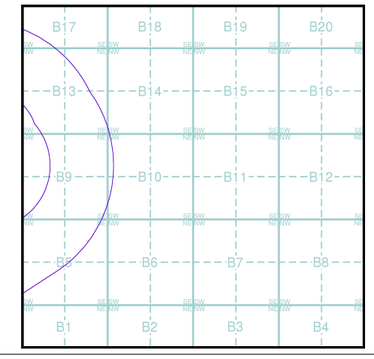
Map Name(s) and Date(s)

SD80SE 1982 1:10,000	SD90SW 1983 1:10,000
SJ89NE 1981 1:10,000	SJ99NW 1982 1:10,000

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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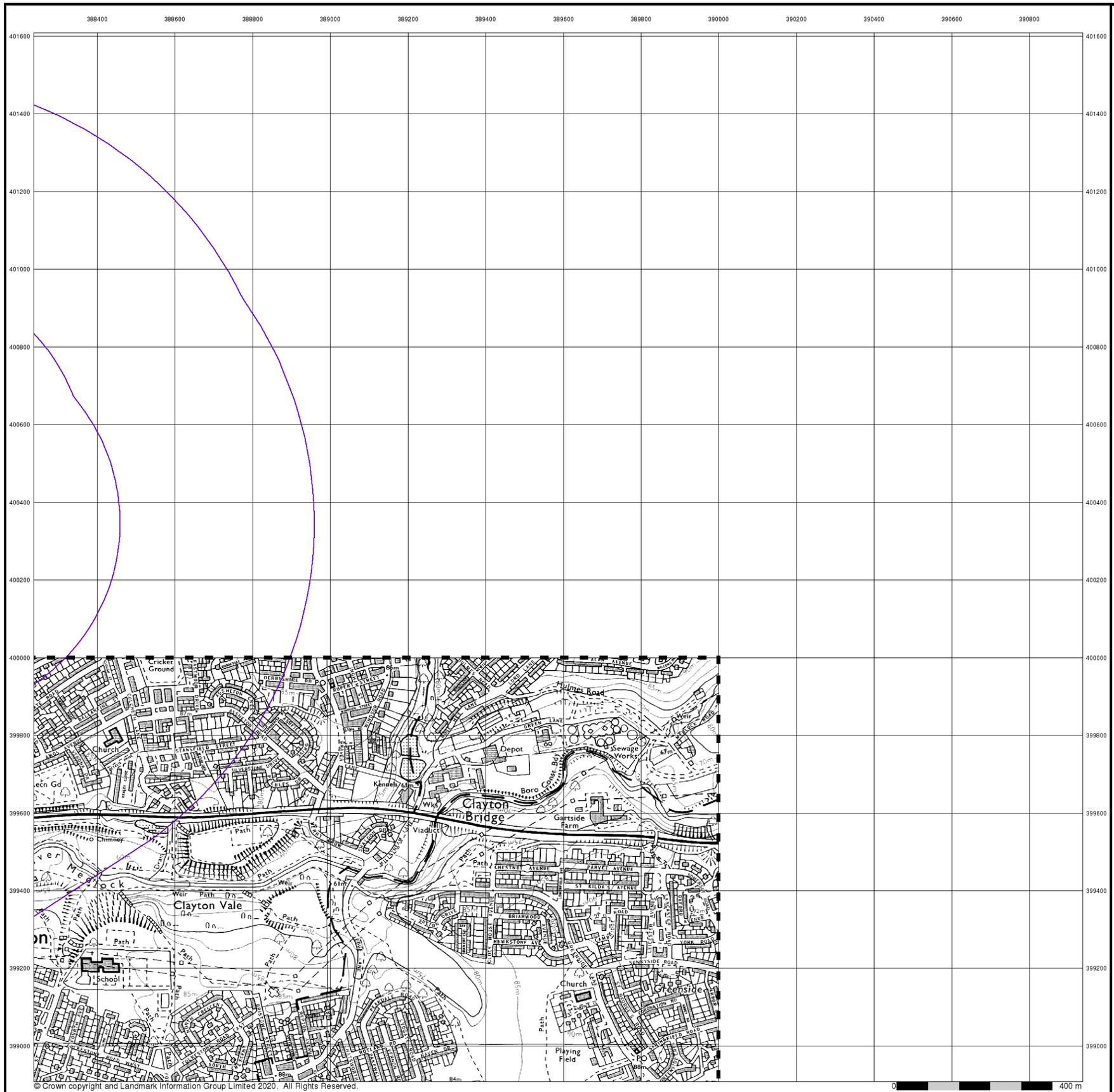

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Ordnance Survey Plan

Published 1987

Source map scale - 1:10,000

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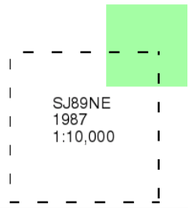
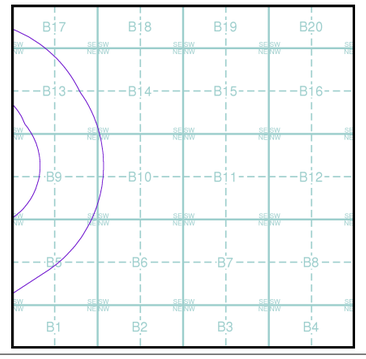
Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
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Slice:	B
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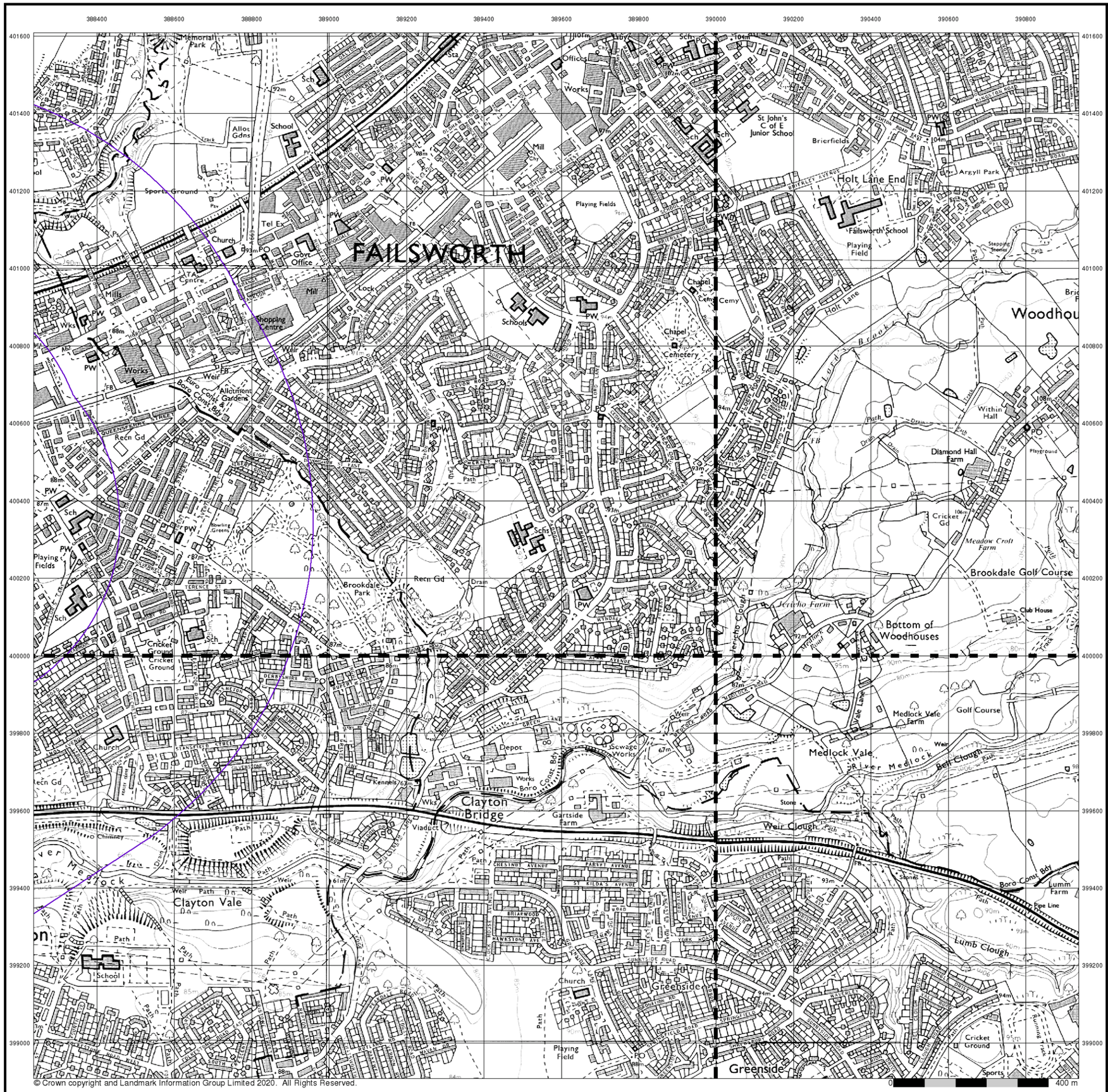

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Ordnance Survey Plan

Published 1990 - 1993

Source map scale - 1:10,000

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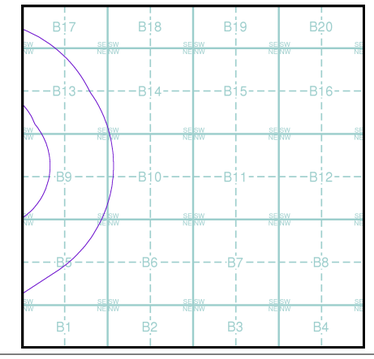
Map Name(s) and Date(s)

SD80SE 1990 1:10,000	SD90SW 1990 1:10,000
SJ89NE 1993 1:10,000	SJ99NW 1991 1:10,000

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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0 400 m

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10k Raster Mapping

Published 1999

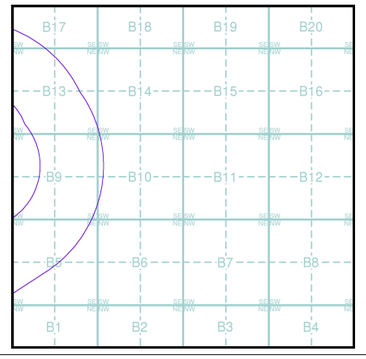
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SD80SE 1999 1:10,000	SD90SW 1999 1:10,000
SJ89NE 1999 1:10,000	SJ99NW 1999 1:10,000

Historical Map - Slice B



Order Details

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Slice:	B
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0 400 m

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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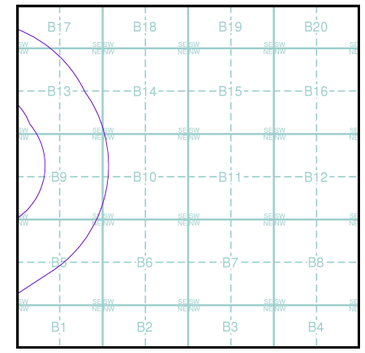
Map Name(s) and Date(s)

SD80SE 2006 1:10,000	SD90SW 2006 1:10,000
SJ89NE 2006 1:10,000	SJ99NW 2006 1:10,000

Historical Map - Slice B



Order Details

Order Number:	267713911_1_1
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Slice:	B
Site Area (Ha):	18.51
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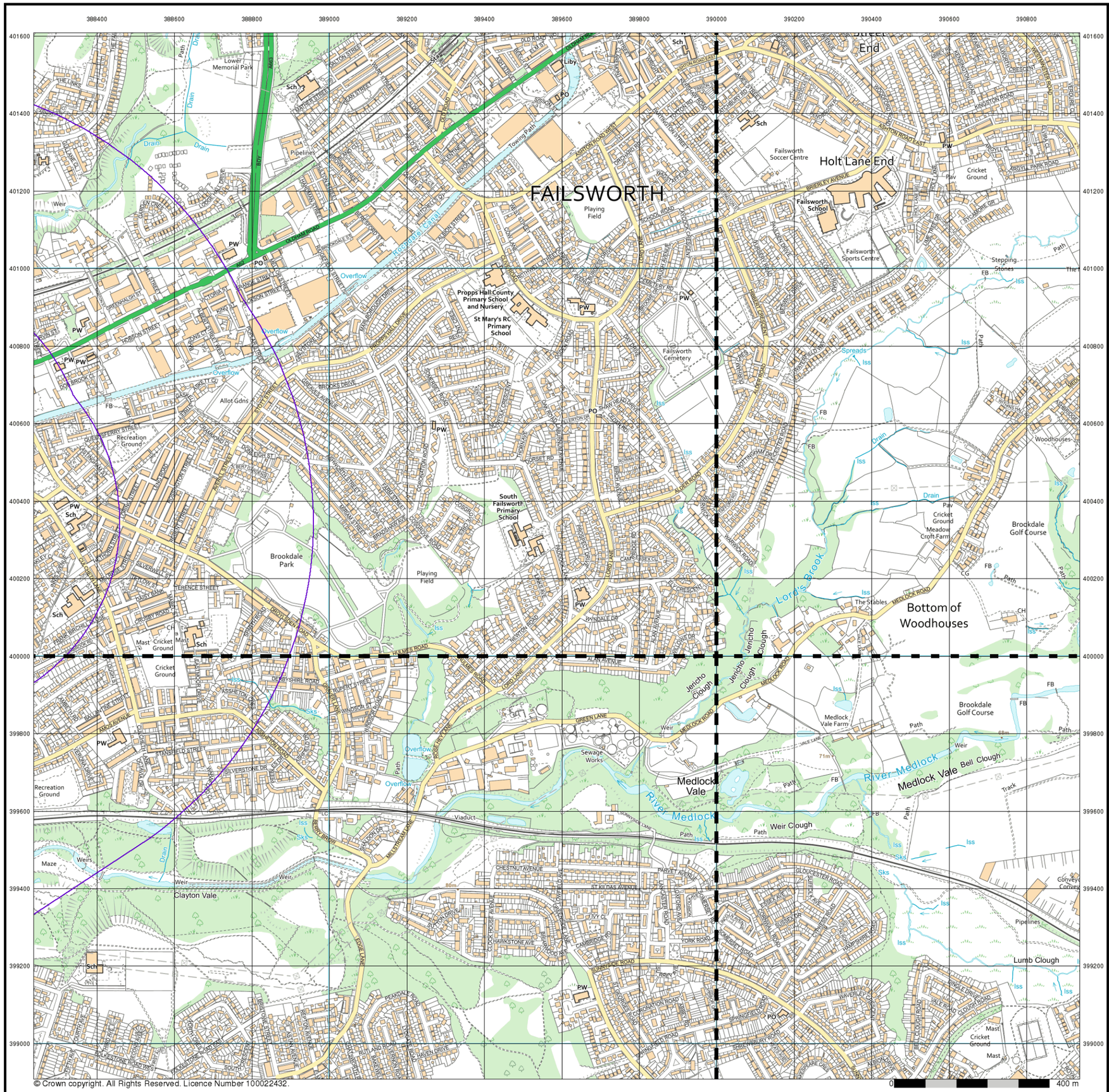

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VectorMap Local

Published 2020

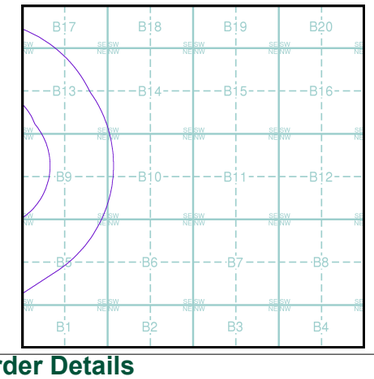
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SD80SE 2020 Variable	SD90SW 2020 Variable
SJ89NE 2020 Variable	SJ99NW 2020 Variable

Historical Map - Slice B



Order Details

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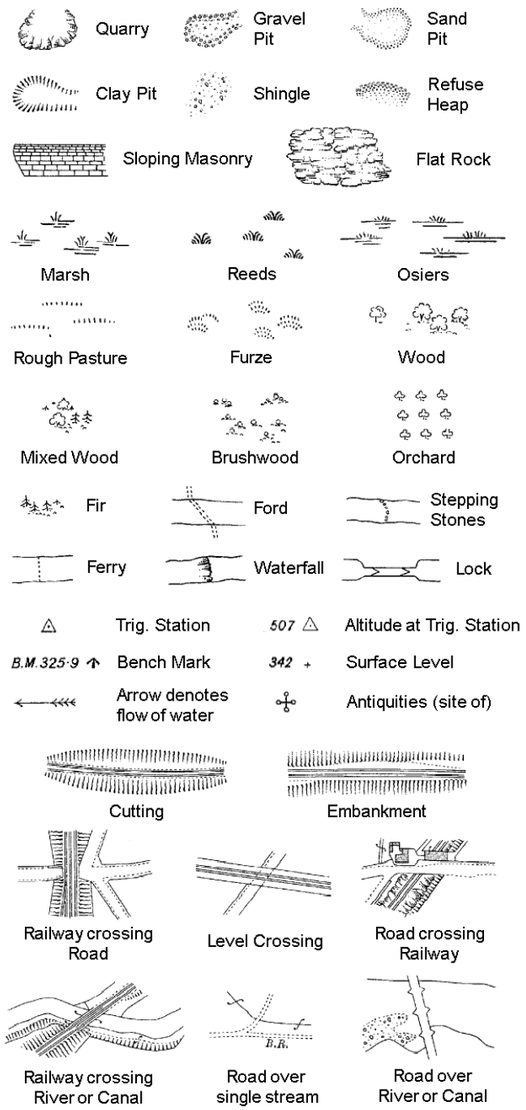
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)

County & Civil Parish Boundary

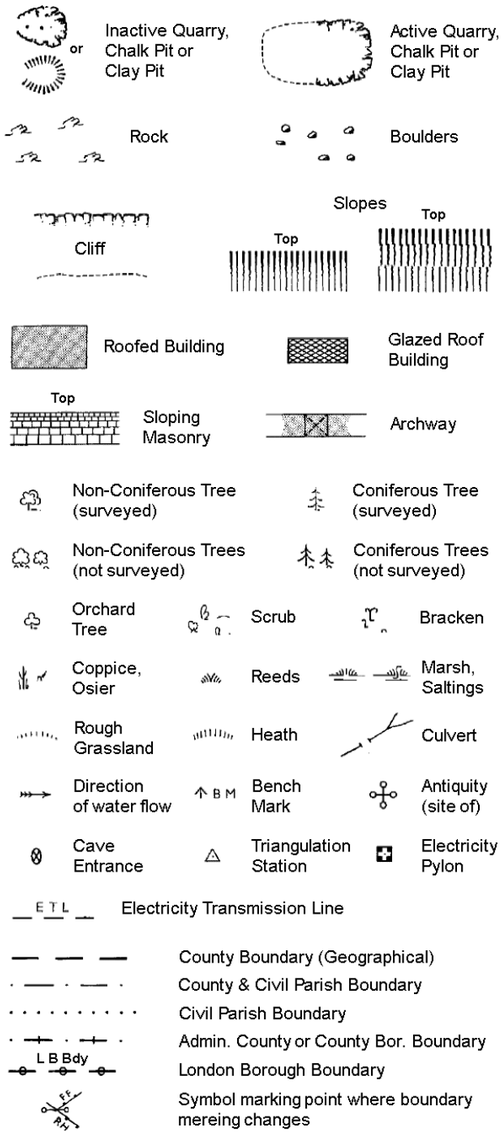
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

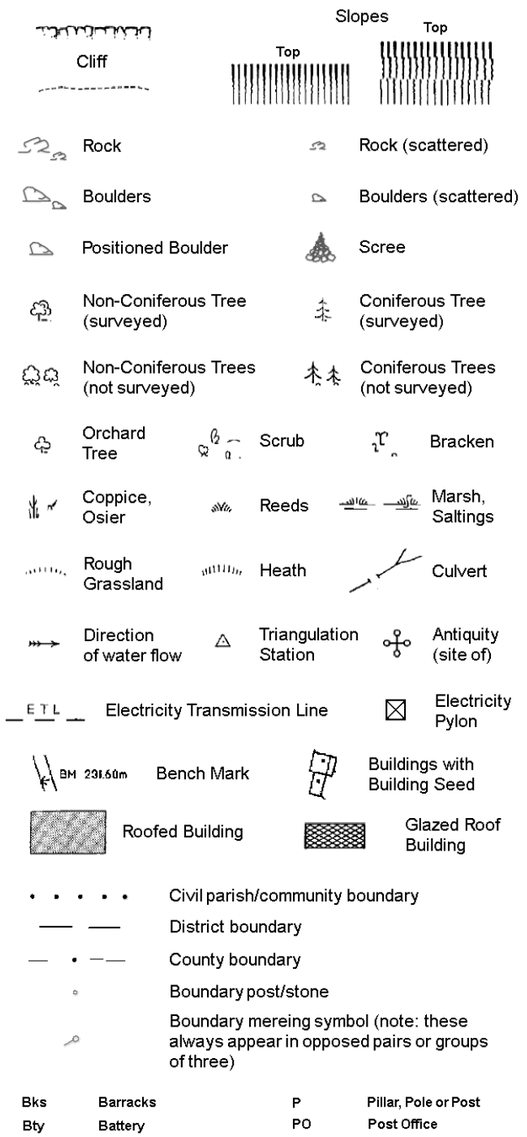
Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary

District boundary

County boundary

Boundary post/stone

Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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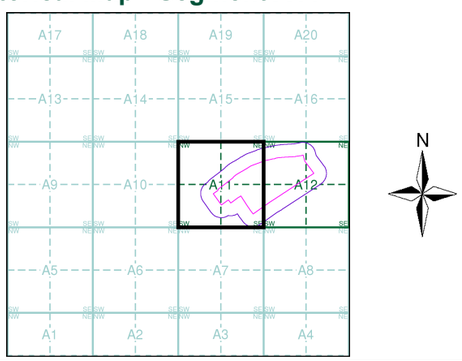
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1908	3
Lancashire And Furness	1:2,500	1931	4
Ordnance Survey Plan	1:1,250	1948 - 1951	5
Ordnance Survey Plan	1:2,500	1951	6
Ordnance Survey Plan	1:1,250	1953 - 1980	7
Ordnance Survey Plan	1:2,500	1970	8
Supply of Unpublished Survey Information	1:1,250	1975 - 1976	9
Additional SIMs	1:1,250	1977 - 1991	10
Additional SIMs	1:1,250	1986 - 1991	11
Ordnance Survey Plan	1:1,250	1990	12
Large-Scale National Grid Data	1:1,250	1992	13
Large-Scale National Grid Data	1:1,250	1992 - 1995	14
Large-Scale National Grid Data	1:1,250	1993	15
Large-Scale National Grid Data	1:1,250	1996	16
Historical Aerial Photography	1:2,500	2000	17

Historical Map - Segment A11



Order Details

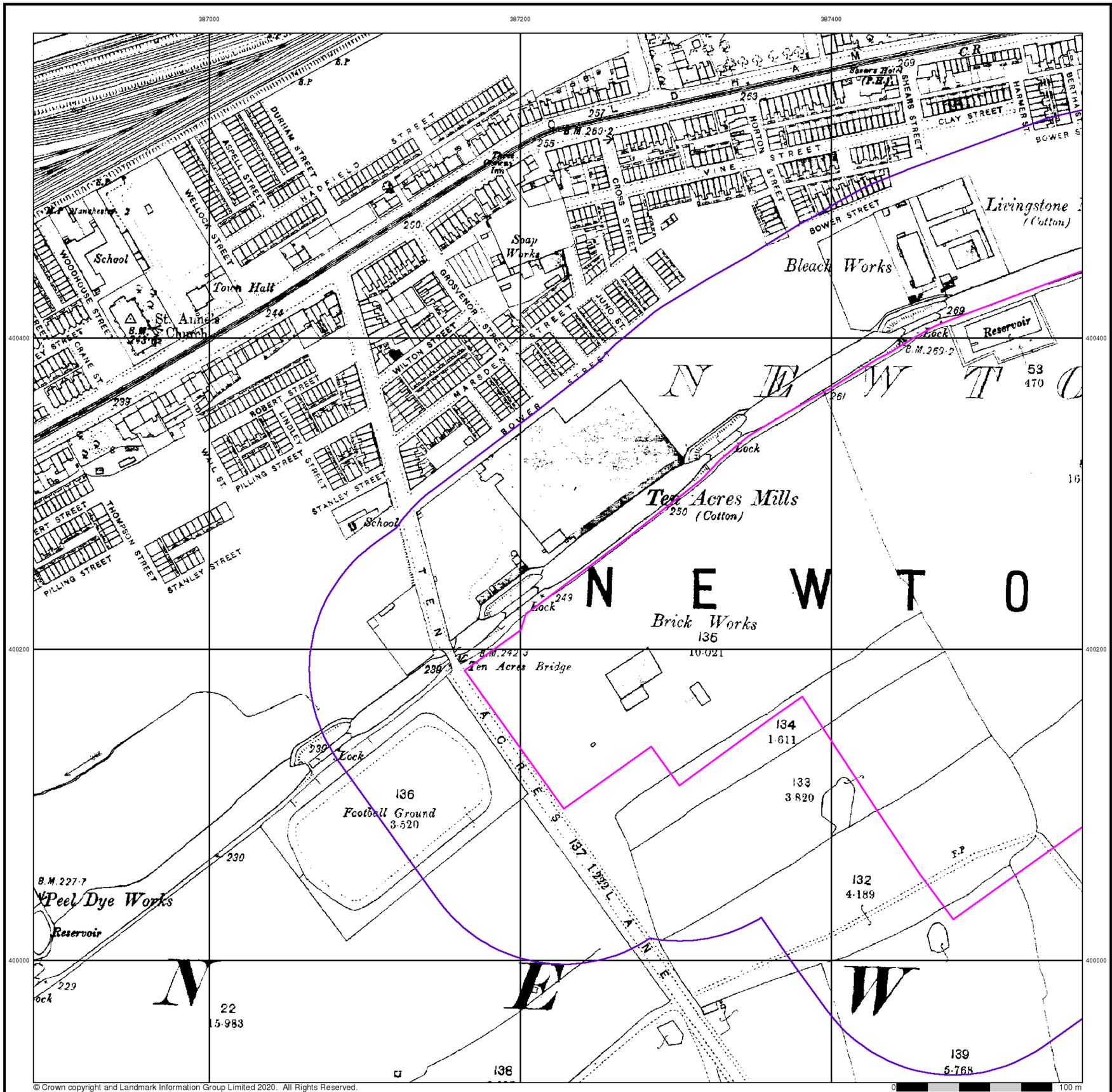
Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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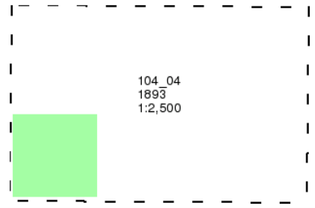
Lancashire And Furness

Published 1893

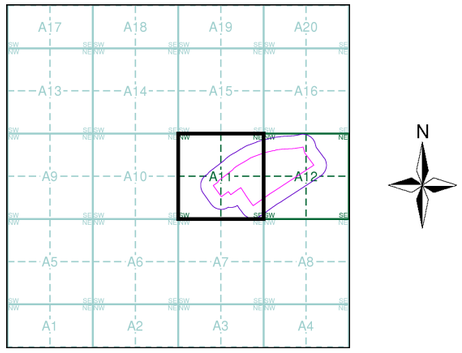
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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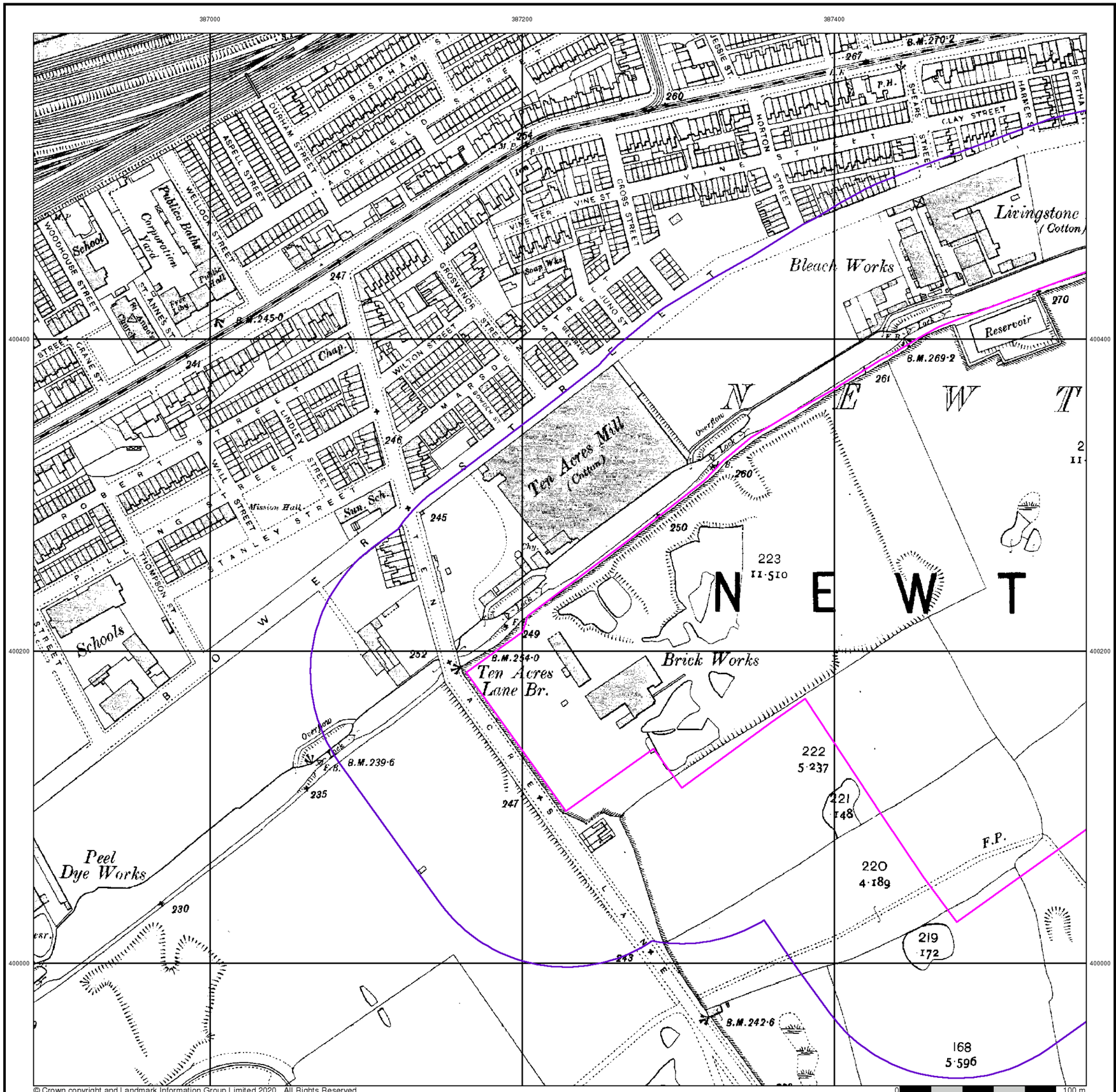

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Lancashire And Furness

Published 1908

Source map scale - 1:2,500

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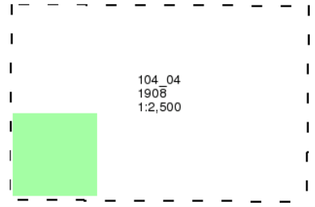
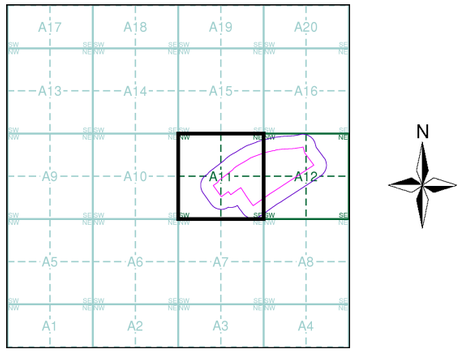
Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
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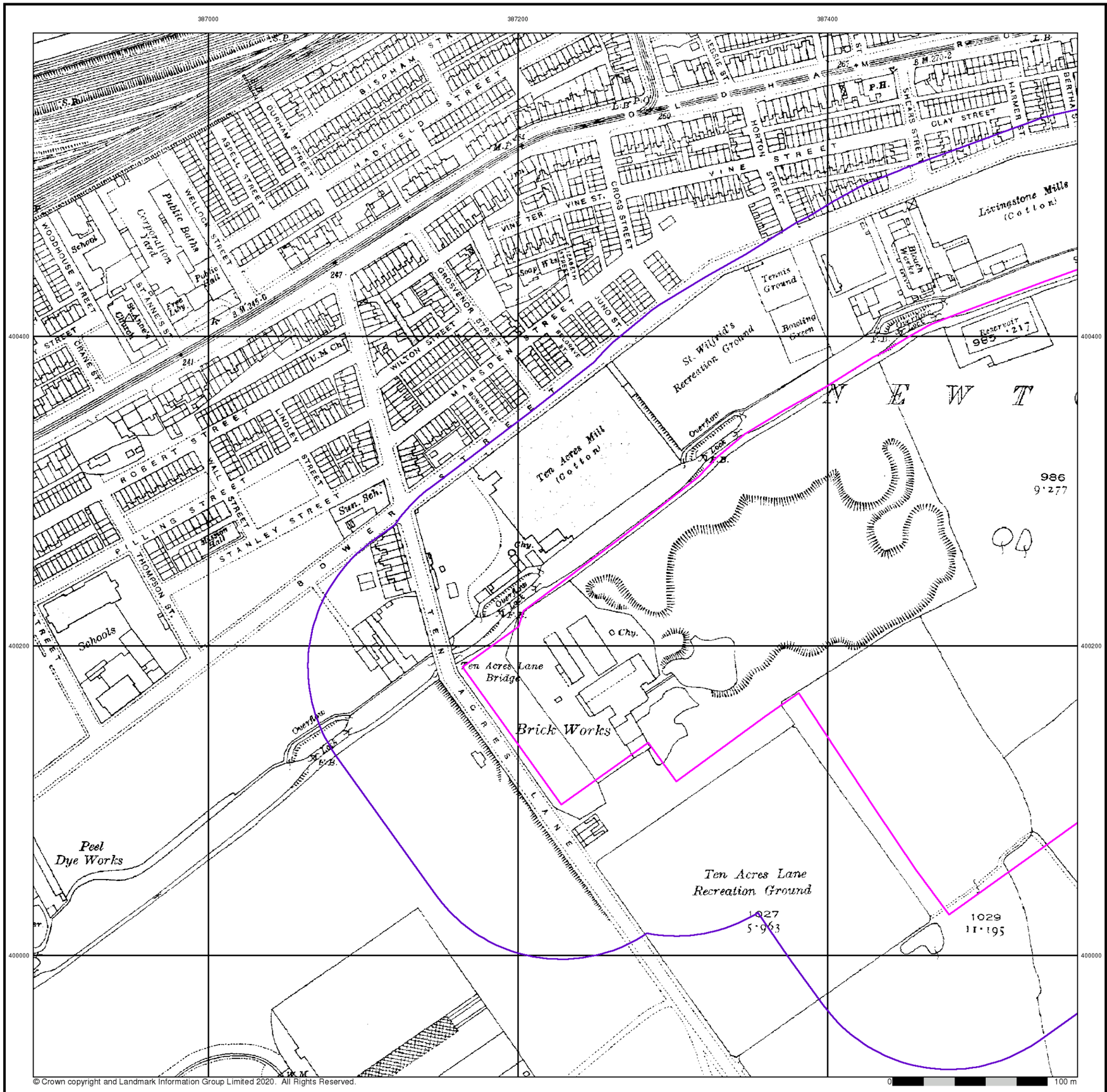

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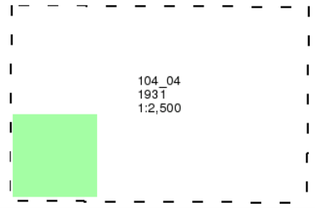
Lancashire And Furness

Published 1931

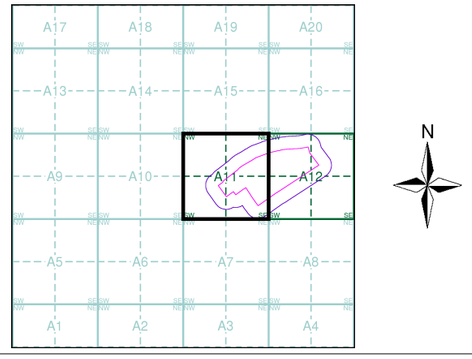
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A11



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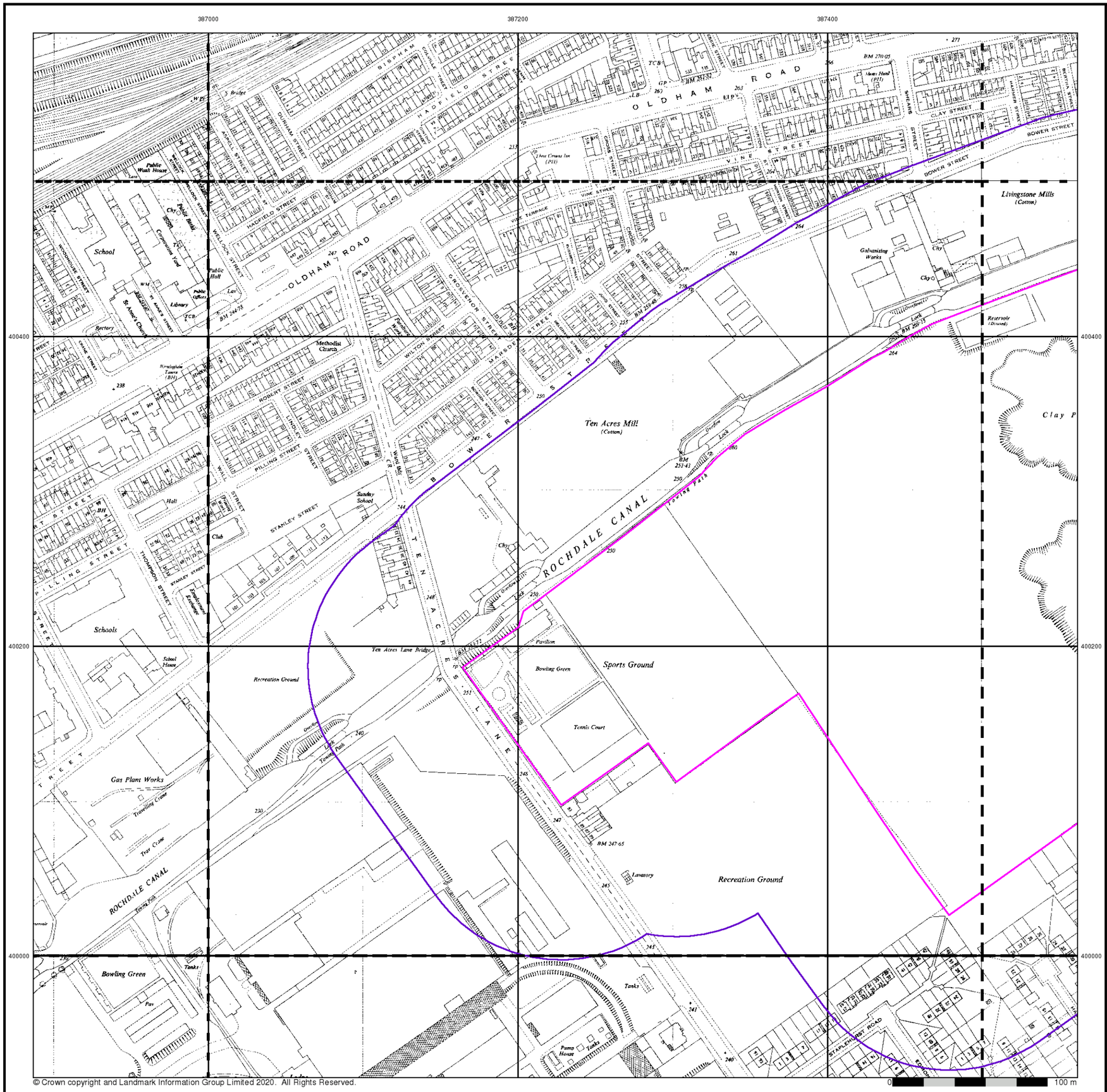

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Ordnance Survey Plan

Published 1948 - 1951

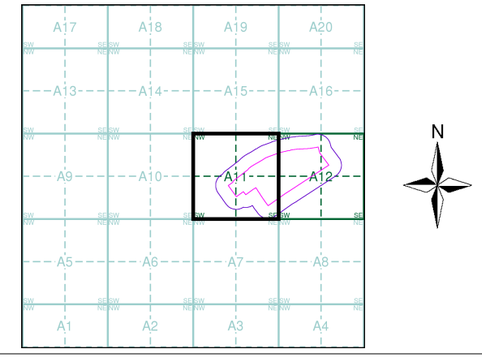
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD8600NE 1948 1:1,250	SD8700NW 1951 1:1,250	SD8700NE 1951 1:1,250
SD8600SE 1949 1:1,250	SD8700SW 1951 1:1,250	SD8700SE 1951 1:1,250
SJ8699NE 1949 1:1,250	SJ8799NW 1949 1:1,250	SJ8799NE 1949 1:1,250

Historical Map - Segment A11



Order Details

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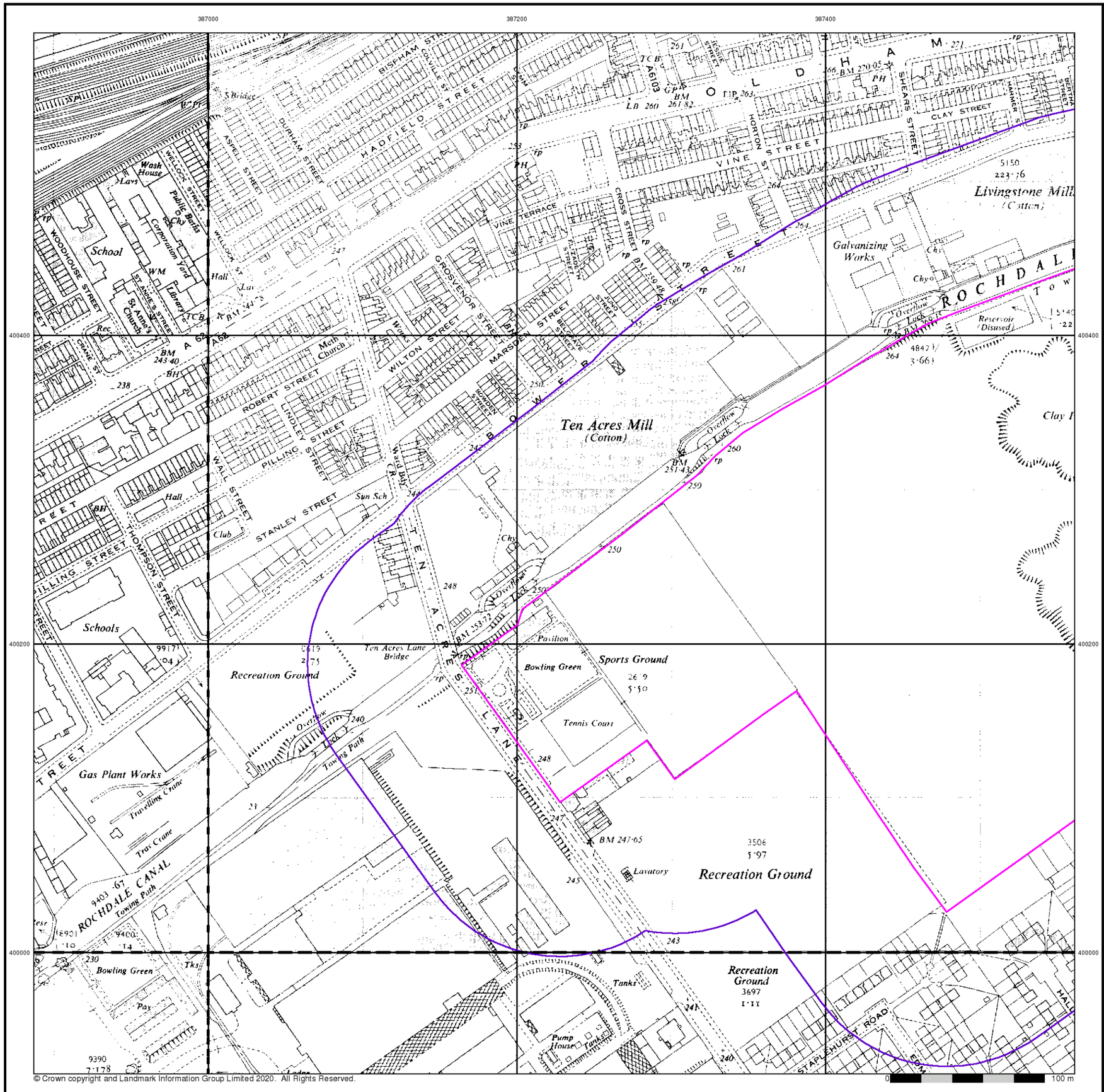

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Ordnance Survey Plan

Published 1951

Source map scale - 1:2,500

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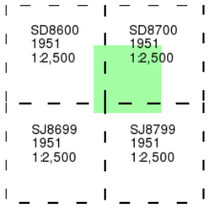
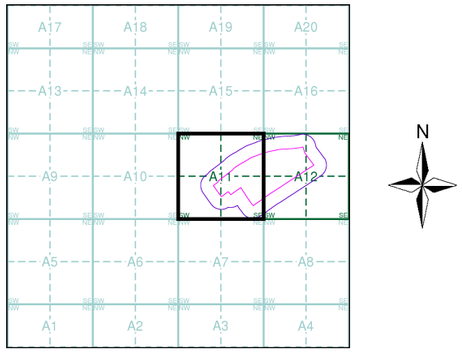
Map Name(s) and Date(s)



Historical Map - Segment A11



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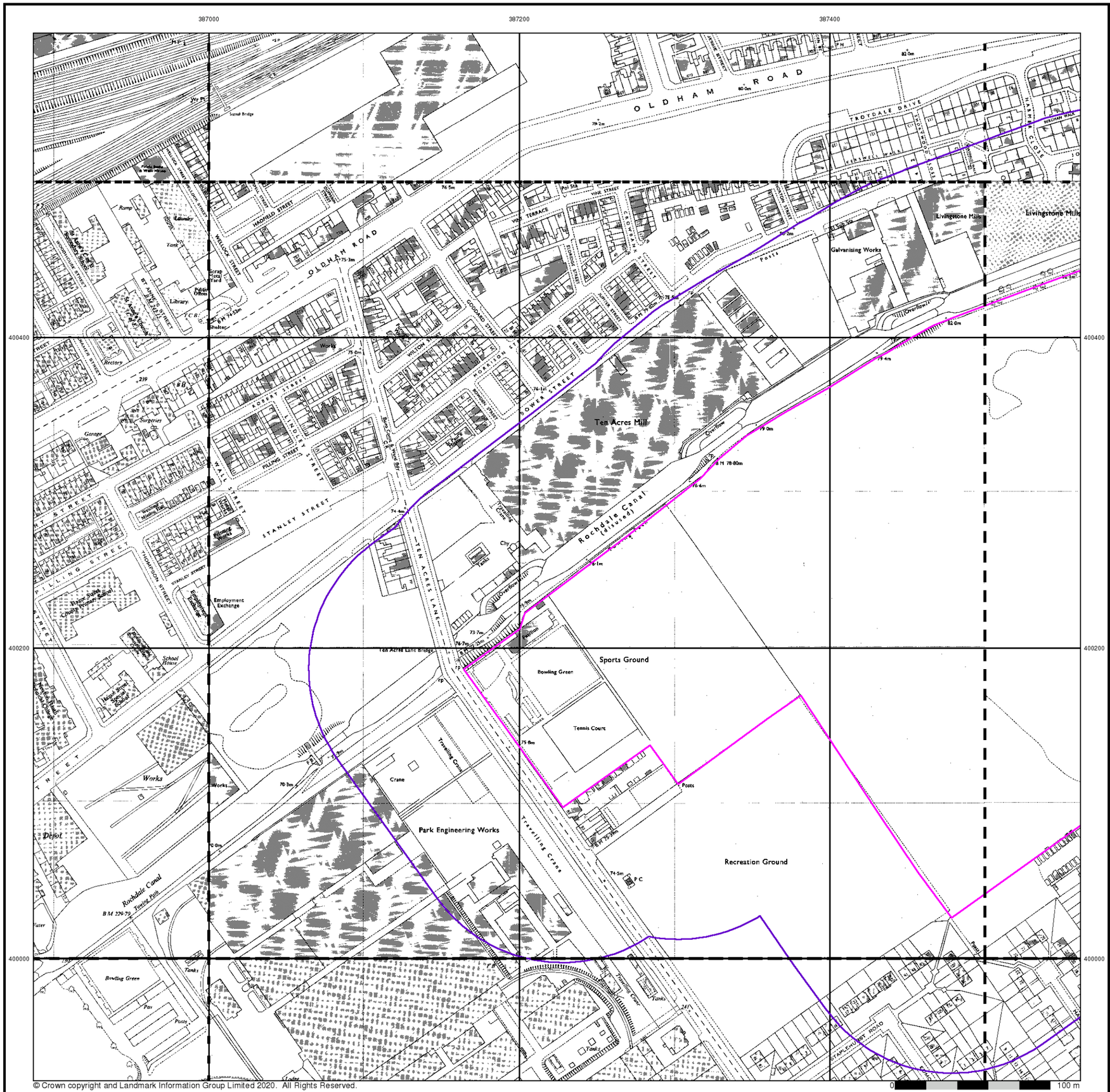

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Ordnance Survey Plan

Published 1953 - 1980

Source map scale - 1:1,250

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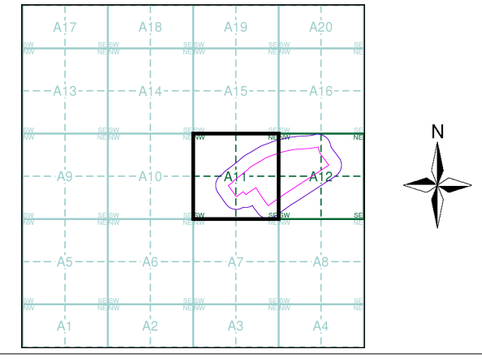
Map Name(s) and Date(s)

SD8600NE 1970 1:1,250	SD8700NW 1980 1:1,250	SD8700NE 1980 1:1,250
SD8600SE 1961 1:1,250	SD8700SW 1971 1:1,250	SD8700SE 1973 1:1,250
SJ8699NE 1953 1:1,250	SJ8799NW 1966 1:1,250	SJ8799NE 1966 1:1,250

Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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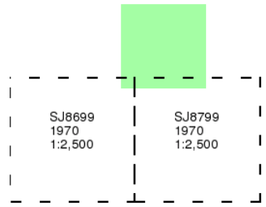
Ordnance Survey Plan

Published 1970

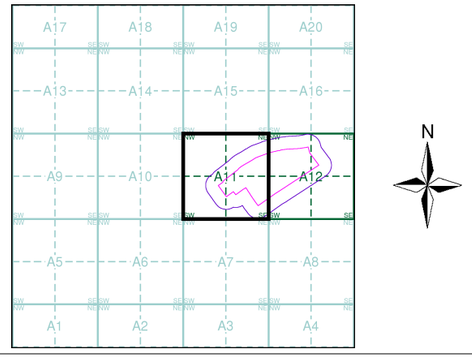
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A11



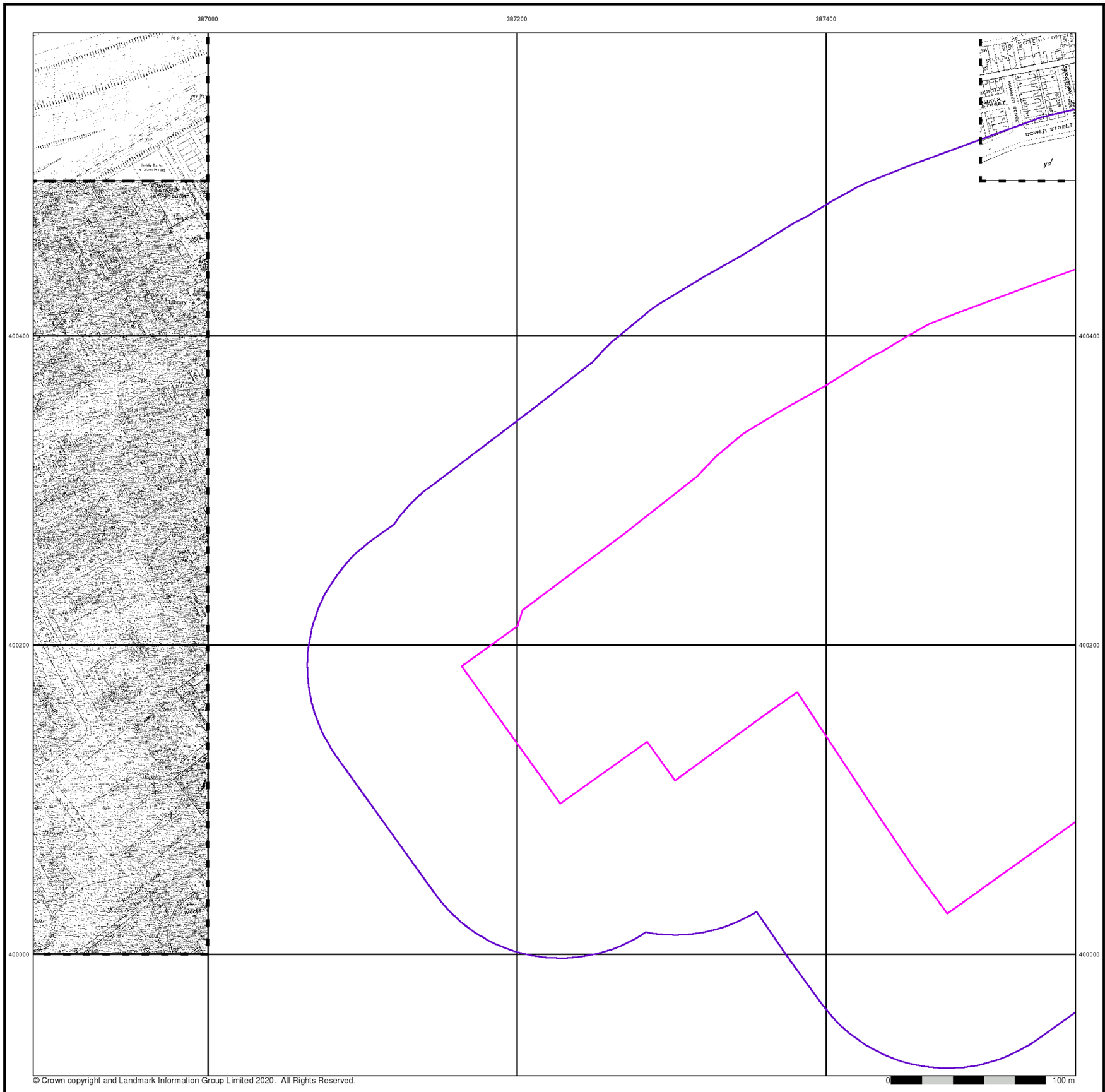
Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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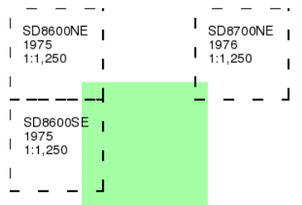
Supply of Unpublished Survey Information

Published 1975 - 1976

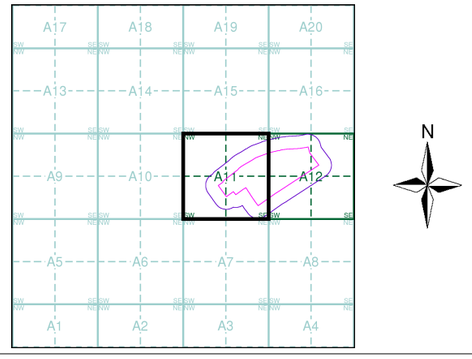
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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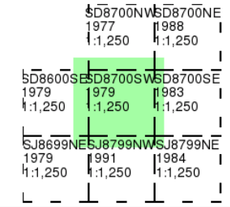
Additional SIMs

Published 1977 - 1991

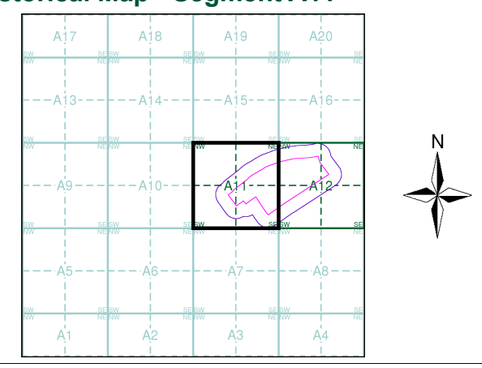
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



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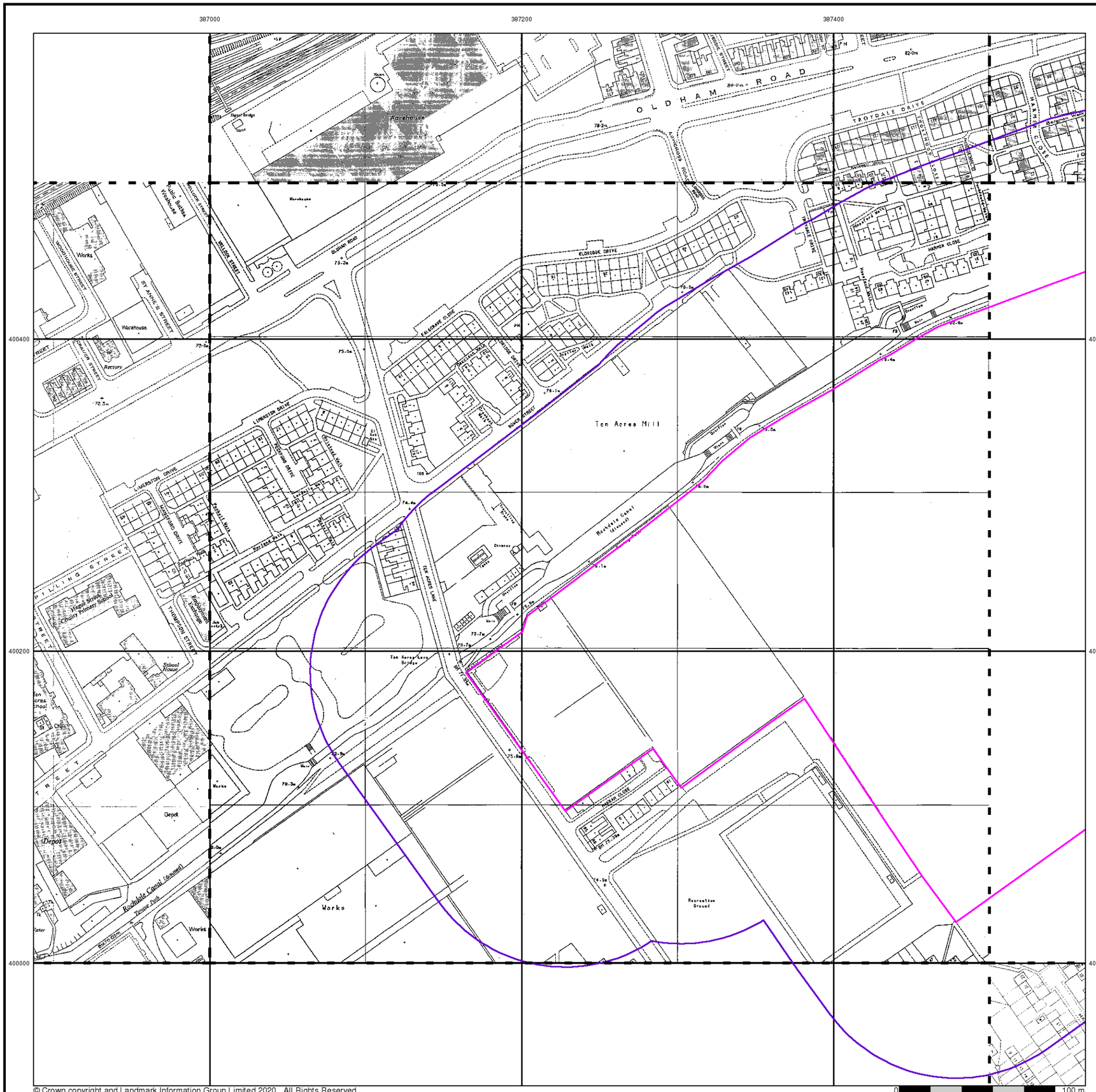

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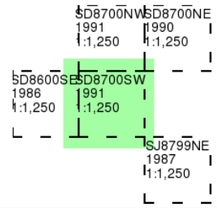
Additional SIMs

Published 1986 - 1991

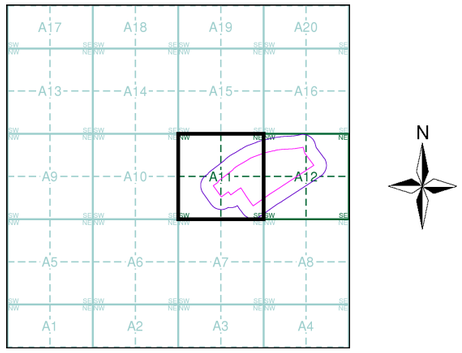
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
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Site at 387600, 400310

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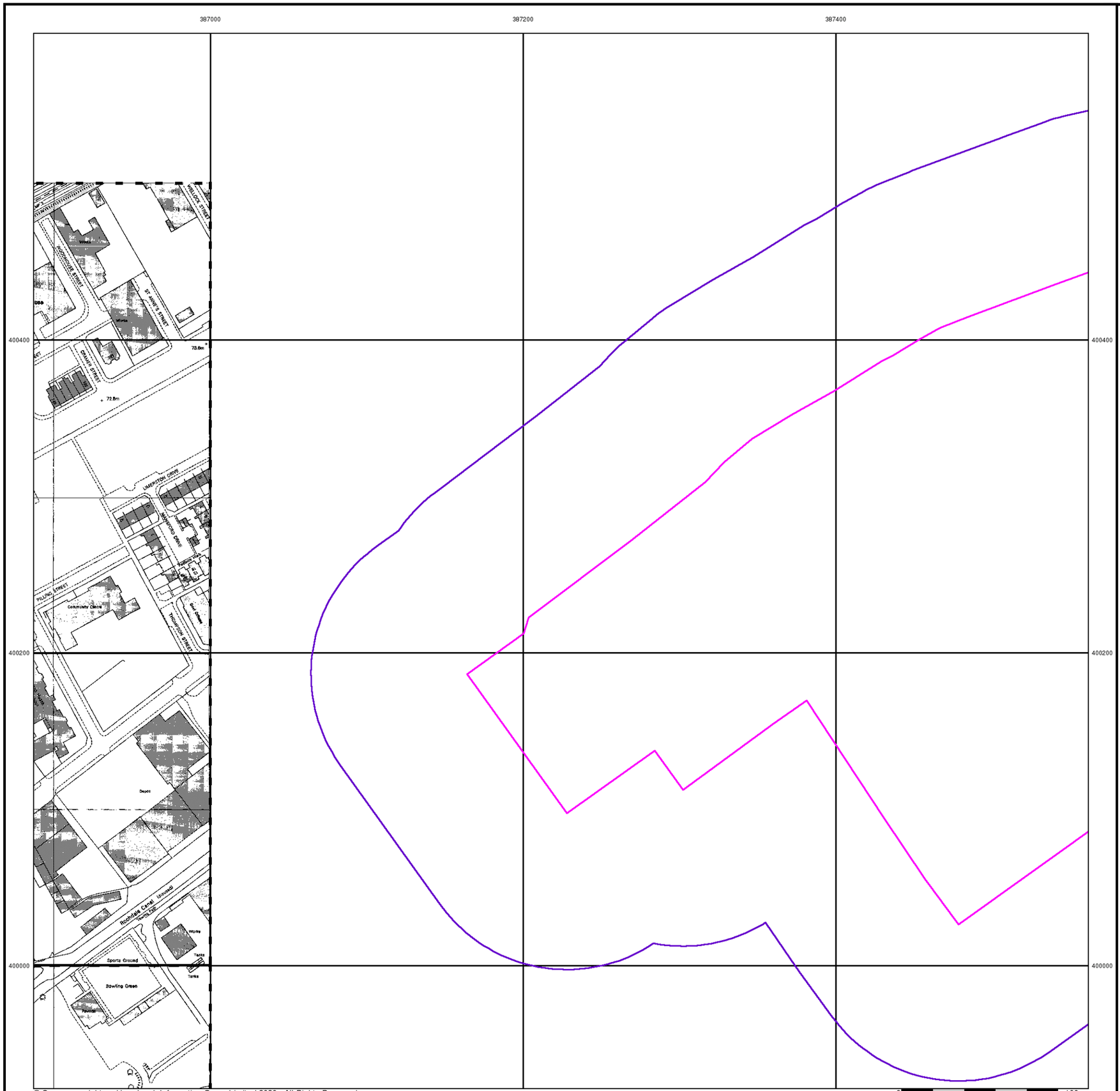

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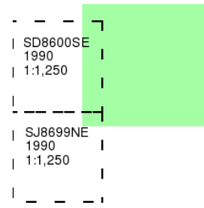
Ordnance Survey Plan

Published 1990

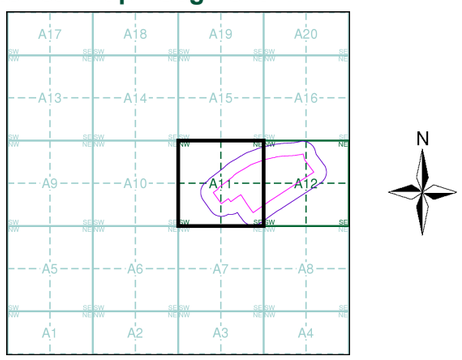
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
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Slice:	A
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Site Details

Site at 387600, 400310

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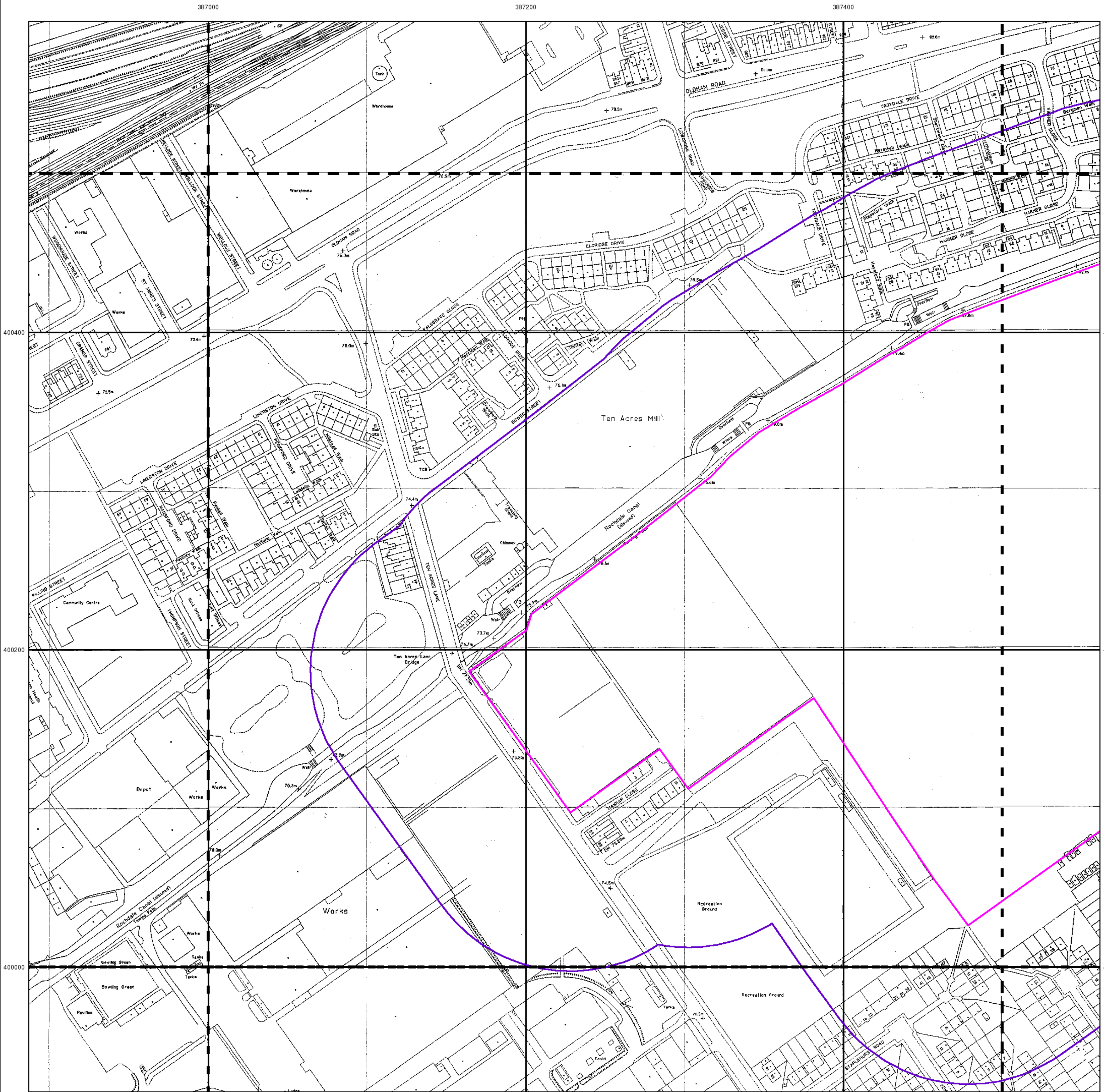

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0 100 m

Large-Scale National Grid Data

Published 1992

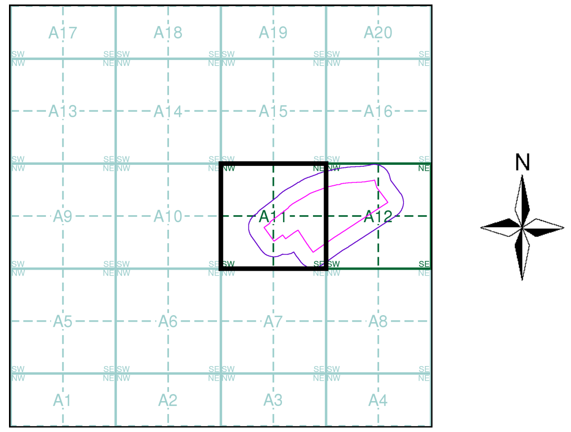
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8600NE 1992 1:1,250	SD8700NW 1992 1:1,250	SD8700NE 1992 1:1,250
SD8600SE 1992 1:1,250	SD8700SW 1992 1:1,250	SD8700SE 1992 1:1,250
SJ8699NE 1992 1:1,250	SJ8799NW 1992 1:1,250	SJ8799NE 1992 1:1,250

Historical Map - Segment A11



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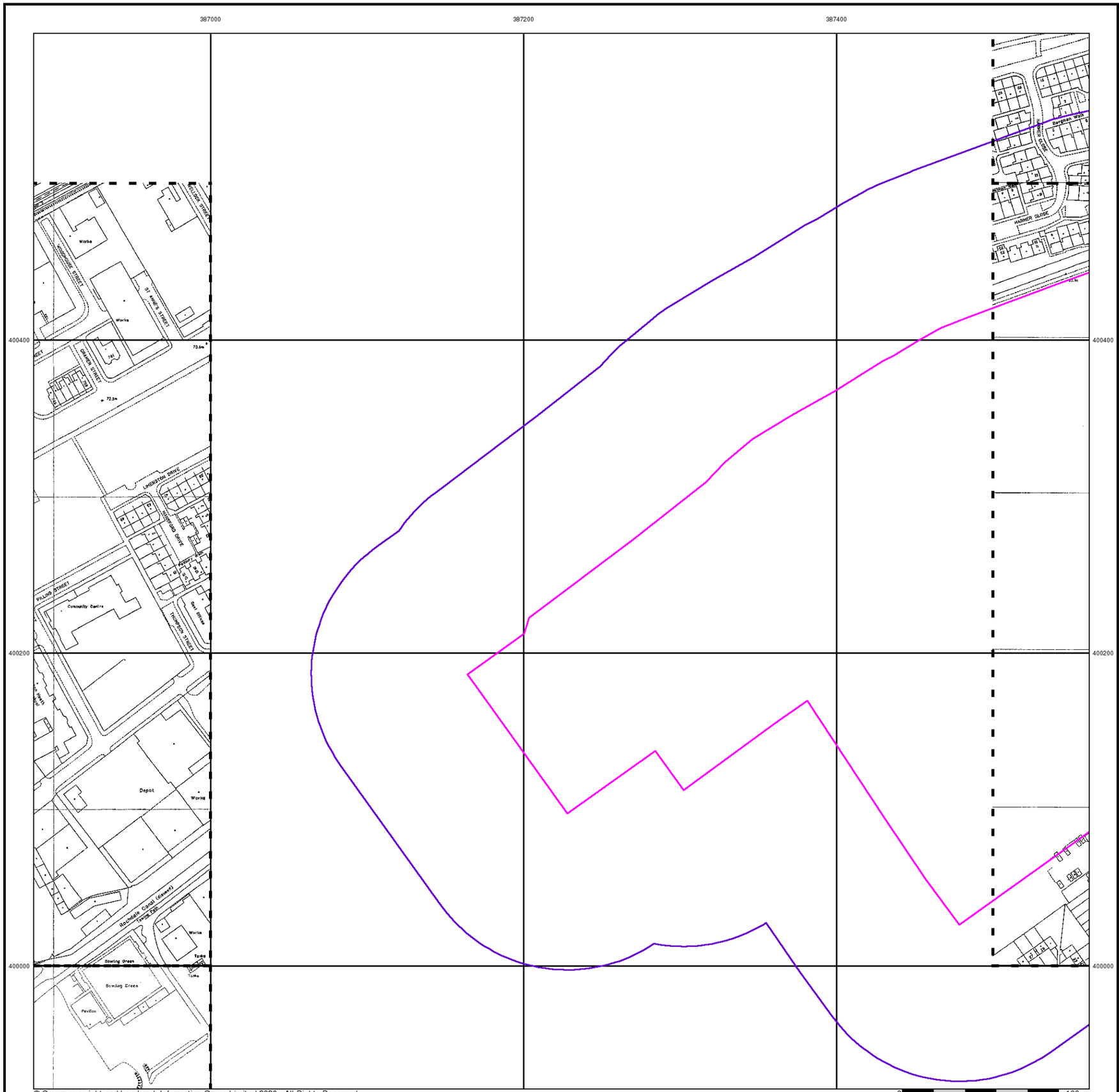


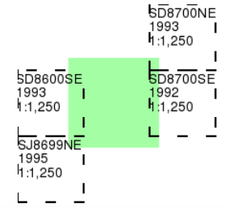
Large-Scale National Grid Data

Published 1992 - 1995

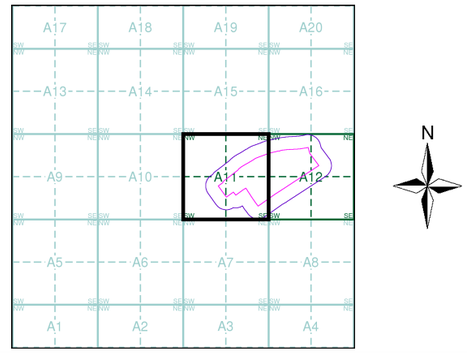
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



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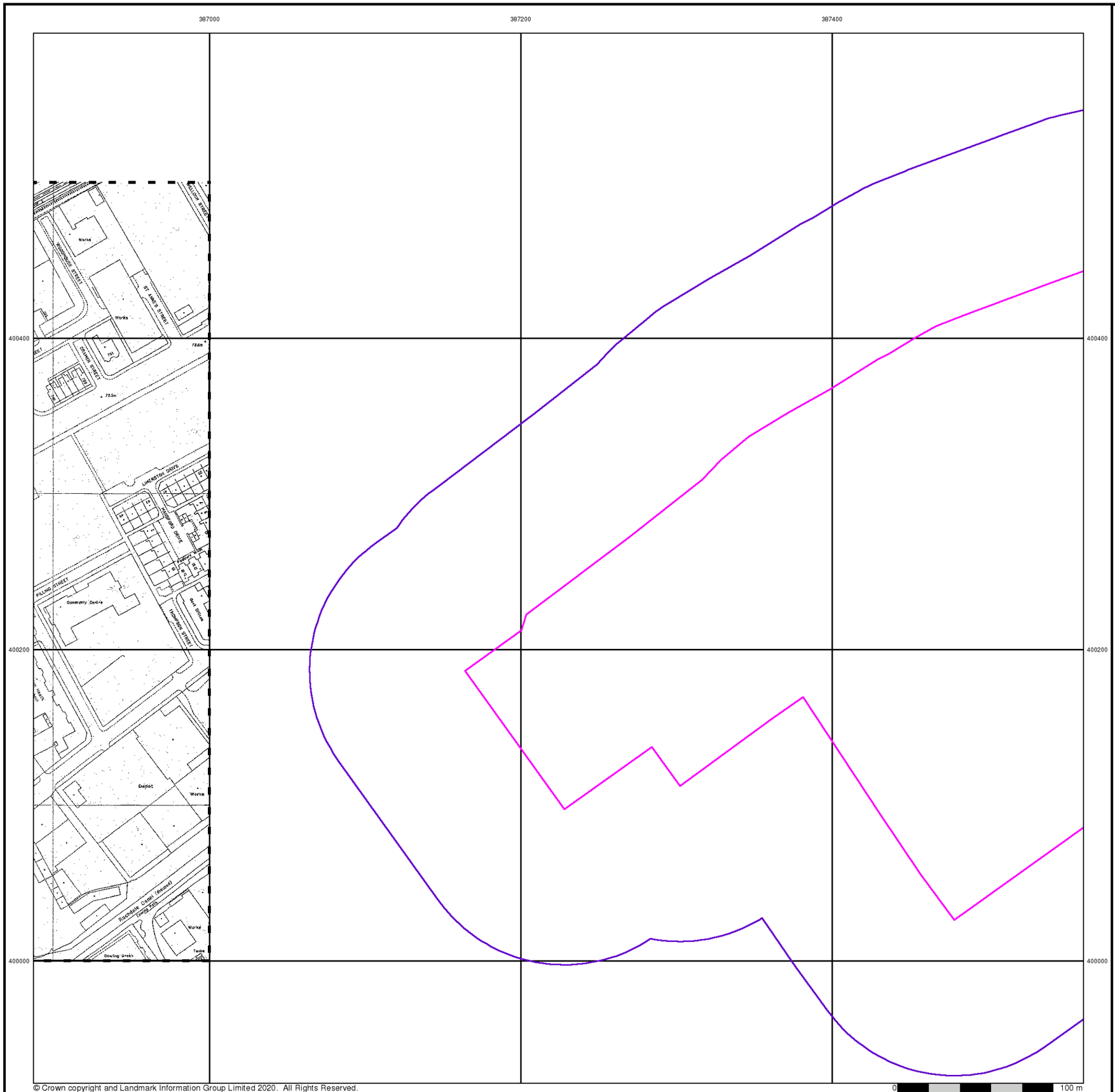

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0 100 m

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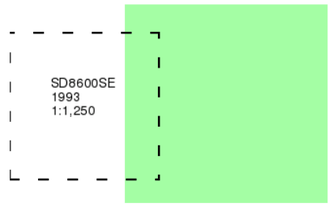
Large-Scale National Grid Data

Published 1993

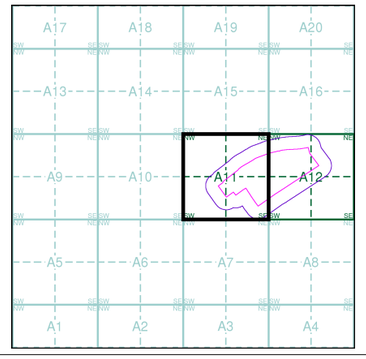
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	267713911_1_1
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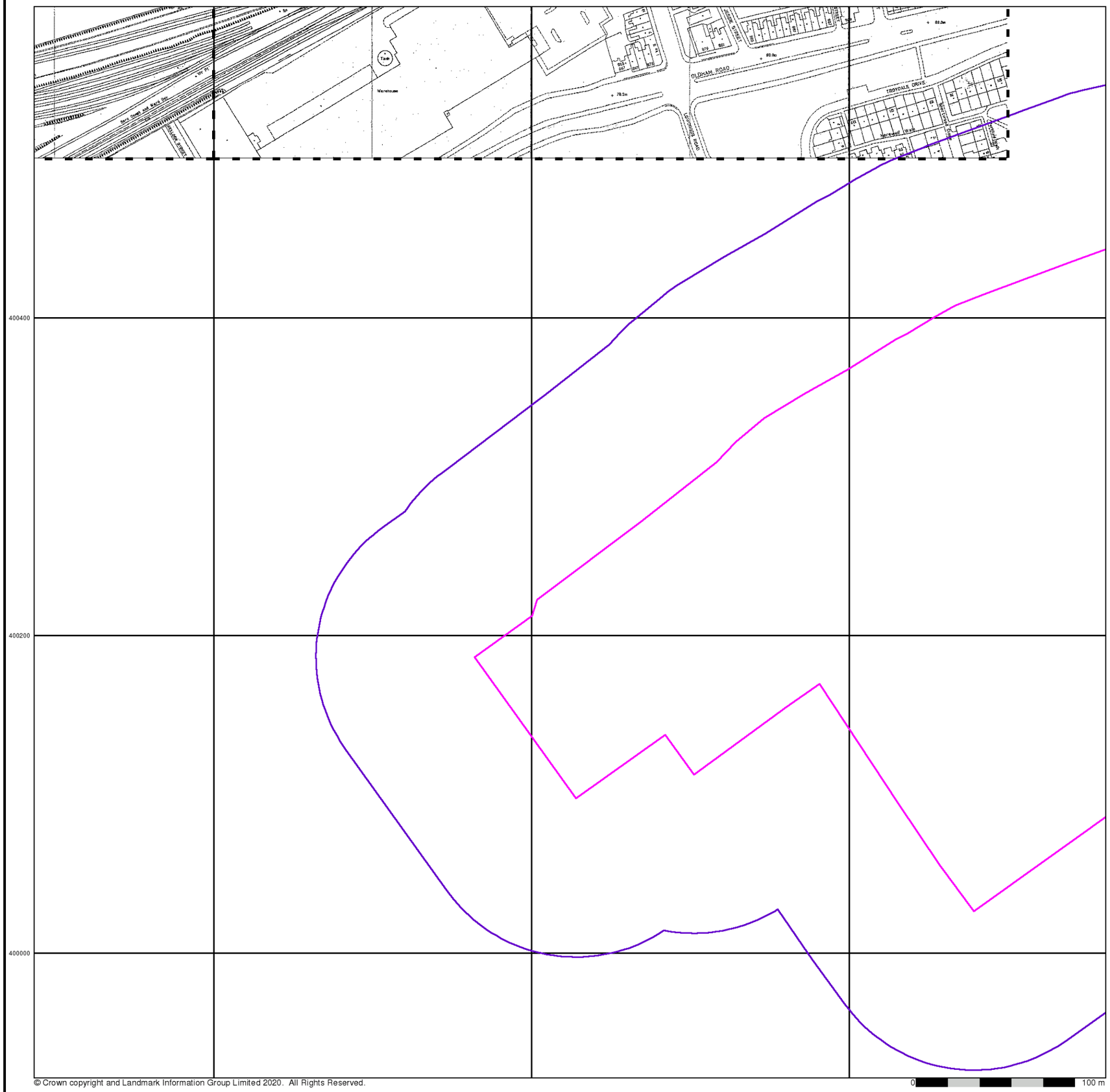

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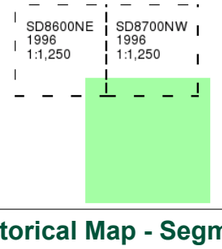
Large-Scale National Grid Data

Published 1996

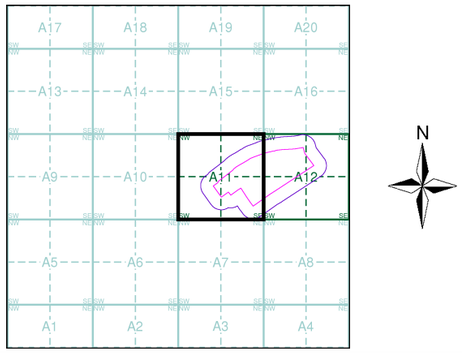
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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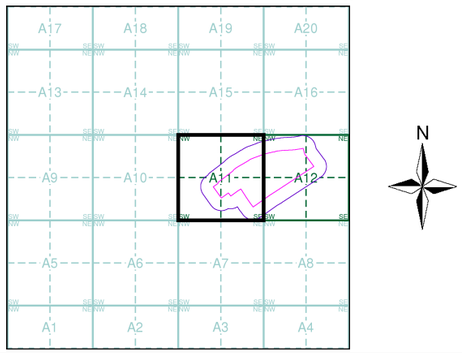
Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A11



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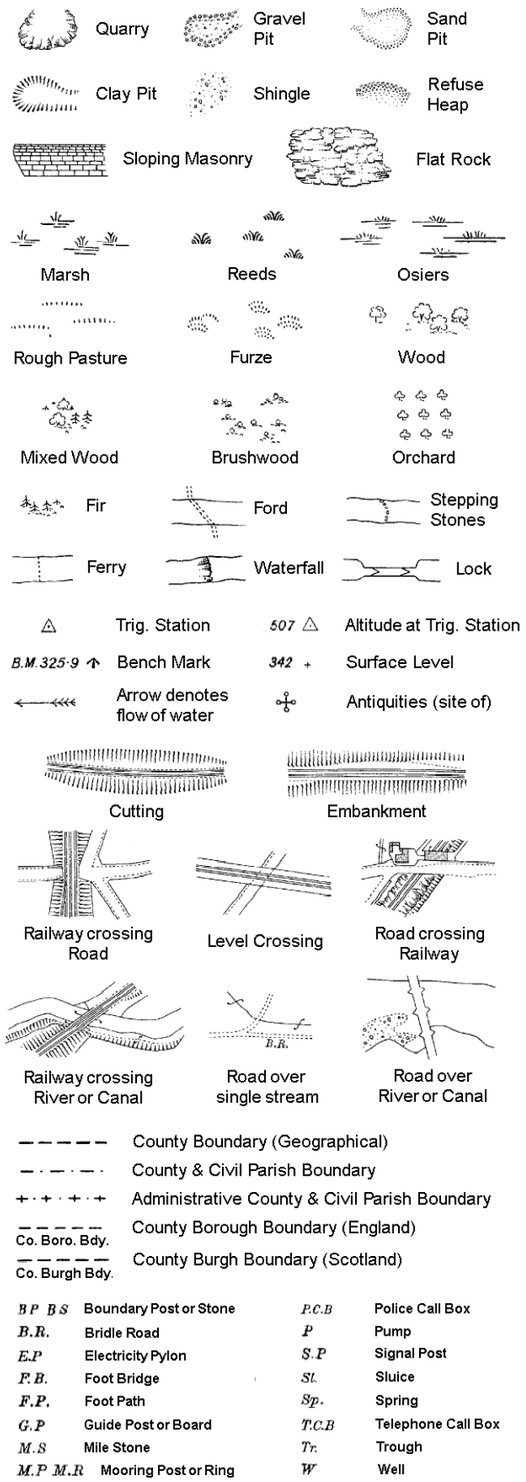
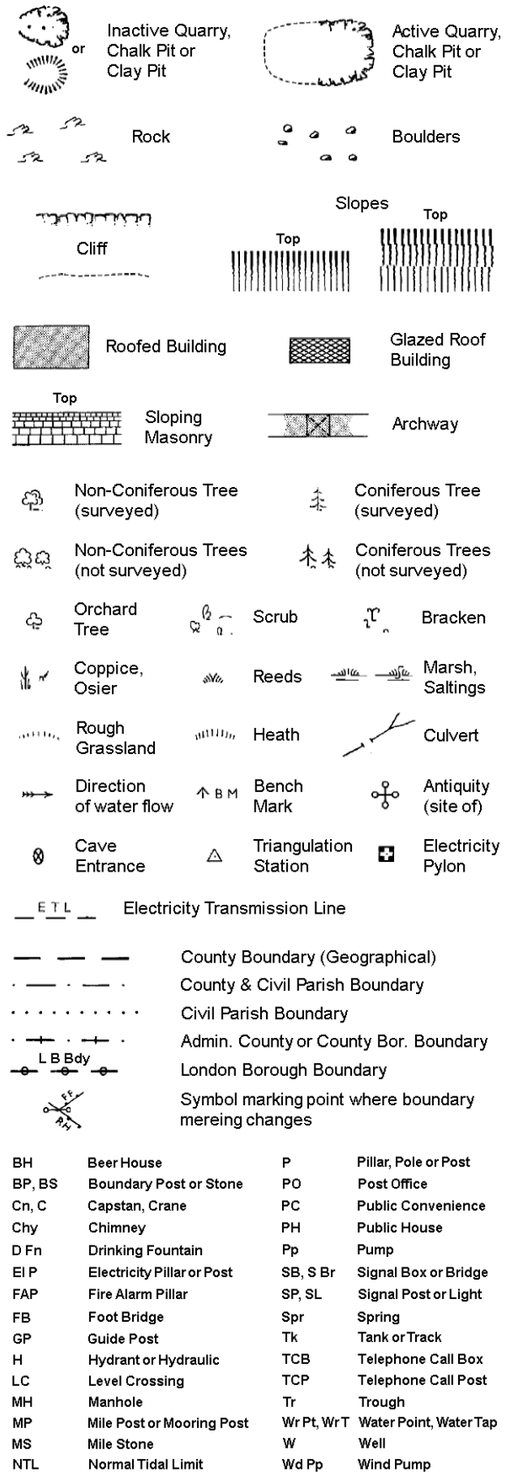
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



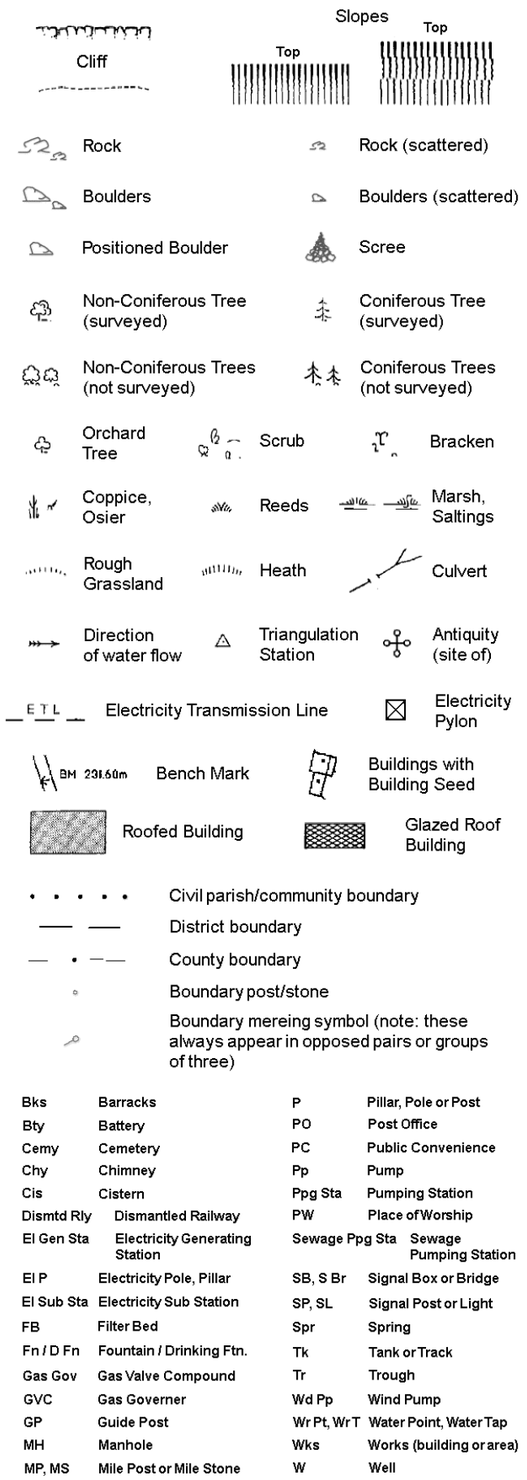
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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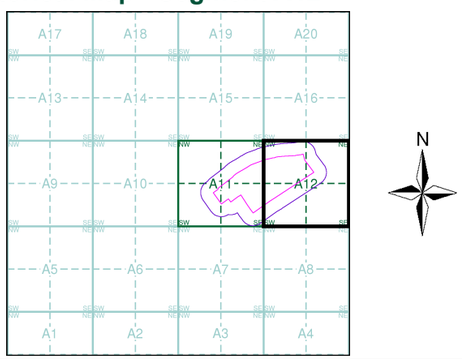
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1908	3
Lancashire And Furness	1:2,500	1931	4
Ordnance Survey Plan	1:1,250	1949 - 1951	5
Ordnance Survey Plan	1:2,500	1951 - 1952	6
Ordnance Survey Plan	1:1,250	1953 - 1980	7
Ordnance Survey Plan	1:2,500	1967	8
Ordnance Survey Plan	1:2,500	1969 - 1970	9
Supply of Unpublished Survey Information	1:1,250	1975 - 1976	10
Additional SIMs	1:1,250	1979 - 1988	11
Additional SIMs	1:1,250	1980 - 1990	12
Ordnance Survey Plan	1:1,250	1981 - 1989	13
Additional SIMs	1:1,250	1986 - 1987	14
Large-Scale National Grid Data	1:1,250	1992	15
Large-Scale National Grid Data	1:1,250	1992 - 1993	16
Large-Scale National Grid Data	1:1,250	1993 - 1994	17
Large-Scale National Grid Data	1:1,250	1994	18
Historical Aerial Photography	1:2,500	2000	19

Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
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Slice:	A
Site Area (Ha):	18.51
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Site Details

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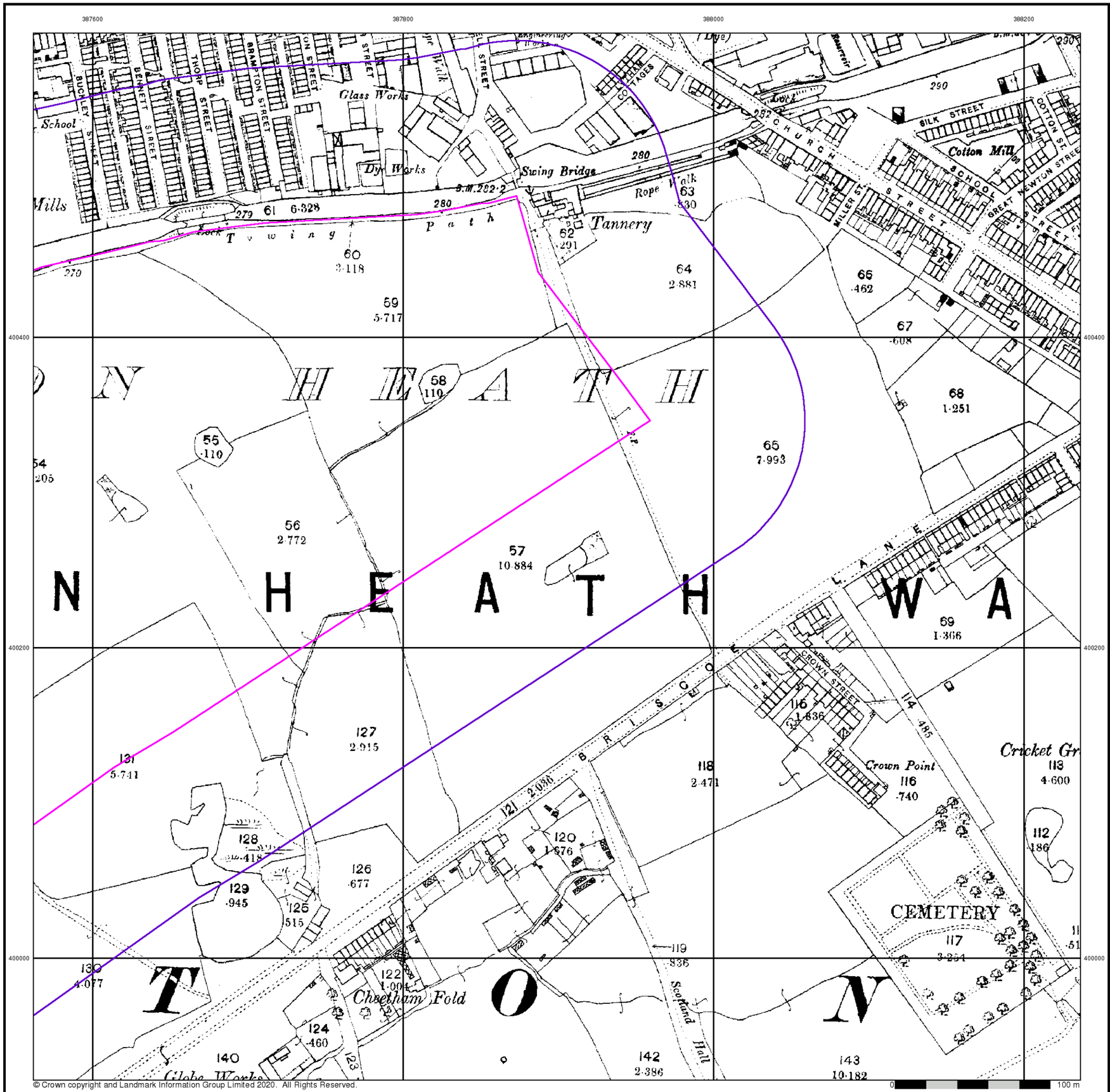


wardell armstrong

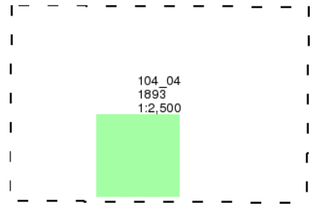
Lancashire And Furness

Published 1893

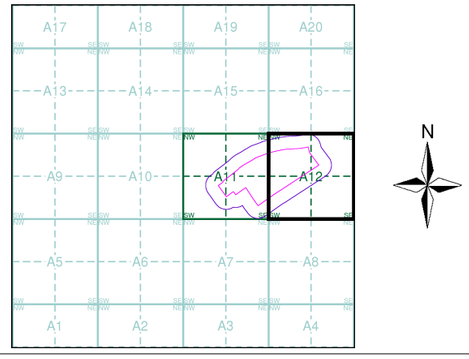
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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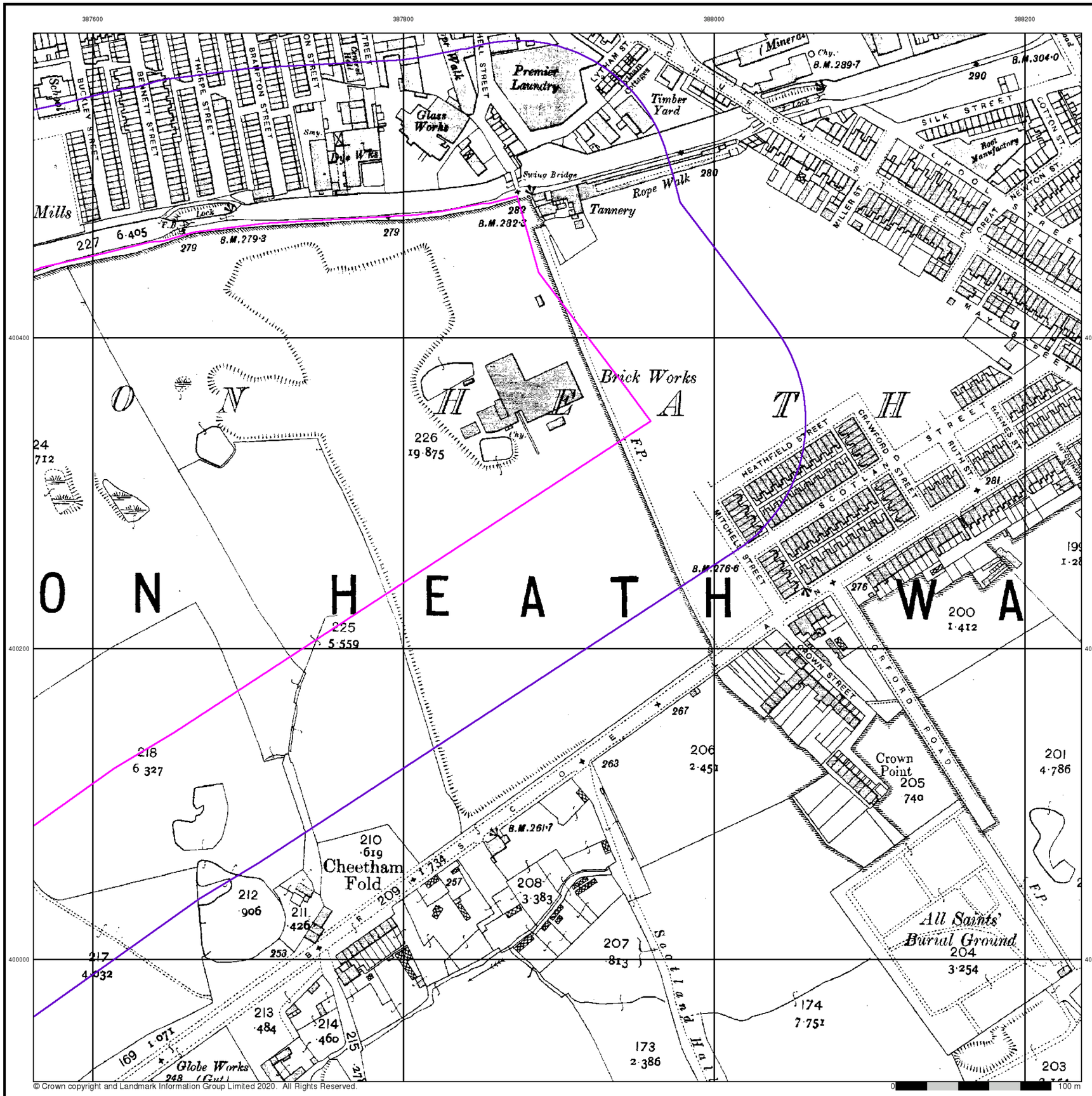


wardell armstrong

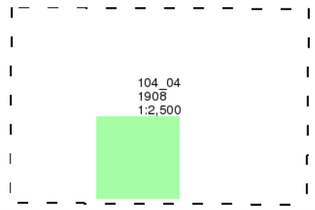
Lancashire And Furness

Published 1908

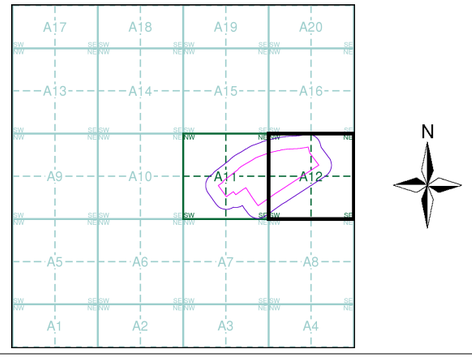
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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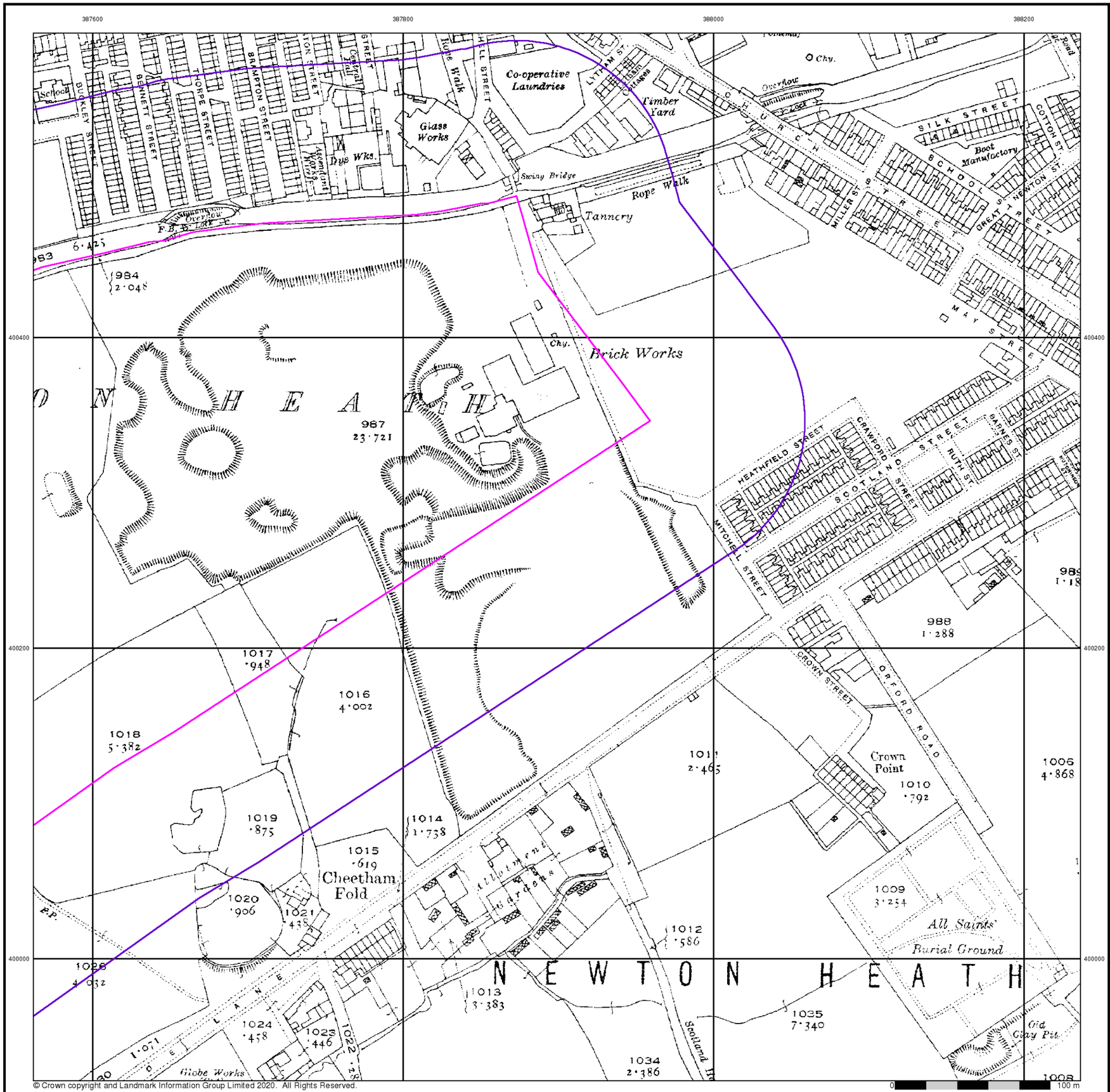

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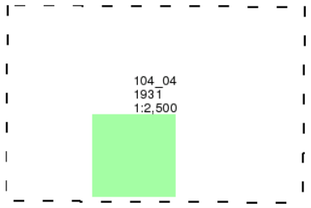
Lancashire And Furness

Published 1931

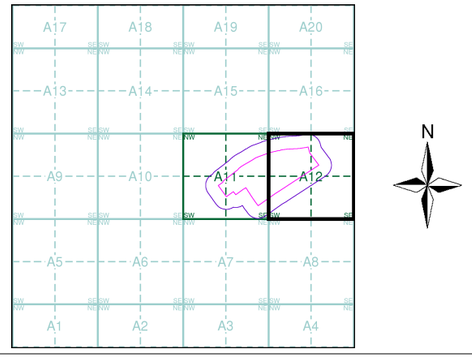
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12

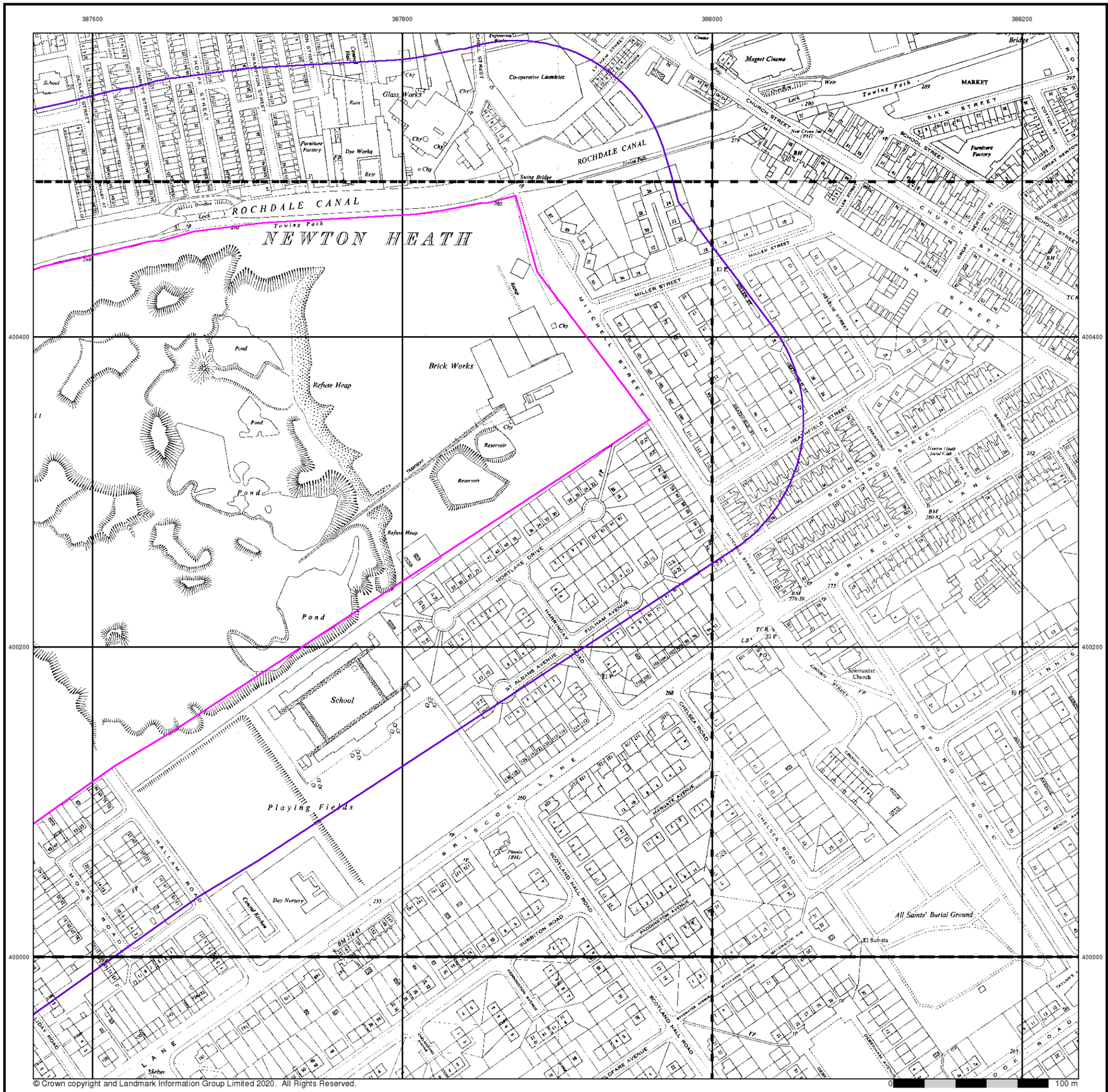


Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310



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Ordnance Survey Plan

Published 1949 - 1951

Source map scale - 1:1,250

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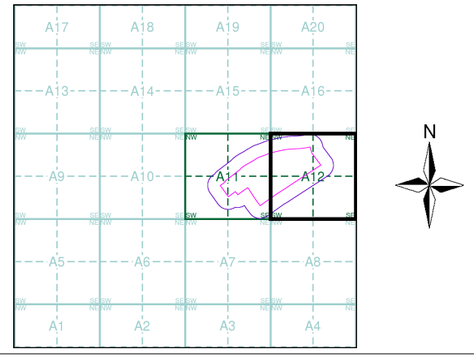
Map Name(s) and Date(s)

SD8700NE 1951 1:1,250	SD8800NW 1951 1:1,250
SD8700SE 1951 1:1,250	SD8800SW 1951 1:1,250
SJ8799NE 1949 1:1,250	SJ8899NW 1951 1:1,250

Historical Map - Segment A12

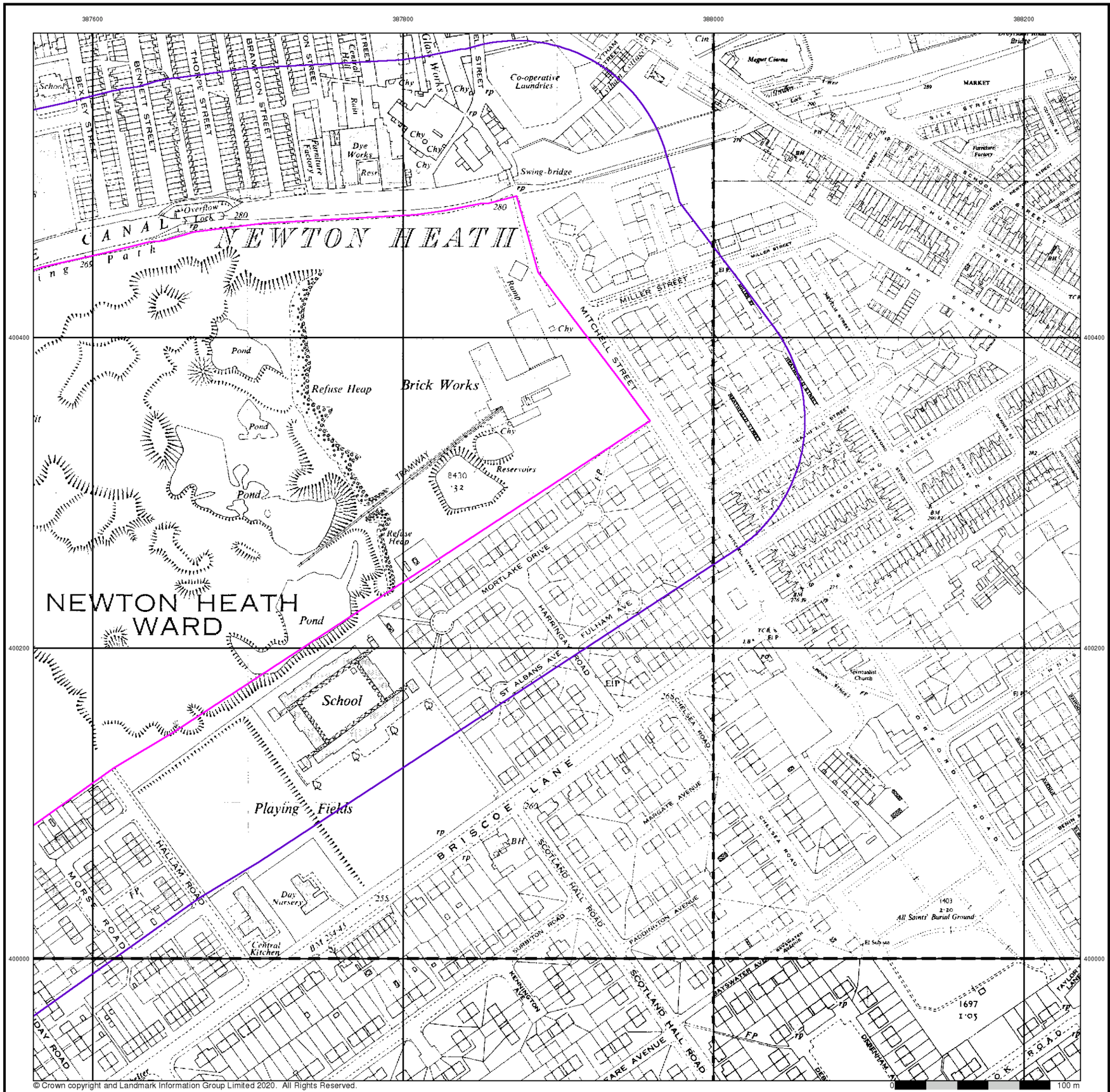


Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310



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Ordnance Survey Plan

Published 1951 - 1952

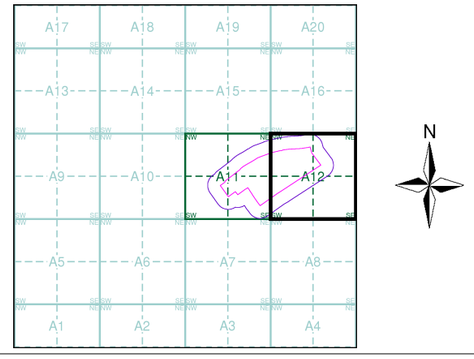
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD8700 1951 1:2,500	SD8800 1952 1:2,500
SJ8799 1951 1:2,500	SJ8899 1952 1:2,500

Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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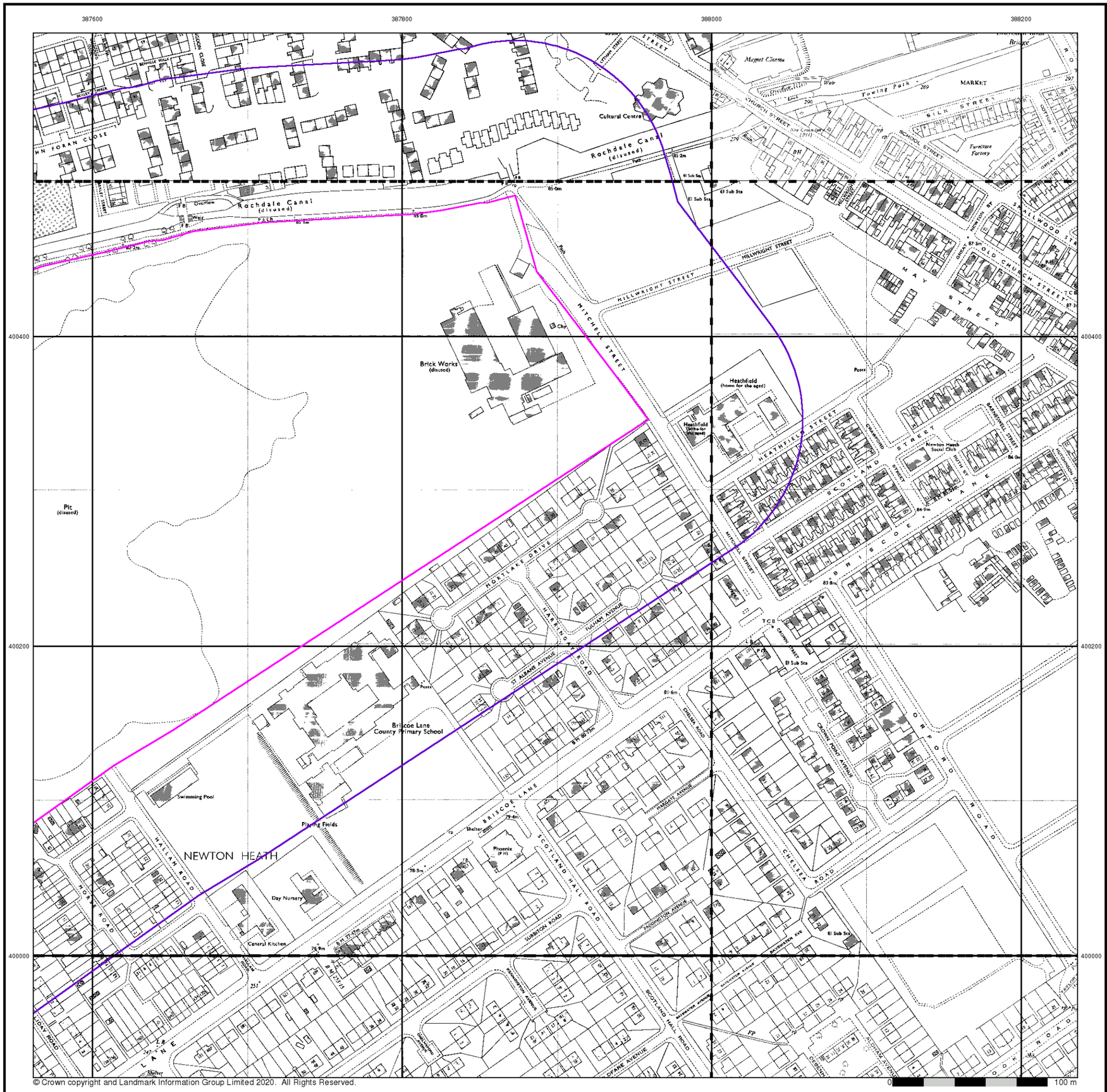

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Ordnance Survey Plan

Published 1953 - 1980

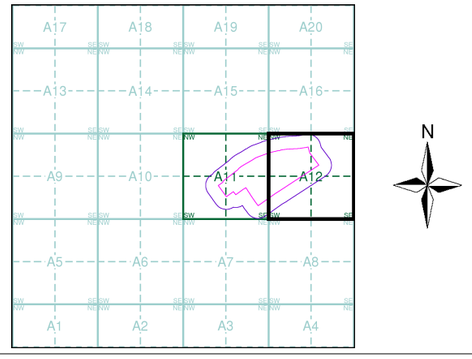
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD8700NE 1980 1:1,250
SD8800NW 1953 1:1,250
SD8700SE 1973 1:1,250
SD8800SW 1972 1:1,250
SJ8799NE 1966 1:1,250
SJ8899NW 1960 1:1,250

Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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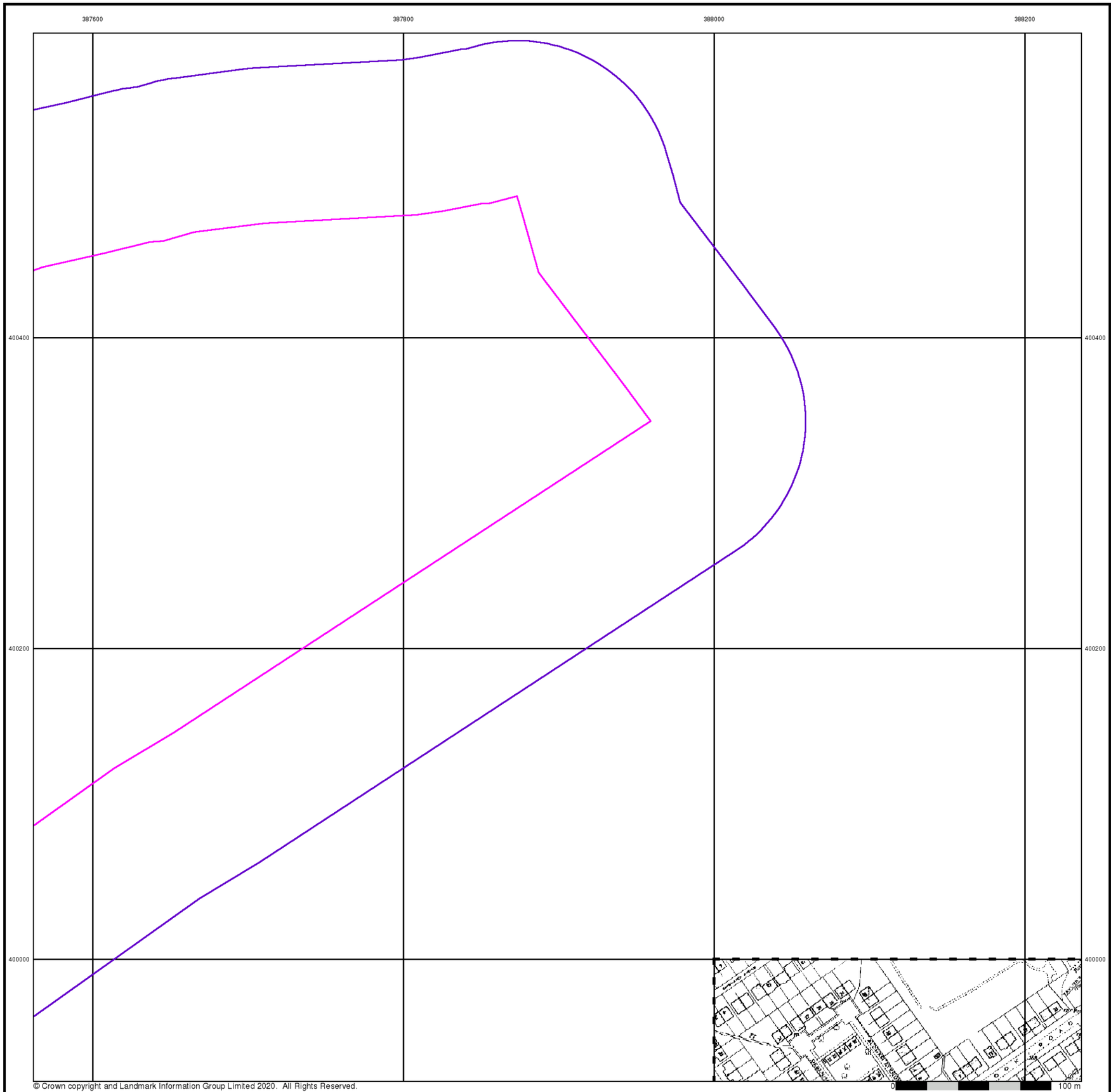

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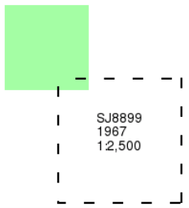
Ordnance Survey Plan

Published 1967

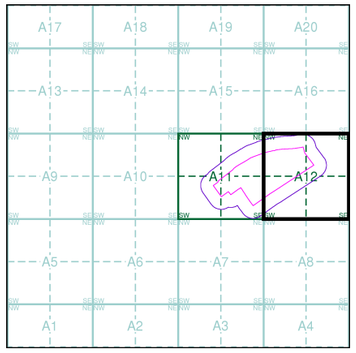
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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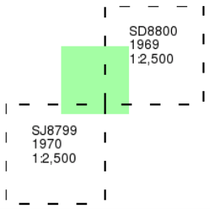
Ordnance Survey Plan

Published 1969 - 1970

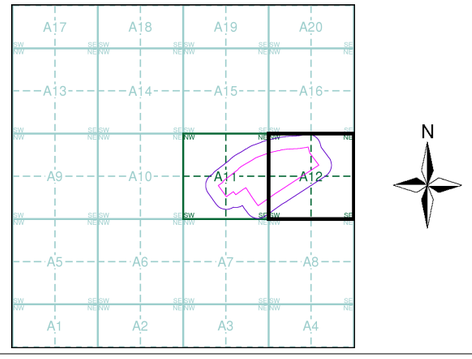
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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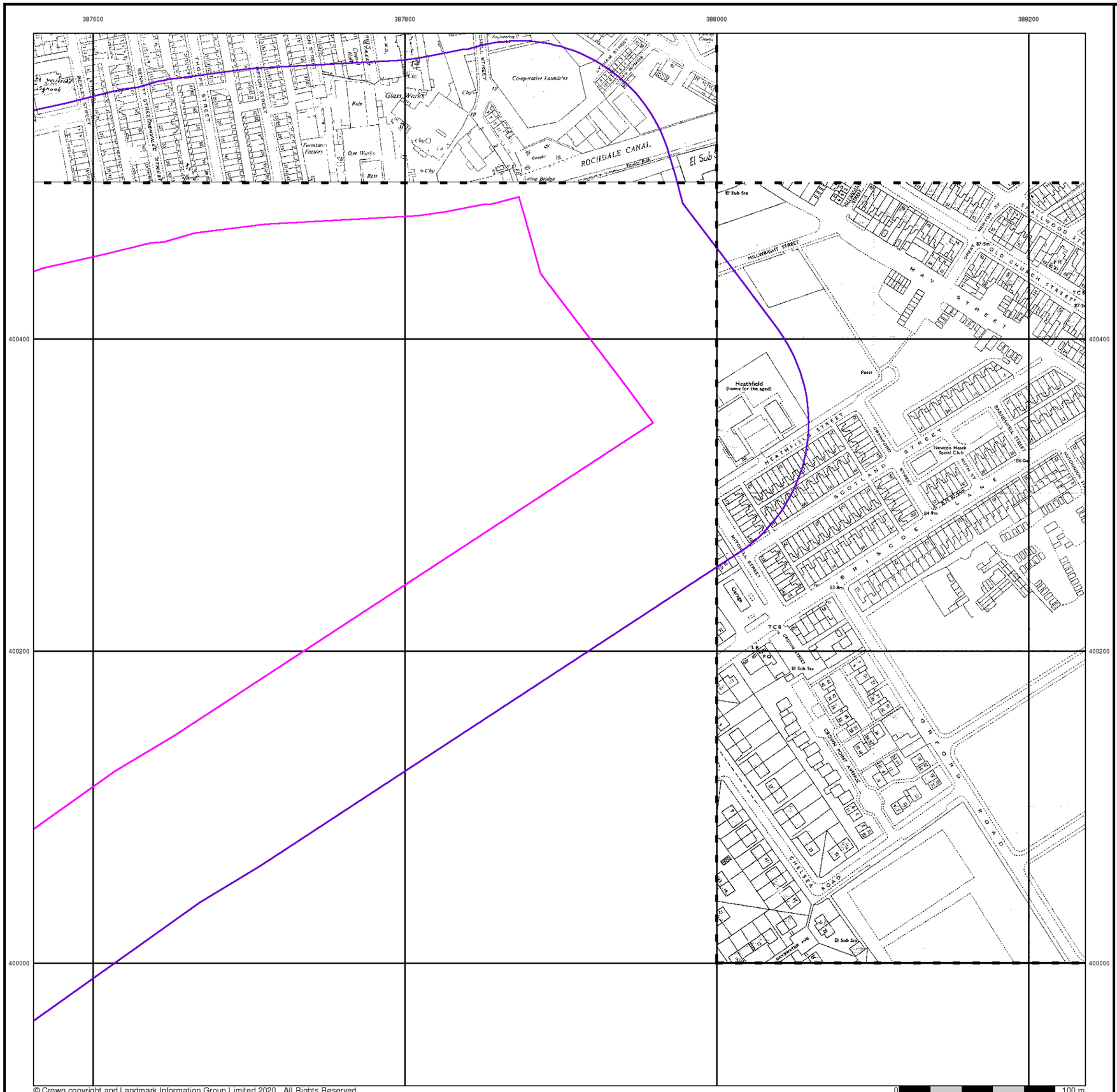

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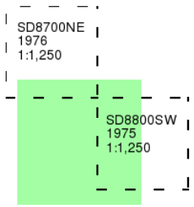
Supply of Unpublished Survey Information

Published 1975 - 1976

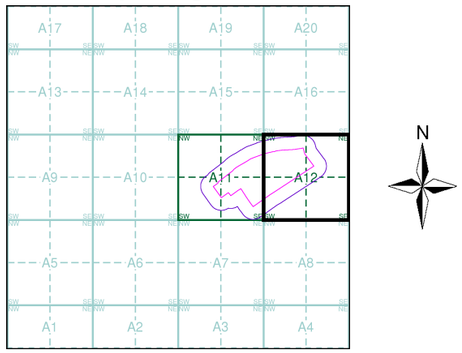
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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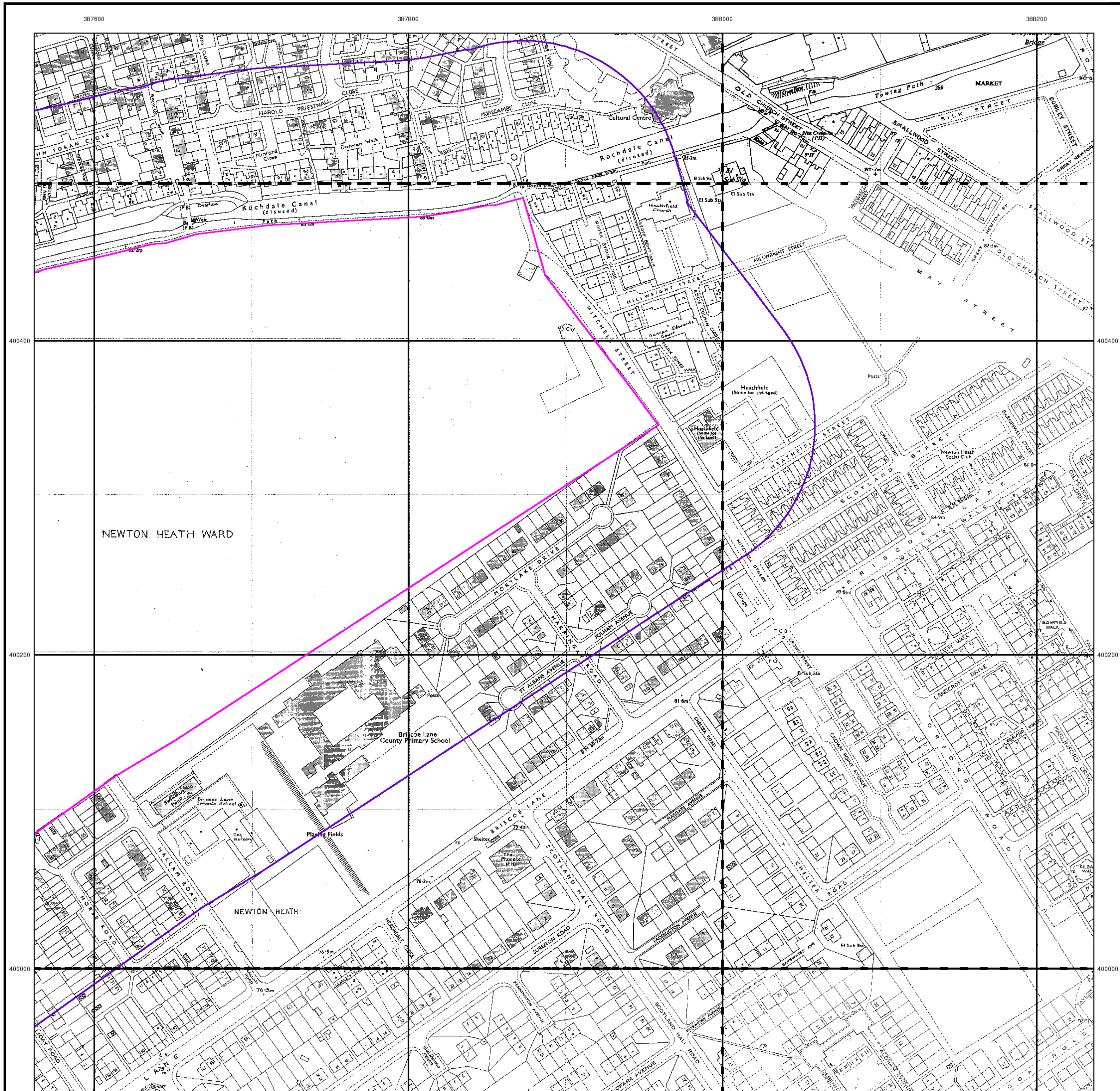

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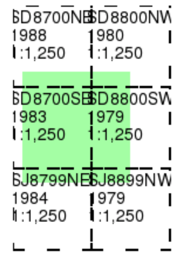
Additional SIMs

Published 1979 - 1988

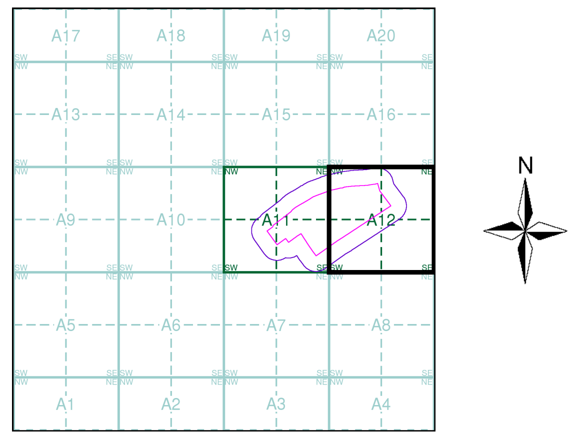
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 100

Site Details

Site at 387600, 400310

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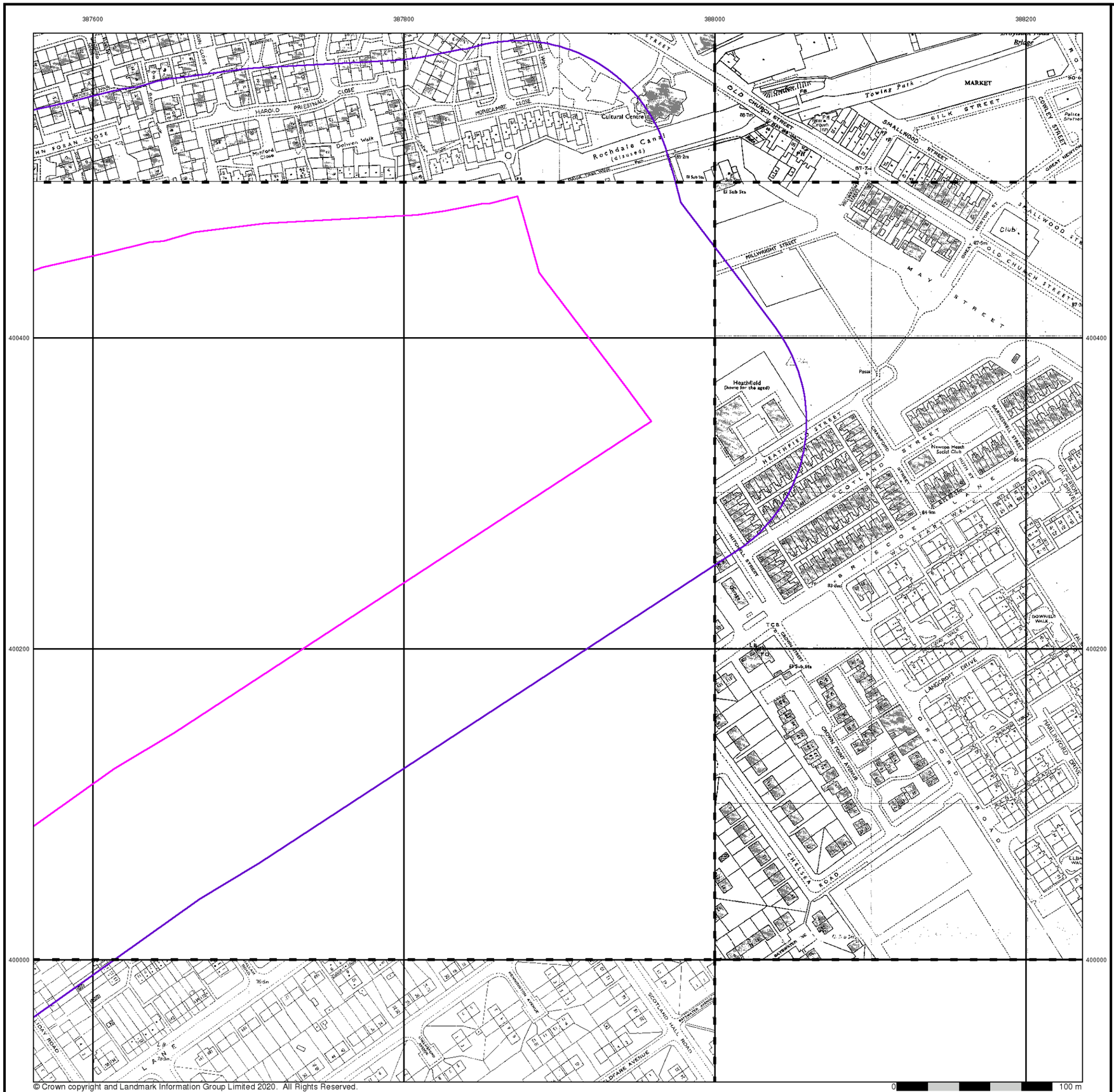
Web: www.envirocheck.co.uk



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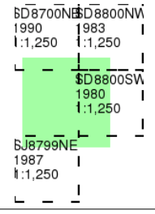
Additional SIMs

Published 1980 - 1990

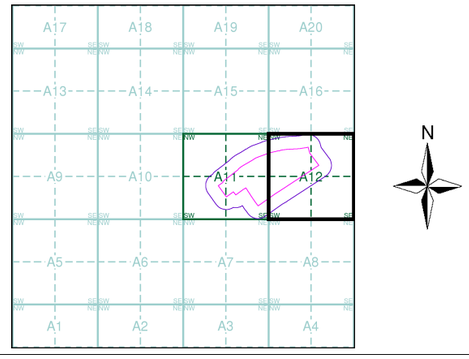
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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Ordnance Survey Plan

Published 1981 - 1989

Source map scale - 1:1,250

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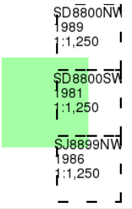
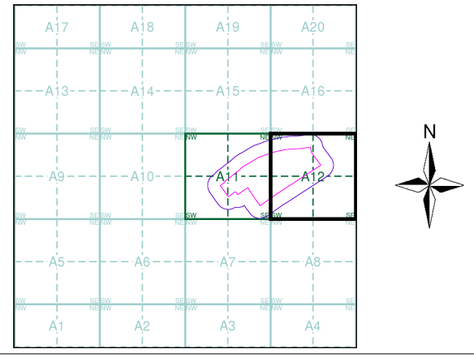
Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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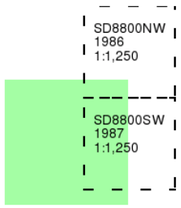
Additional SIMs

Published 1986 - 1987

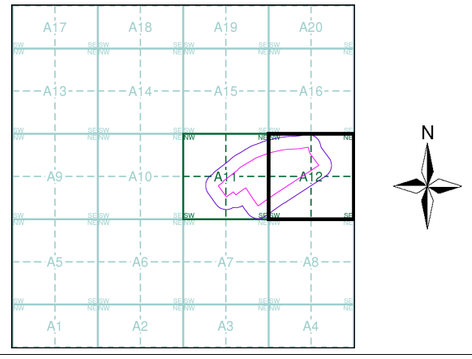
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



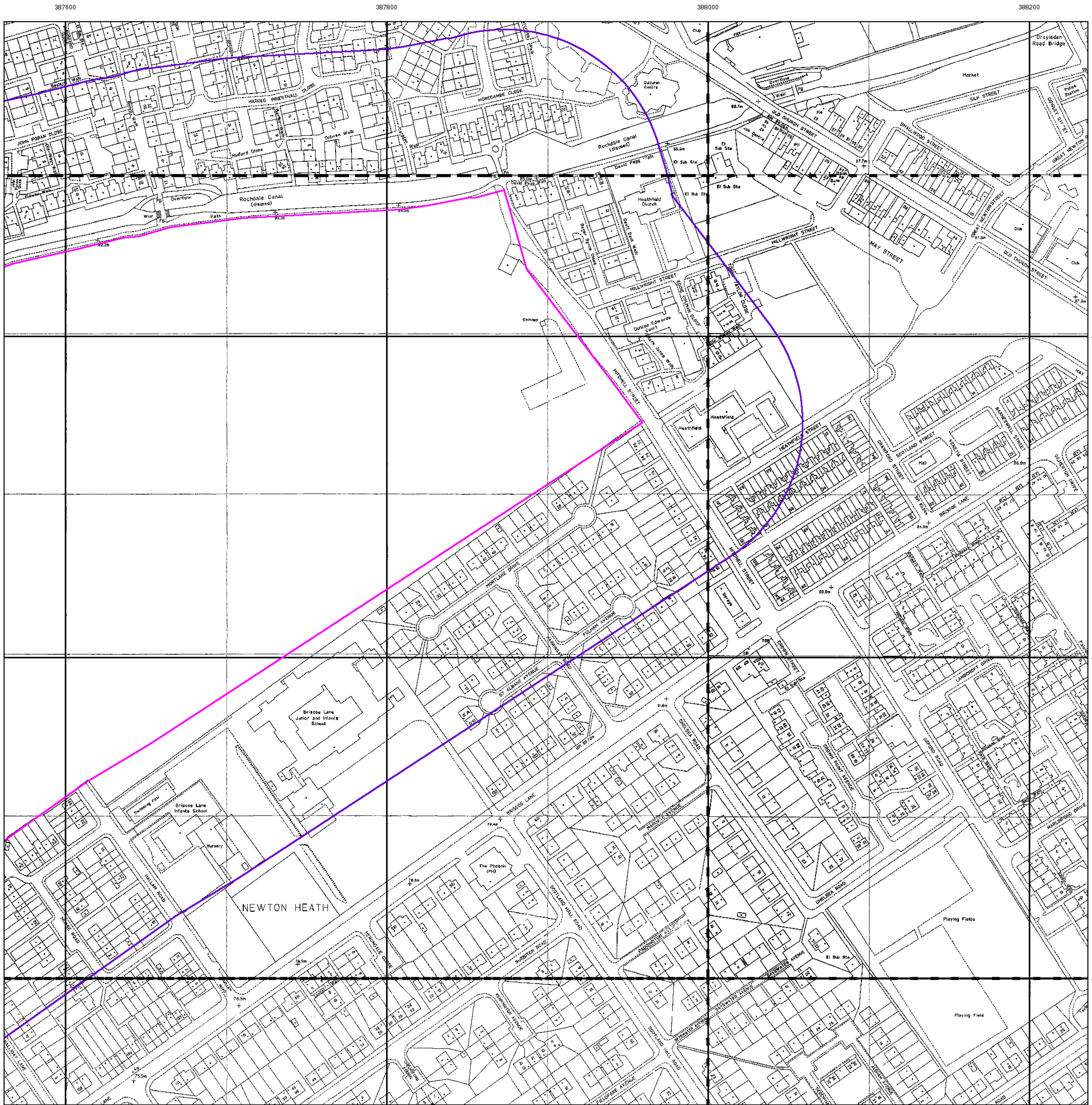
Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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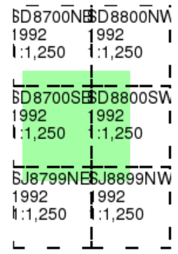
Large-Scale National Grid Data

Published 1992

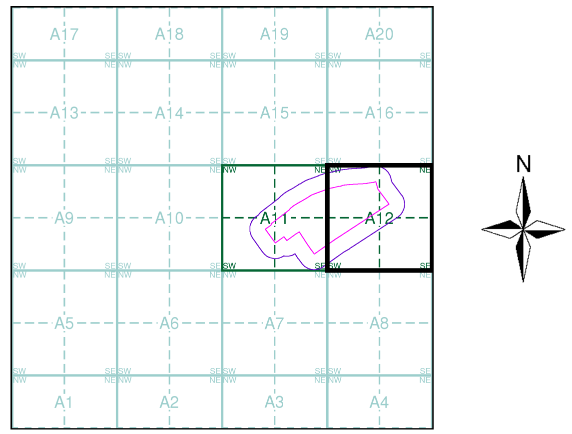
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number: 267713911_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 100

Site Details

Site at 387600, 400310

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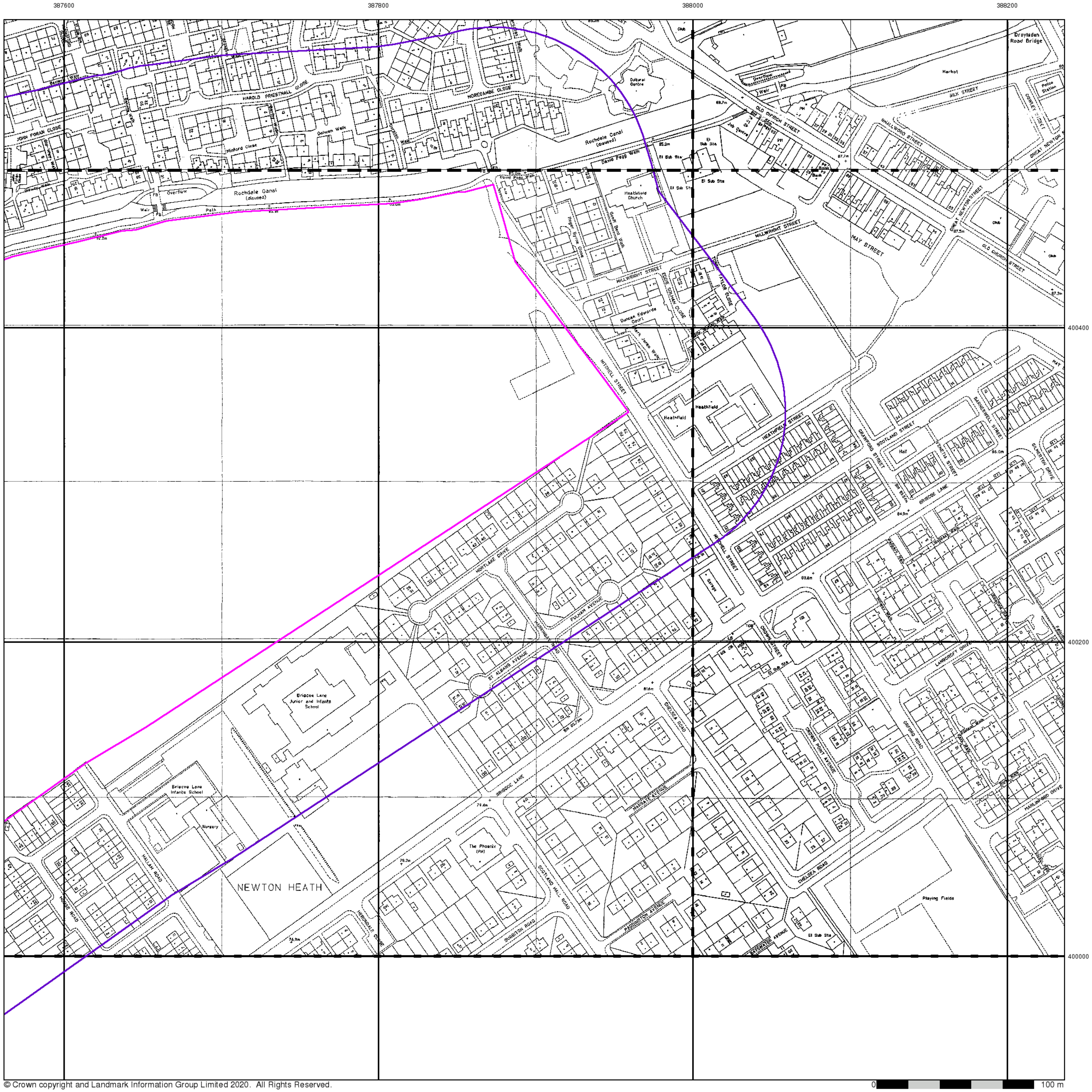

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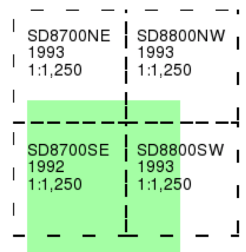
Large-Scale National Grid Data

Published 1992 - 1993

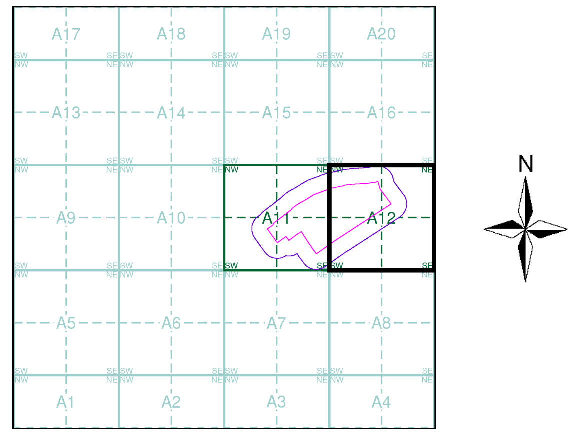
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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Large-Scale National Grid Data

Published 1993 - 1994

Source map scale - 1:1,250

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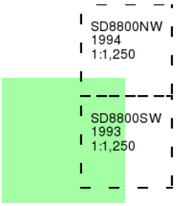
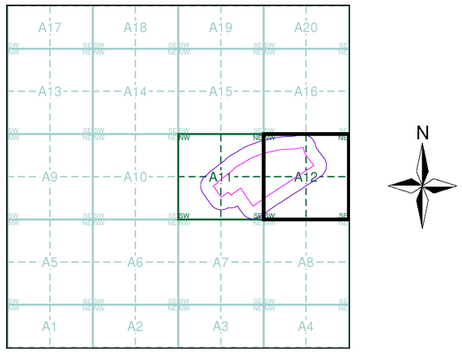


Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

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Large-Scale National Grid Data

Published 1994

Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

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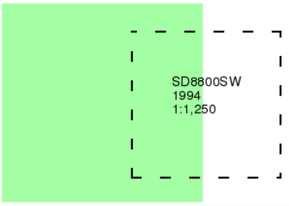
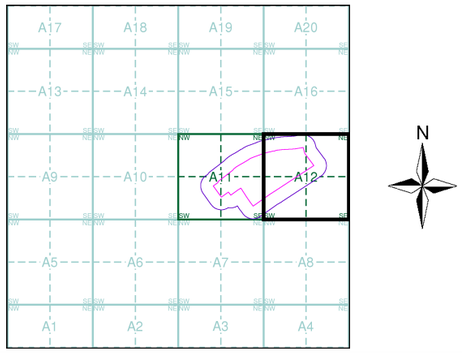


Historical Map - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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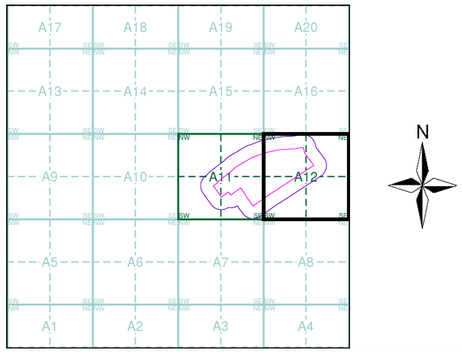
Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	100

Site Details

Site at 387600, 400310

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
298878396_1_1

Customer Reference:
Ten Acres

National Grid Reference:
387320, 400240

Slice:
A

Site Area (Ha):
18.51

Search Buffer (m):
1000

Site Details:
Site at 387600, 400310

Client Details:
Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thorncliffe Park
Chapletown
Sheffield
S35 2PH

Contents

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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2				21
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 7				8
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 9		5	4	10
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 12		Yes		
Pollution Incidents to Controlled Waters	pg 12		1	1	4
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 13	1		1	1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 13				4
Water Abstractions	pg 14			1	3 (*30)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 22	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 23	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 23	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 24		18	3	22

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 29				1
Historical Landfill Sites	pg 29	1			9
Integrated Pollution Control Registered Waste Sites	pg 31				1
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 31		1	2	8
Local Authority Landfill Coverage	pg 33	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 33	2	1	2	10
Potentially Infilled Land (Water)	pg 34	3	19	32	52
Registered Landfill Sites	pg 40	1			2
Registered Waste Transfer Sites	pg 41		1		3
Registered Waste Treatment or Disposal Sites	pg 43			2	5
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 48			1	
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents	pg 48			1	
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 49	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 49	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 53	2		1	5
BGS Urban Soil Chemistry	pg 55			Yes	Yes
BGS Urban Soil Chemistry Averages	pg 56	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 56	Yes	n/a	n/a	n/a
Mining Instability	pg 56	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 56	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 56	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 57	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 57	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 58		20	62	135
Fuel Station Entries	pg 76		1	1	3
Points of Interest - Commercial Services	pg 77			25	39
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 82		11	47	49
Points of Interest - Public Infrastructure	pg 91		9	4	34
Points of Interest - Recreational and Environmental	pg 95		1	1	5
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 97				1
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 97				1
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 97	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (W)	0	1	387300 400243
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (SW)	0	1	387250 400150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NW)	0	1	387318 400243
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	0	1	387350 400250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (S)	9	1	387350 400050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (S)	27	1	387318 400000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (S)	39	1	387400 400000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (W)	95	1	387150 400300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	274	1	387650 400750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NW (NW)	275	1	387050 400450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SW)	279	1	387100 399850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	301	1	387450 400750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	310	1	387750 400800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	324	1	387600 400800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SW)	347	1	387050 399800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (SW)	353	1	386900 399950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (S)	357	1	387150 399750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A10SE (SW)	366	1	386850 400000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SW)	371	1	387100 399750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A10SE (W)	389	1	386800 400050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (SW)	394	1	386850 399950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A10SE (W)	415	1	386750 400243

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lightbowne Rd, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0083 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 25th October 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Moston Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A15NW (N)	623	2	387180 400960
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: River Park Road, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0118 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	637	2	387750 399450
3	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Kenyon Lane Cso, Kenyon Lane, Manchester, Greater Manchester, M40 5fh Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982953 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: 20th February 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Trib River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A16NW (NE)	671	2	387750 401150
3	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Kenyon Lane Cso, Kenyon Lane, Manchester, Greater Manchester, M40 5fh Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0352 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Moston Brook **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A16NW (NE)	685	2	387720 401160

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Viridor Waste (Greater Manchester)Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Refuse Treatment/Transfer Station, Newton Heath, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016990218 Permit Version: 1 Effective Date: 17th June 1980 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Moston Brook **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A16NE (NE)	678	2	388100 401130
5	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Kenyon Lane Cso, Kenyon Lane, Manchester, Greater Manchester, M40 5fh Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982953 Permit Version: 2 Effective Date: 21st February 2005 Issued Date: 21st February 2005 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Trib River Irk **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A16NW (NE)	686	2	387700 401160
6	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Briscoe Lane Cso Briscoe Lane / Riverpark Rd Jnct, ., Manchester, Greater Manchester, M40 2nl Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982735 Permit Version: 2 Effective Date: 31st August 1999 Issued Date: Not Supplied Revocation Date: 3rd December 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	687	2	387470 399340
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Briscoe Lane Cso Briscoe Lane / Riverpark Rd Jnct, ., Manchester, Greater Manchester, M40 2nl Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982735 Permit Version: 3 Effective Date: 4th December 2019 Issued Date: 4th December 2019 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	689	2	387470 399338

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Riverpark Road, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0337 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	697	2	387460 399330
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Riverpark Road, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982735 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 30th August 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A7SE (S)	697	2	387460 399330
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Clayton Sso Bank Street, Urmston, Trafford, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016940385 Permit Version: 1 Effective Date: 23rd November 1982 Issued Date: Not Supplied Revocation Date: 31st March 1998 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	707	2	387480 399320
6	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: River Park Road/Bank St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0119 Permit Version: 2 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	717	2	387490 399310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: River Park Road/Bank St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0119 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Not Supplied Receiving Water: Not Supplied **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7SE (S)	717	2	387490 399310
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lord North Street/Clifton St Cso Lord North Street/Clifton St Jnc, ., Manchester, Greater Manchester, M40 2hj Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0069 Permit Version: 5 Effective Date: 20th November 2019 Issued Date: 20th November 2019 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	749	2	386622 399658
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lord North Street/Clifton St Cso Lord North Street/Clifton St Jnc, ., Manchester, Greater Manchester, M40 2hj Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0069 Permit Version: 4 Effective Date: 5th February 2016 Issued Date: 5th February 2016 Revocation Date: 19th November 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	749	2	386620 399660
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lord North Street/Clifton St Cso Lord North Street/Clifton St Jnc, ., Manchester, Greater Manchester, M40 2hj Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0069 Permit Version: 3 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 4th February 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	749	2	386620 399660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lord North Street/Clifton St Cso Lord North Street/Clifton St Jnc, ., Manchester, Greater Manchester, M40 2hj Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0069 Permit Version: 2 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	749	2	386620 399660
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Lord North Street/Clifton St Cso Lord North Street/Clifton St Jnc, ., Manchester, Greater Manchester, M40 2hj Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0069 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 13th April 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	749	2	386620 399660
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Bank Street Cso, Clayton, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982847 Permit Version: 2 Effective Date: 15th September 1996 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A3NE (S)	797	2	387490 399230
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Bank Street Cso, Clayton, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982847 Permit Version: 1 Effective Date: 3rd January 1995 Issued Date: Not Supplied Revocation Date: 14th September 1996 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A3NE (S)	797	2	387490 399230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Hulme Hall Lane Opp Falmo, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0260 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Shooters Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	980	2	386520 399420
10	**Integrated Pollution Prevention And Control** Name: Princes Ltd Location: Manchester Drinks Manufacturer, Lord North Street,, Newton Heath,, Manchester, M40 2HJ Authority: Environment Agency, North West Region Permit Reference: Tp3832pn Original Permit Ref: Tp3832pn Effective Date: 13th October 2005 **Status: Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) (D) (II) Activity Description: Animal, Vegetable & Food; Treating Etc. Vegetable Raw Materials For Food Greater Than 300T/Day Primary Activity: Y	A6NE (SW)	528	2	386767 399835
11	**Integrated Pollution Prevention And Control** Name: Suez Recycling And Recovery Uk Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: RP3836QY Original Permit Ref: Rp3836qy Effective Date: 1st June 2019 **Status: Effective** Application Type: Transfer App. Sub Type: Whole limited change in management Positional Accuracy: Located by supplier to within 100m Activity Code: 5.4 A(1) (a) (ii) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 5.4 A(1) a) (i) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Primary Activity: Y	A16NE (NE)	581	2	388170 400990
11	**Integrated Pollution Prevention And Control** Name: Viridor Waste (Greater Manchester) Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: LP3135DH Original Permit Ref: Xp3335gu Effective Date: 4th January 2017 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 100m Activity Code: 5.4 A(1) a) (i) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Primary Activity: Y Activity Code: 5.4 A(1) (a) (ii) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A16NE (NE)	581	2	388170 400990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Integrated Pollution Prevention And Control** Name: Viridor Waste (Greater Manchester) Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: NP3530EF Original Permit Ref: Xp3335gu Effective Date: 21st October 2013 **Status:** **Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 100m Activity Code: 5.4 A(1) (a) (ii) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 5.4 A(1) a) (i) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Primary Activity: Y	A16NE (NE)	581	2	388170 400990
11	**Integrated Pollution Prevention And Control** Name: Viridor Waste (Greater Manchester) Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: CP3934NB Original Permit Ref: Xp3335gu Effective Date: 29th May 2013 **Status:** **Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 10m Activity Code: 5.4 A(1) a) (i) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Primary Activity: Y Activity Code: 5.4 A(1) (a) (ii) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Primary Activity: N Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A16NE (NE)	581	2	388170 400990
11	**Integrated Pollution Prevention And Control** Name: Viridor Waste (Greater Manchester) Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: XP3335GU Original Permit Ref: Xp3335gu Effective Date: 19th May 2010 **Status:** **Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 100m Activity Code: 1.1 A(1) (B) (III) Activity Description: Combustion; Waste Derived Fuel Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: Y	A16NE (NE)	581	2	388170 400990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Integrated Pollution Prevention And Control** Name: Suez Recycling And Recovery Uk Ltd Location: North Manchester Mbt, North Manchester Mbt, Reliance Street,,, MANCHESTER, Lancashire, M40 3EZ Authority: Environment Agency, North West Region Permit Reference: LP3502LW Original Permit Ref: Rp3836qy Effective Date: Not Supplied **Status:** **Valid** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 100m Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 5.4 A(1) a) (i) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Primary Activity: Y Activity Code: 5.4 A(1) (a) (ii) Activity Description: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Primary Activity: N	A16NE (NE)	581	2	388170 400990
12	**Integrated Pollution Prevention And Control** Name: Princes Ltd Location: Manchester Soft Drinks - Epr/Tp3832pn, Lord North Street, Newton Heath,, Manchester, M40 2HJ Authority: Environment Agency, North West Region Permit Reference: CP3138CX Original Permit Ref: Tp3832pn Effective Date: 11th July 2012 **Status:** **Effective** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) (D) (II) Activity Description: Animal, Vegetable & Food; Treating Etc. Vegetable Raw Materials For Food Greater Than 300T/Day Primary Activity: Y	A6NE (SW)	679	2	386660 399724
13	**Local Authority Pollution Prevention and Controls** Name: Weir Pumps Location: Park Works, Newton Heath, Manchester, Lancashire, M40 2ba Authority: Manchester City Council, Environmental Health Department Permit Reference: 37/93 Dated: 10th February 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A11SW (SW)	94	3	387122 400084
14	**Local Authority Pollution Prevention and Controls** Name: Briscoe Lane Service Station Location: 86-90 Briscoe Lane, Newton Heath, MANCHESTER, M40 2TH Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/049/06 Dated: 28th December 2001 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status:** **Authorised** Positional Accuracy: Manually positioned to the address or location	A12SE (E)	131	3	388016 400228
15	**Local Authority Pollution Prevention and Controls** Name: Weir Pumps Location: Park Works, Newton Heath, MANCHESTER, Lancashire, M40 2BA Authority: Manchester City Council, Environmental Health Department Permit Reference: 37/93 Dated: 10th February 1993 Process Type: Local Authority Air Pollution Control Description: PG2/3 Electrical and rotary furnaces **Status:** **Authorised** Positional Accuracy: Manually positioned to the address or location	A11SW (SW)	153	3	387069 400057
16	**Local Authority Pollution Prevention and Controls** Name: Mathers Foundry Ltd Location: Park Works, Ten Acres Lane/Briscoe Lane, Newton Heath, M40 2BA Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/26/05/AW Dated: 15th December 1997 Process Type: Local Authority Pollution Prevention and Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes **Status:** **Permitted** Positional Accuracy: Manually positioned to the address or location	A11SW (SW)	220	3	386996 400044

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Local Authority Pollution Prevention and Controls** Name: Mathers Foundry Ltd Location: Park Works, Ten Acres Lane/Briscoe Lane, Newton Heath, M10 6ba Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/26/05/AW Dated: 15th December 1997 Process Type: Local Authority Pollution Prevention and Control Description: PG2/3 Electrical and rotary furnaces **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A11SW (SW)	220	3	386996 400044
17	**Local Authority Pollution Prevention and Controls** Name: Quickmix Concrete Co Ltd Location: Dean Lane, Manchester, Lancashire, M10 0ad Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/21/92 Dated: 17th July 1992 Process Type: Local Authority Air Pollution Control Description: PG3/10 China and ball clay **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A16SW (NE)	286	3	387701 400759
18	**Local Authority Pollution Prevention and Controls** Name: Newton Heath Service Station Location: 1123 Oldham Road, Newton Heath, MANCHESTER, Lancashire, M40 2FU Authority: Manchester City Council, Environmental Health Department Permit Reference: Pfs/10/98 Dated: 22nd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	320	3	388081 400734
19	**Local Authority Pollution Prevention and Controls** Name: Drummer Boy Trading Company Location: Bower Street, Newton Heath, Manchester, M12 6BL Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/96/97 Dated: 17th October 1997 Process Type: Local Authority Air Pollution Control Description: PG6/15 Coating in drum manufacturing and reconditioning processes **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A11SW (SW)	321	3	386887 400025
20	**Local Authority Pollution Prevention and Controls** Name: Olympia Furniture Ltd Location: Holt Street, Off Oldham Road, Newton Heath, Manchester, Lancashire, M10 9ax Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/67/94 Dated: 1st February 1995 Process Type: Local Authority Air Pollution Control Description: PG6/32 Adhesive coating **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A10NE (W)	420	3	386780 400355
21	**Local Authority Pollution Prevention and Controls** Name: Sapphire Garage Ltd Location: Unit 1-3 Quantum Trading Park, Monsall Road, Manchester, M40 8fx Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/01/10/RM Dated: 8th March 2010 Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles **Status: Permitted** Positional Accuracy: Located by supplier to within 10m	A10NE (W)	532	3	386641 400277
22	**Local Authority Pollution Prevention and Controls** Name: Grm Insulation Solutions Location: Block 1, Riverpark Road, Eastlands, Manchester, M40 2xp Authority: Manchester City Council, Environmental Health Department Permit Reference: Not Supplied Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/32 Adhesive coating **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A7SE (S)	568	3	387491 399459

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Local Authority Pollution Prevention and Controls** Name: Moston Service Station Location: Lightbowne Road, Moston, MANCHESTER, Lancashire, M10 9BU Authority: Manchester City Council, Environmental Health Department Permit Reference: Pfs/9/98 Dated: 22nd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A15NW (N)	652	3	387177 400991
24	**Local Authority Pollution Prevention and Controls** Name: Murco Service Station Location: 55 St Mary's Road, Newton Heath, MANCHESTER, Lancashire, M40 3AR Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/025/06 Dated: 22nd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A16NW (NE)	654	3	387886 401145
25	**Local Authority Pollution Prevention and Controls** Name: Tcs - Monsall Location: 571 Oldham Road, Newton Heath, MANCHESTER, Lancashire, M40 5AF Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/023/06 Dated: 22nd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A10SW (W)	671	3	386495 400145
26	**Local Authority Pollution Prevention and Controls** Name: Trafford Rubber Products Location: North Manchester Sites, 55 Clifton Street, Miles Platting, Manchester, Greater Manchester, M10 8hf Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/63/93 Dated: 12th September 1994 Process Type: Local Authority Air Pollution Control Description: PG6/28 Rubber processes **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	696	3	386737 399605
27	**Local Authority Pollution Prevention and Controls** Name: Hanson Aggregates Location: Norton Street, Miles Platting, MANCHESTER, Lancashire, M40 8HD Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/04/05/AW Dated: 5th August 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A6NE (SW)	696	3	386591 399792
28	**Local Authority Pollution Prevention and Controls** Name: Northern Butchers Hide Markets Ltd Location: 228 Briscoe Lane, Newton Heath, MANCHESTER, Lancashire, M40 2XG Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/52/93 Dated: 1st March 1995 Process Type: Local Authority Air Pollution Control Description: PG6/21 Hide and skin processes **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A6SE (SW)	745	3	386831 399468
29	**Local Authority Pollution Prevention and Controls** Name: North Manchester Commercials Location: Briscoe Lane, Newton Heath, MANCHESTER, Lancashire, M40 2NL Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/78/95/03 Dated: 1st November 1995 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A6SE (SW)	858	3	386776 399369

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	**Local Authority Pollution Prevention and Controls** Name: Manchester Cabins Ltd Location: Harden Works, Oldham Road, MANCHESTER, Lancashire, M40 8AG Authority: Manchester City Council, Environmental Health Department Permit Reference: 64/93 Dated: 14th January 1994 Process Type: Local Authority Air Pollution Control Description: PG6/29 Di-isocyanate processes **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A6NW (W)	983	3	386236 399865
	Nearest Surface Water Feature	A11NE (NE)	2	-	387486 400418
31	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Not Supplied Incident Date: 21st April 1993 Incident Reference: 93630820 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (NE)	28	2	387700 400500
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Rochdale Canal; None Pollution Found Incident Date: 23rd May 1995 Incident Reference: 95611216 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A15SW (N)	301	2	387200 400600
33	**Pollution Incidents to Controlled Waters** Property Type: Agriculture: Manure Compound Location: M C R Abatoir, Riverpark Road Authority: Environment Agency, North West Region Pollutant: General Biodegradable : Solid Manure Note: Not Supplied Incident Date: 6th January 1999 Incident Reference: 362 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SW (S)	686	2	387200 399400
34	**Pollution Incidents to Controlled Waters** Property Type: Transport, Storage, Communications: Road Location: Mill Street, Failsworth, MANCHESTER, Greater Manchester Authority: Environment Agency, North West Region Pollutant: Inert : Plaster & Plasterboard Note: Not Supplied Incident Date: 18th April 1999 Incident Reference: 1432 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Approximate location provided by supplier	A16NE (NE)	721	2	388000 401200
35	**Pollution Incidents to Controlled Waters** Property Type: Manufacturing: Metal Fabrication Location: Nall St, Levenshulme, MANCHESTER, Greater Manchester Authority: Environment Agency, North West Region Pollutant: Organic Chemicals : Oils: Mixed / Unidentified / Waste Note: Not Supplied Incident Date: 10th May 1999 Incident Reference: 28748 Catchment Area: River Mersey (Etherow) Receiving Water: River Stretch (Freshwater) Cause of Incident: Un-Consented Works Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A8SW (S)	760	2	387700 399300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: River Medlock Incident Date: 1st September 1995 Incident Reference: 95632224 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	870	2	388100 399400
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Qsl At Summit To Empress Processing Estimated Distance (km): 27.6 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A11SE (NW)	0	2	387318 400243
	River Quality Name: Moston Bk GQA Grade: River Quality F Reach: Qsl At Hale Lane Failsworth To Irk Estimated Distance (km): 5.6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A15SE (N)	461	2	387258 400845
	River Quality Name: Medlock GQA Grade: River Quality E Reach: Lords Bk To Irwell Estimated Distance (km): 9.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A3NE (S)	822	2	387459 399205
37	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 28th July 2016 Incident Reference: 1457159 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Lubricating Pollutant: Oils And Fuel: Mixed/Waste Oils	A16NW (NE)	516	2	387806 401002
38	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 25th December 2003 Incident Reference: 208157 Water Impact: Category 3 - Minor Incident Air Impact: Category 2 - Significant Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke Pollutant: Contaminated Water: Firefighting Run-Off	A8SW (S)	622	2	387592 399415
39	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 14th May 2004 Incident Reference: 237969 Water Impact: Category 4 - No Impact Air Impact: Category 3 - Minor Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Organic Chemicals : Other Organic Wastes	A10SW (W)	679	2	386517 399982

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 19th March 2005 Incident Reference: 299985 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A3NE (S)	804	2	387500 399223
41	**Water Abstractions** Operator: Cochrane & Gibbs Ltd Licence Number: 2569006022 Permit Version: Not Supplied Location: Rochdale Canal, Bower Street, Newton Heath, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Boiler Feed & Manufacturing Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 773 Yearly Rate (m3): 168202 Details: Additional Purpose: Boiler feed; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A11SW (SW)	322	2	386901 400001
42	**Water Abstractions** Operator: Watney Mann (North) Ltd Licence Number: 2569005004 Permit Version: Not Supplied Location: Two Boreholes, NEWTON HEATH Authority: Environment Agency, North West Region Abstraction: Cooling & Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 1364 Yearly Rate (m3): 478435 Details: Additional Purpose: Cooling; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SW (NW)	643	2	386900 400800
43	**Water Abstractions** Operator: Hanson Quarry Products Europe Limited Licence Number: 2569005061 Permit Version: 3 Location: Borehole At Norton Street, Miles Platting, Manchester Authority: Environment Agency, North West Region Abstraction: Construction: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Norton Street, Miles Platting Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 13th August 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	732	2	386550 399790
43	**Water Abstractions** Operator: Hanson Quarry Products Europe Ltd Licence Number: 2569005061 Permit Version: 2 Location: Borehole At Norton Street, Miles Platting, Manchester Authority: Environment Agency, North West Region Abstraction: Construction: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Norton Street, Miles Platting Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6NE (SW)	732	2	386550 399790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: V H E Construction Limited Licence Number: 2569006040 Permit Version: Not Supplied Location: The River, Medlock, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Dust Suppression Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 20 Yearly Rate (m3): 2000 Details: Licence Status: Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NE (SW)	1086	2	386800 399100
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1339	2	386900 398800
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006992 Permit Version: Not Supplied Location: Ashton Canal, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Drinking; Cooking; Sanitary; Washing For Industrial Premises Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 1136500 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1344	2	386900 398795
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Manchester, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1631	2	387600 398400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: British Waterways Licence Number: 2569006996 Permit Version: 100 Location: Ashton Canal, Manchester [Vitacom] Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 227300 Details: (British Vita Ltd) Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1636	2	387600 398395
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Manchester, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1658	2	387800 398400
	Water Abstractions Operator: Canal And River Trust Licence Number: 2569006997 Permit Version: 100 Location: Ashton Canal Manchester Clayton Analine Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 3500420 Details: Land At Ciba Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1663	2	387800 398395
	Water Abstractions Operator: Air Products Chemicals Ltd Licence Number: 2569006037 Permit Version: 100 Location: Boreholes X 2 On Premises At Croft Street Clayton Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 655 Yearly Rate (m3): 111832 Details: Premises Croft St, Clayton, M/Cr Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1680	2	387900 398400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Victor Wolf Ltd Licence Number: 2569007020 Permit Version: Not Supplied Location: Two Boreholes, Croft Street, Clayton, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 2182 Yearly Rate (m3): 372772 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1685	2	387900 398395
	Water Abstractions Operator: Evonik Chemicals Ltd Licence Number: 2569006037 Permit Version: 104 Location: Borehole 1 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 19th April 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1691	2	387860 398379
	Water Abstractions Operator: Evonik Chemicals Limited Licence Number: 2569006037 Permit Version: 103 Location: Borehole 1 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 9th March 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1691	2	387860 398379
	Water Abstractions Operator: Air Products (Chemicals) Limited Licence Number: 2569006037 Permit Version: 102 Location: Borehole 1 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 17th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1691	2	387860 398379

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Air Products (Chemicals) Plc Licence Number: 2569006037 Permit Version: 101 Location: Borehole 1 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1691	2	387860 398379
	Water Abstractions Operator: Evonik Chemicals Ltd Licence Number: 2569006037 Permit Version: 104 Location: Borehole 2 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 19th April 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1695	2	387859 398375
	Water Abstractions Operator: Evonik Chemicals Limited Licence Number: 2569006037 Permit Version: 103 Location: Borehole 2 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 9th March 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1695	2	387859 398375
	Water Abstractions Operator: Air Products (Chemicals) Limited Licence Number: 2569006037 Permit Version: 102 Location: Borehole 2 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 17th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1695	2	387859 398375

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Air Products (Chemicals) Plc Licence Number: 2569006037 Permit Version: 101 Location: Borehole 2 On Premises At Croft Street, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Croft Street, Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1695	2	387859 398375
	Water Abstractions Operator: Evonik Chemicals Ltd Licence Number: 2569006036 Permit Version: 104 Location: Borehole On Premises At Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 19th April 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1834	2	388027 398277
	Water Abstractions Operator: Evonik Chemicals Limited Licence Number: 2569006036 Permit Version: 103 Location: Borehole On Premises At Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th March 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1834	2	388027 398277
	Water Abstractions Operator: Air Products (Chemicals) Limited Licence Number: 2569006036 Permit Version: 102 Location: Borehole On Premises At Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1834	2	388027 398277

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Air Products (Chemicals) Plc Licence Number: 2569006036 Permit Version: 101 Location: Borehole On Premises At Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1834	2	388027 398277
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Manchester, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1835	2	388100 398300
	Water Abstractions Operator: Canal And River Trust Licence Number: 2569006995 Permit Version: 100 Location: Ashton Canal, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 68190 Details: Land At Air Products Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1840	2	388100 398295
	Water Abstractions Operator: British Waterways Board Licence Number: 2569006030 Permit Version: Not Supplied Location: Manchester, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Ashton Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1SE (SW)	1857	2	385900 398800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: British Waterways Licence Number: 2569006990 Permit Version: 100 Location: Ashton Canal, Manchester [Distillers, Ancoats] Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 750090 Details: (Lancashire Tar Distillers Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1SE (SW)	1861	2	385900 398795
	Water Abstractions Operator: Air Products Chemicals Ltd Licence Number: 2569006036 Permit Version: 100 Location: Borehole On Premises At Clayton Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 3600 Yearly Rate (m3): 372772 Details: Premises At Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1900	2	388000 398200
	Water Abstractions Operator: Air Products Chemicals Ltd Licence Number: 2569006036 Permit Version: 100 Location: Borehole On Premises At Clayton Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1900	2	388000 398200
	Water Abstractions Operator: City Of Manchester Licence Number: 2569005038 Permit Version: Not Supplied Location: River Irk, Collyhurst, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 546 Yearly Rate (m3): 93557 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1910	2	385300 400600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Ciba Specialty Chemicals Plc Licence Number: 2569006026 Permit Version: 101 Location: Borehole At Premises, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 2837 Yearly Rate (m3): 633949 Details: Premises At Clayton Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th July 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1939	2	387700 398100
	Water Abstractions Operator: Ciba Specialty Chemicals Plc Licence Number: 2569006026 Permit Version: 101 Location: Borehole At Premises, Clayton, Manchester Authority: Environment Agency, North West Region Abstraction: Chemicals: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Clayton Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th July 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1939	2	387700 398100
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (NW)	0	4	387318 400243
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (S)	0	4	387279 400140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (E)	0	4	387366 400258
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (SW)	0	4	387232 400166
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (SW)	0	4	387265 400129
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A11SE (E)	0	4	387366 400258
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A11SE (SW)	0	4	387232 400166
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A11SE (NW)	0	4	387318 400243
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SE (NW)	0	4	387318 400243
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SE (S)	0	4	387279 400140
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
44	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 92.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11NE (N)	7	5	387351 400350
45	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 167.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11NE (NE)	7	5	387480 400422
46	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 310.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A12NW (NE)	8	5	387698 400481
47	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 110.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11NE (NW)	8	5	387275 400286
48	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 55.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11NE (N)	8	5	387308 400315
49	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 56.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11NE (NE)	8	5	387429 400398
50	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 67.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A12NW (NE)	9	5	387639 400472
51	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 69.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A11NE (N)	9	5	387308 400315

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 41.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A11NE (NE)	9	5	387442 400418
53	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 59.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A12NW (NE)	9	5	387639 400472
54	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 52.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11SW (W)	10	5	387220 400248
55	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 65.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A11SW (W)	11	5	387220 400248
56	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 25.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A11NE (NE)	11	5	387429 400398
57	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 354.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11SW (W)	13	5	387179 400216
58	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 85.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A12NE (NE)	137	5	388001 400537
59	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 37.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A12NE (NE)	137	5	388001 400537
60	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 55.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A12NE (NE)	171	5	388030 400559

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 638.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A12NE (NE)	222	5	388084 400562
62	**OS Water Network Lines** Watercourse Form: Transfer Watercourse Length: 66.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A11SW (SW)	324	5	386901 399998
63	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 56.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A11SW (SW)	324	5	386901 399998
64	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 164.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A10SE (SW)	380	5	386857 399964
65	**OS Water Network Lines** Watercourse Form: Transfer Watercourse Length: 61.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A6NE (SW)	544	5	386727 399863
66	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NE (SW)	544	5	386727 399863
67	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 25.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NE (SW)	553	5	386720 399857
68	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 16.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NE (SW)	579	5	386700 399841
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NW (SE)	589	5	387898 399602

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2111.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Moston Brook Catchment Name: Mersey Primacy: 1	A15NW (N)	593	5	387190 400964
71	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 368.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NE (SW)	595	5	386687 399831
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 287.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Moston Brook Catchment Name: Mersey Primacy: 1	A16NE (NE)	677	5	387972 401162
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 231.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Moston Brook Catchment Name: Mersey Primacy: 1	A16NW (NE)	680	5	387753 401193
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 934.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A7SE (S)	691	5	387443 399336
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 101.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A8SW (SE)	710	5	387765 399376
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A7SE (S)	712	5	387482 399314
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 185.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A16NW (NE)	713	5	387753 401193
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 380.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A7SE (S)	717	5	387483 399310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 845.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A8SW (SE)	730	5	387805 399373
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A20SW (NE)	870	5	387835 401360
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A20SW (NE)	887	5	387826 401379
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 360.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A20SW (NE)	887	5	387835 401377
83	**OS Water Network Lines** Watercourse Form: Transfer Watercourse Length: 58.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	A6NW (SW)	963	5	386397 399604
84	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NW (SW)	963	5	386397 399604
85	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 25.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6NW (SW)	973	5	386389 399598
86	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 10.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A6SW (SW)	998	5	386370 399582

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**BGS Recorded Landfill Sites** Site Name: Clayton Vale Location: Clayton, MANCHESTER, Gt Manchester, M11 Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate	A8SW (SE)	539	-	387677 399526
88	**Historical Landfill Sites** Licence Holder: Messrs H Evers Location: Mitchell Street, Newton Heath, Manchester, Greater Manchester Name: Land adjacent to Mitchell Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16455 First Input Date: 1st May 1973 Last Input Date: 31st December 1984 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9171 BGS Ref: Not Supplied Other Ref: F008, RD/LIC/013/76	A11SE (NE)	0	2	387326 400249
89	**Historical Landfill Sites** Licence Holder: Central Electricity Generating Board Location: Bank Bridge Road, Manchester Name: Clayton Vale Power Station Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16476 First Input Date: 31st December 1901 Last Input Date: 31st December 1980 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9178 BGS Ref: Not Supplied Other Ref: GDO F001,RD/LIC/045/76	A8SW (SE)	527	2	387767 399574
90	**Historical Landfill Sites** Licence Holder: Central Electricity Generating Board Location: Bank Bridge Road, Manchester Name: Clayton Vale Power Station Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16480 First Input Date: 31st December 1965 Last Input Date: 31st December 1968 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9729 BGS Ref: Not Supplied Other Ref: RD/LIC/045/76,GDO F001	A8SW (SE)	536	2	387663 399523
91	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Clayton, Manchester, Greater Manchester Name: Clayton Vale Operator Location: Stuart Street Power Station Boundary Accuracy: As Supplied Provider Reference: EAHLD32041 First Input Date: 31st December 1901 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 2777 Other Ref: Not Supplied	A8SW (SE)	538	2	387678 399526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**Historical Landfill Sites** Licence Holder: George Cox and Sons Limited Location: St Marys Road - Joyce Street, Kenyan Lane, Moston, Manchester Name: Lightbowne Phase II Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16420 First Input Date: 7th May 1980 Last Input Date: 31st December 1981 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9283 BGS Ref: Not Supplied Other Ref: F036, RD/LIC/188/79	A16NW (NE)	583	2	387684 401069
93	**Historical Landfill Sites** Licence Holder: Manchester City Council Location: Northampton Road, Harpurhey, Manchester, Greater Manchester Name: Moston Brook Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16424 First Input Date: 1st May 1974 Last Input Date: 1st December 1977 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9660 BGS Ref: Not Supplied Other Ref: F006	A15SW (NW)	587	2	387008 400821
94	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Church Lane, Harpurhey, Manchester, Greater Manchester Name: Land adjacent to Church Lane North Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16416 First Input Date: Not Supplied Last Input Date: 31st December 1977 Specified Waste Type: Deposited Waste included Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F007	A15SW (N)	594	2	387143 400906
95	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Newton Heath, Manchester, Greater Manchester Name: Land off Reliance Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16433 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F041	A16NE (NE)	602	2	388001 401079
96	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Moston, Manchester, Greater Manchester Name: Land to the rear of Fairway Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16384 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F021, G036	A16NE (NE)	687	2	388001 401165

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	**Historical Landfill Sites** Licence Holder: North West Gas Location: Bradeley Hall Road, Haslington, Crewe, Cheshire Name: Bradford Road Works Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16491 First Input Date: 7th December 1979 Last Input Date: 1st December 1983 Specified Waste Type: Deposited Waste included Inert, Industrial and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9286 BGS Ref: Not Supplied Other Ref: RD/LIC/180/79, GDO F058, 0381	A2NE (SW)	992	2	386755 399226
98	**Integrated Pollution Control Registered Waste Sites** Name: Evans Universal Ltd Location: The Abattoir, Riverpark Road, MANCHESTER, M10 2XP Authority: Environment Agency, North West Region Permit Reference: AW8467 Dated: 15th October 1996 Process Type: IPC new application Description: 5.1 A (C) Incineration within the Waste Disposal Industry **Status: Application has met the requirements for authorisation (but not yet authorised)** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	2	387365 399456
99	**Licensed Waste Management Facilities (Locations)** Licence Number: 53890 Location: 13 Warden Lane, Manchester, M40 2FH Operator Name: Bolger K Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Revoked** Issued: 10th July 1991 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 9th April 2015 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16SW (NE)	233	2	387698 400706
100	**Licensed Waste Management Facilities (Locations)** Licence Number: 53488 Location: Bower Street, Newton Heath, Manchester, M40 2AF Operator Name: Mauser - M D L Limited Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Material Recycling Treatment Facilities **Licence Status: Modified** Issued: 12th August 1998 Last Modified: 9th July 2020 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SE (W)	340	2	386847 400066
100	**Licensed Waste Management Facilities (Locations)** Licence Number: 53559 Location: Navigation Trading Estate, Bower Street, Newton Heath, Manchester, M40 2AR Operator Name: Recon Packaging Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Material Recycling Treatment Facilities **Licence Status: Modified** Issued: 12th March 1997 Last Modified: 23rd October 2014 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SE (W)	363	2	386831 400043

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	**Licensed Waste Management Facilities (Locations)** Licence Number: 102576 Location: Yard 3, Arkady Ind Est, Brisco Lane, Newton Heath, Manchester, M40 2XG Operator Name: D M R Recycling (MCr) Limited Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: HCl Waste TS + treatment **Licence Status: Revoked** Issued: 8th September 2011 Last Modified: 18th March 2014 Expires: Not Supplied Suspended: Not Supplied Revoked: 3rd July 2015 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	539	2	387038 399593
102	**Licensed Waste Management Facilities (Locations)** Licence Number: 53930 Location: Reliance Street, Manchester, M40 3EZ Operator Name: G M Waste Ltd Operator Location: Po Box 151, Higher Swan Lane, Bolton, BL3 3WW Authority: Environment Agency - North West Region, South Area Site Category: Physical Treatment Facilities **Licence Status: Modified** Issued: 3rd April 1984 Last Modified: 2nd June 2000 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	584	2	388184 400985
103	**Licensed Waste Management Facilities (Locations)** Licence Number: 53930 Location: North Manchester T L S & M B T Plant, Reliance Street, Newton Heath, Manchester, M40 3EZ Operator Name: Suez Recycling And Recovery U K Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Treatment - Biological **Licence Status: Transferred** Issued: 3rd April 1984 Last Modified: 4th January 2017 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	589	2	388141 401015
104	**Licensed Waste Management Facilities (Locations)** Licence Number: 53767 Location: Land At The Junction Of, Cheetham Street & Goodier Street, Oldham Road, Manchester, M40 2BP Operator Name: European Metal Recycling Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Expired** Issued: 12th October 1993 Last Modified: 4th January 2005 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SW (W)	729	2	386465 399982

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	**Licensed Waste Management Facilities (Locations)** Licence Number: 50355 Location: Land/premises At, Irlam Street, Off Irlam Road, Manchester, M40 2BP Operator Name: European Metal Recycling Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Modified** Issued: 4th January 2005 Last Modified: 11th December 2009 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SW (W)	744	2	386446 399995
105	**Licensed Waste Management Facilities (Locations)** Licence Number: 53518 Location: Old Leaches Yard, Beckford Street, Miles Platting, Manchester, M40 5AE Operator Name: Anthony & Darren James Benson Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Transferred** Issued: 9th February 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SW (W)	909	2	386258 400130
106	**Licensed Waste Management Facilities (Locations)** Licence Number: 403404 Location: Land Adjacent To 498 Oldham Road, Miles Platting, Manchester, M40 5AA Operator Name: P R Junior Limited Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Inert & Excavation WTS with treatment **Licence Status: Transferred** Issued: 25th July 2016 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SE (W)	961	2	386210 400075
106	**Licensed Waste Management Facilities (Locations)** Licence Number: 103632 Location: 498 Oldham Road, Miles Platting, Manchester, M40 5AA Operator Name: Anthony O' Connor & Sons Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Inert & Excavation WTS with treatment **Licence Status: Revoked** Issued: 23rd December 2011 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 10th May 2016 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SE (W)	961	2	386210 400075
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		0	6	387318 400243
107	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SE (NW)	0	-	387318 400243
108	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SE (E)	0	-	387524 400246

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SW (SW)	235	-	387006 400004
110	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	460	-	388175 399939
111	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A16SE (NE)	461	-	388065 400909
112	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (S)	503	-	387171 399577
113	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (SW)	598	-	386991 399549
114	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8NE (SE)	644	-	388117 399681
115	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SE)	678	-	387824 399444
116	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (SW)	705	-	386646 399700
117	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SE)	734	-	387803 399368
118	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A16NE (NE)	768	-	388181 401194
119	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6SE (SW)	778	-	386714 399514
120	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A14SW (NW)	889	-	386404 400646
121	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A19SW (N)	981	-	387202 401355
122	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11NE (NE)	0	-	387515 400407
123	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (E)	0	-	387629 400132
124	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11NE (E)	0	-	387521 400272
125	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (SE)	17	-	387405 400105

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11SE (SE)	19	-	387467 400012
127	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (E)	42	-	387698 400120
128	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NW (NE)	56	-	387726 400530
129	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	64	-	387680 400088
130	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11SW (SW)	65	-	387154 400090
131	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	86	-	387673 400055
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15SE (N)	87	-	387441 400637
133	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (S)	159	-	387298 399954
134	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (S)	172	-	387298 399940
135	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (W)	189	-	387007 400290
136	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (W)	191	-	387037 400327
137	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (SE)	222	-	387721 399927
138	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	225	-	387671 399874
139	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	233	-	388045 400649
140	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A16SE (NE)	236	-	388082 400600
141	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	237	-	387662 399866
142	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NE (S)	240	-	387476 399787
143	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	241	-	387874 400004
144	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11SW (SW)	273	-	387014 399929
145	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NW (SW)	289	-	387011 399908
146	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A16SE (NE)	294	-	388138 400617

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NE (S)	299	-	387331 399767
148	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (S)	309	-	387201 399790
149	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	310	-	386855 400162
150	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	318	-	388034 400765
151	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A11SW (SW)	323	-	386892 400013
152	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	329	-	388015 400787
153	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (SW)	346	-	387088 399782
154	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A7NW (S)	348	-	387142 399760
155	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (SW)	349	-	386954 399883
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	350	-	387795 399822
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SW (NE)	352	-	387653 400821
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A8NW (SE)	370	-	387689 399723
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A12SE (E)	371	-	388214 400077
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (S)	372	-	387204 399727
161	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	375	-	388058 400817
162	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	387	-	386782 400238
163	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	388	-	387860 399819
164	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NE (S)	393	-	387313 399669
165	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	411	-	388133 400809
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	414	-	387584 399626
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NE (S)	426	-	387492 399601

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (NW)	428	-	386980 400589
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6NE (SW)	449	-	386829 399884
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7SE (S)	454	-	387412 399577
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	456	-	387928 399782
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	459	-	388143 400862
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	459	-	388057 400911
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	469	-	386722 400032
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (S)	493	-	387174 399607
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	504	-	387732 399591
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	508	-	387017 399635
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15SW (N)	559	-	387188 400892
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	563	-	386611 400088
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A8SW (SE)	567	-	387671 399493
181	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A8NE (SE)	569	-	387907 399626
182	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7SW (S)	582	-	387040 399547
183	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A15NE (N)	584	-	387269 400966
184	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	595	-	388110 399734
185	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	627	-	388176 399740
186	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A8SW (SE)	633	-	387891 399544
187	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SW (W)	636	-	386542 400057
188	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NE (N)	645	-	387362 401056

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
189	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A15NW (N)	648	-	387154 400974
190	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NE (SW)	653	-	386616 399831
191	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6NE (SW)	659	-	386658 399762
192	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A16NE (NE)	673	-	387973 401158
193	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6SE (SW)	675	-	386814 399565
194	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A15NW (N)	676	-	387101 400976
195	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NW (NE)	682	-	387752 401162
196	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7SW (S)	686	-	387005 399449
197	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A8SW (SE)	704	-	387765 399384
198	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A16NE (NE)	704	-	388038 401195
199	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NW (N)	711	-	387109 401021
200	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A15NW (NW)	721	-	386990 400968
201	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NE (NE)	722	-	388176 401146
202	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A6SE (SW)	732	-	386848 399472
203	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NW (N)	735	-	387209 401095
204	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NE (SW)	748	-	386570 399733
205	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NE (NE)	757	-	388203 401172
206	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	772	-	386412 400362
207	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A15NW (NW)	777	-	386910 400979
208	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NW (SW)	794	-	386440 399863
209	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	794	-	386392 400368

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
210	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A20SE (NE)	797	-	387909 401287
211	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A3NE (S)	803	-	387408 399227
212	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NE (N)	815	-	387328 401223
213	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A3NE (S)	819	-	387382 399213
214	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6SE (SW)	820	-	386786 399408
215	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A3NE (S)	822	-	387456 399204
216	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A4NW (S)	835	-	387627 399205
217	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NW (SW)	865	-	386389 399804
218	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A3NE (S)	894	-	387403 399136
219	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A14NE (NW)	899	-	386768 401025
220	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SW (N)	922	-	387166 401279
221	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8SE (SE)	937	-	388220 399383
222	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	952	-	386263 400492
223	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A4NW (S)	955	-	387667 399089
224	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A4NW (SE)	981	-	387847 399117
225	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A14SW (W)	983	-	386304 400661
226	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A19SE (N)	989	-	387340 401407
227	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19SW (N)	991	-	387054 401309

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
228	**Registered Landfill Sites** Licence Holder: H Evers (Messrs) Licence Reference: 00013 Site Location: Mitchell Street, Newton Heath, Manchester, Greater Manchester Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: Taylor Road, Urmston, TRAFFORD, Greater Manchester, M31 3JL Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 13th July 1978 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Construction And Demolition Wastes Foundry Sand Ind. Non-Haz. Waste Slag, Boiler/Flue Cleanings Prohibited Waste: Liquid Wastes Sludge Wastes	A11SE (NE)	0	2	387324 400247
229	**Registered Landfill Sites** Licence Holder: George Cox & Sons Ltd Licence Reference: 00188 Site Location: Lightbowne Phase 2, Kenyon Lane, Manchester, Greater Manchester Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: Hall Lane Works, Farnsworth, BOLTON, Lancashire, BL4 7QF Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 4th February 1982 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Construction And Demolition Wastes Prohibited Waste: Liquid/Slurry/Sludge Wastes	A16NW (N)	599	2	387579 401100
230	**Registered Landfill Sites** Licence Holder: C.E.G.B. Licence Reference: 00045/76 Site Location: Clayton Vale Power Station, Bank Bridge Road, Manchester, Greater Manchester Licence Easting: 388000 Licence Northing: 399500 Operator Location: Europa House, Stockport, Cheshire Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 12th March 1979 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Construction And Demolition Wastes Mine And Quarry Wastes - Mill Rejects Pulverised Fuel Ash Prohibited Waste: Liquid/Sludge Wastes	A8SE (SE)	732	2	388000 399500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
231	**Registered Waste Transfer Sites** Licence Holder: K Bolger - Manchester Waste Recovery Licence Reference: 00613 Site Location: 13 Warden Lane, Newton Heath, Manchester, Greater Manchester, M40 2fh Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st July 1991 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Asbestos Inherently Mixed In Other Was Electrical Fitting/Fixture/Appliances Empty Used Containers General Commercial Rubbish General Ind. Rubbish Gmwda Group 1 - Non/V.Slow Decomp.Wast Gmwda Group 2 - Slow Decomp./Slight So Gmwda Group 3 - Decomp./Sol.- But Only Max.Waste Permitted By Licence-Stated Plasterboard/Plaster Scrap Machinery - Ferrous/Non-Ferrous Scrap Rubber (Including Tyres) Prohibited Waste: All Other Waste N.O.S. Explosive Waste Liquid/Sludge Wastes Odiferous Wastes Violently Reactive Wastes Waste In Drums Waste In Pressurised Cont'Rs	A16SW (NE)	237	2	387700 400710

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
232	**Registered Waste Transfer Sites** Licence Holder: James Moores Ltd Licence Reference: 00727/91 Site Location: Oldham Road, Miles Platting, Manchester, Greater Manchester Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 1st December 1991 Preceded By Licence: Not Given Superseded By Licence: 00727/M01/T01 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Bonded Asbestos Sheet/Piping; Contaminated Waste/Soils; Gmwda Group 1 - Non/V.Slow Decomp.Wast; Gmwda Group 2 - Slow Decomp./Slight So; Gmwda Group 3 - Decomp./Sol.Waste = No; Household Waste As Part Of Skip Waste; Max.Storage; Max.Storage Of Reclaimed Mat'L; Max.Waste Permitted By Licence-Stated; Plaster Prohibited Waste: Asbestos; Ash, Clinker; Boiler Scale, Slag; Clinical Wastes; Cosmetic Products; Explosive Waste; Foundry Sand; Gas Under Pressure; Incinerator Residues; Liquid/Sludge Wastes; Malodorous Waste; Pretreated Waste Not Permit By Lic; Sewage; Soap, Detergents; Special Wastes; Veg. Food/Proc, Animal Carcass; Violently Reactive Waste; Waste In Drums; Waste N.O.S.	A10SW (W)	732	2	386460 399990
233	**Registered Waste Transfer Sites** Licence Holder: B A Hibbert Licence Reference: 00774/M01/T01 Site Location: Old Leaches Yard, Beckford Street, Miles Platting, Manchester, Greater Manchester, M40 5ae Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st December 1997 Preceded By Licence: 00774 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Gmwda Group 1 - Non/V.Slow Decomp.Wast; Gmwda Group 2 - Slow Decomp./Slight So; Gmwda Group 3 - Decomp./Sol.Waste = No; Max.Storage In Licence; Max.Waste Permitted By Licence Prohibited Waste: Asbestos; Explosive Waste; Liquid Wastes; Pressurised Wastes Or Containers; Sludge Wastes; Spec.Waste (Epa'90:S62/1996 Regs); Waste In Drums; Waste N.O.S.; Waste React Violently With Water	A10SW (W)	839	2	386330 400100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
233	**Registered Waste Transfer Sites** Licence Holder: T J Mc Ivor Licence Reference: 00774 Site Location: Old Leaches Yard, Beckford Street, Miles Platting, Manchester, Greater Manchester, M40 5ae Operator Location: 63 Brierley Avenue, FAILSWORTH, Greater Manchester, M35 0RF Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 1st February 1993 Preceded By Licence: Not Given Superseded By Licence: 00774/M01/T01 Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Gmwda Group 1 - Non/V.Slow Decomp.Wast Gmwda Group 2 - Slow Decomp./Slight So Gmwda Group 3 - Decomp./Sol.Waste = No High-Dens/Hard/Bonded/Cement Asbestos Max.Storage In Licence Max.Storage Of Reclaimed Waste Max.Waste Permitted By Licence Prohibited Waste: Explosive Waste Gmwda Group 5 - Chemical/Toxic Waste Liquid/Sludge Wastes Special Wastes Waste In Drums Waste In Pressurised Cont'Rs Waste N.O.S. - Pretreated Or Not Waste Violently Reactive With Water	A10SW (W)	839	2	386330 400100
234	**Registered Waste Treatment or Disposal Sites** Licence Holder: Drummer Boy Trading Co Ltd Licence Reference: 00782 Site Location: Bower Street, Newton Heath, MANCHESTER, Greater Manchester, M10 6BX Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Recycling Drums Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 12th August 1998 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Empty Used Ibcs With < 2 Litre Liq Or 10 Litre Solid Residues Which May Include Empty Used Packagescontainers With < 1%Vol Residues Which May Include Maximum Waste In Working Plan Maximum Waste Permitted By Licence Packagescontainers/Ibcs With < 10%Vol Non-Haz. Residues Which May Include Special Waste (As In Epa 1990:S62 Of 1996 Regs) Starch Based Polymers Surfactants Water Based Adhesive Wastes Prohibited Waste: Drums With Residues Of Subs In Prescribed Subs/Processes Regs 1989) Drums/Cont'Rs With Residues Of List I Subs In Eec Directive 80/68/Eec Material With Haz.Code H 1 - Explosive Material With Haz.Code H 2 - Oxidising Material With Haz.Code H 3a - Highly Flammable Material With Haz.Code H 6 - Toxic Material With Haz.Code H 7 - Carcinogenic Material With Haz.Code H 9 - Infectious Material With Haz.Code H10 - Teratogenic Material With Haz.Code H11 - Mutagenic Material With Haz.Code H12 - Can Release Toxic Gases Material With Haz.Code H14 - Ecotoxic Other Waste/Waste Not Otherwise Specified	A10SE (W)	298	2	386880 400100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
235	**Registered Waste Treatment or Disposal Sites** Licence Holder: Recon Packaging Ltd Licence Reference: 00840 Site Location: Navigation Trading Estate, Bower Street, Newton Heath, MANCHESTER, Greater Manchester, M10 6BX Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Recycling Drums Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st March 1997 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Cont'Rs With < 1% Of Permitted Residue; Cont'Rs With Waste Cosmetics; Cont'Rs With Waste Latex; Cont'Rs With Waste Soap/Detergent; Max.Waste Permitted By Licence; Max.Waste Permitted By Licence Plus; Pre-Cleaned Empty Drums Prohibited Waste: Drums Cont. Uk Red List Subs; Drums Cont.Subs In Eec Dir. 76/464; Drums Cont.Subs In Eec Dir. 80/68; Highly Malodorous Wastes; Pressurised Waste; Residues Of Haz.Chemicals; Residues Of Spec.Waste (Epa'90:S62); Sub'S Control. Radioactive Subs Act'60; Subs React Violently With Water; Waste N.O.S.	A10SE (SW)	408	2	386801 400001
236	**Registered Waste Treatment or Disposal Sites** Licence Holder: Greater Manchester Waste Ltd Licence Reference: 00329/M04 Site Location: North Manchester R.T.P., Reliance Street, Newton Heath, MANCHESTER, Greater Manchester, M6 6NA Operator Location: PO Box 151, 151 Higher Swan Lane, BOLTON, Lancashire, BL3 3WW Authority: Environment Agency - North West Region, South Area Site Category: Treatment Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 2nd June 2000 Preceded By Licence: 00329/M03 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Biocides; Contaminated Rubbish/Bags/Sacks; Distillation Residues; Dyestuffs Waste; Empty Used Containers; Ind. Non-Haz. Inert, Non-Flammable; Ind. Non-Haz. Potentially Combustible; Paint Waste; Polymeric Material, Products/Scrap; Printing Industry Wastes/Ink; Prod'Ts Of Incomplete Polymerisation $; Pulverised/Compacted Dom./Com. Waste; Soaps & Detergents; Tar, Pitch, Bitumen, Asphalts; Untreated Dom./Com. Waste; Waste Treated Timber Prohibited Waste: Waste N.O.S; Waste Wgiving Rise To Health Hazard; Waste Which Is Corrosive Due To Acidity; Waste Which Is Corrosive Due To Alkalinity; Waste Which Is/Reacts To Give Spontaneously Combustible Mat'L; Waste Which Reacts With Air/Water/Other Waste Giving Toxic/Inlam.Gases; Waste With Flash Pt Less Than 75 C	A16NE (NE)	574	2	388165 400985

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
236	**Registered Waste Treatment or Disposal Sites** Licence Holder: Waste Treatment Ltd (G.M.Waste) Licence Reference: 00329/M03 Site Location: Dano Pulveriser At Reliance Street, Newton Heath, Manchester, Greater Manchester Operator Location: PO Box 151, Higher Swan Lane, BOLTON, Lancashire, BL3 3WW Authority: Environment Agency - North West Region, South Area Site Category: Pulverization - with transfer Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 3rd April 1984 Preceded By Licence: R/047 Superseded By Licence: 00329/M04 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Biocides, Cellulose Wastes (Natural/Synth.), Civic Amenity/Refuse Amenity Waste, Contaminated Rubbish/Bags/Sacks, Distillation Residues, Dyestuffs Waste, Empty Used Containers, House. + Com. Pulverised Waste, House. + Com. Untreated Waste, Ind. Non-Haz. Inert, Non-Flammable, Ind. Non-Haz. Potentially Combustible, Paint Waste $, Polymeric Material, Products/Scrap, Printing Industry Wastes/Ink $, Prod'Ts Of Incomplete Polymerisation $, Soaps & Detergents, Tannery & Fellmongers Waste, Tar, Pitch, Bitumen, Asphalts, Waste Treated Timber Prohibited Waste: Acids, Alkalis, Highly Reactive/Corrosive Wastes, Waste N.O.S, Waste Not Acceptable To W.D.A., Waste With F.Pt Less Than 75	A16NE (NE)	574	2	388165 400985
236	**Registered Waste Treatment or Disposal Sites** Licence Holder: G.M.W.D.A. Licence Reference: R/047 Site Location: Reliance Street, Newton Heath, Manchester, Greater Manchester Operator Location: Blackfriars House, Parsonage, MANCHESTER, Greater Manchester, M3 2JA Authority: Environment Agency - North West Region, South Area Site Category: Pulverization Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 27th August 1981 Preceded By Licence: Not Given Superseded By Licence: 00329/M03 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Biocides, Cellulose Wastes (Natural/Synth.), Contaminated Rubbish/Bags/Sacks, Distillation Residues, Dyestuffs Waste, Empty Used Containers, House. + Com. Untreated Waste, Household Waste, Ind. Non-Haz. Waste, Paint Waste $, Polymeric Material, Products/Scrap, Printing Industry Wastes/Ink $, Prod'Ts Of Incomplete Polymerisation $, Soaps & Detergents, Tannery & Fellmongers Waste, Tar, Pitch, Bitumen, Asphalts, Waste Treated Timber	A16NE (NE)	574	2	388165 400985

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
237	**Registered Waste Treatment or Disposal Sites** Licence Holder: The Sheppard Group Ltd Licence Reference: 00727/M01/T01 Site Location: E M R Moores Division, Irlam Street, Miles Platting, Manchester, Greater Manchester, M40 2bp Operator Location: Alexandra Building, Alexandra Dock, Bootle, Liverpool, Merseyside Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard - with Transfer Station Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 12th October 1993 Preceded By Licence: 00943 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Brake Fluid/Antifreeze; Cadmium & Cpds; Carbides And Acetylides; Comp.Bonded Asbestos Sheet/Piping; Contaminated Soil - Class C; Copper & Cpds; Electrical Goods/Tvs/Whiteware; Fuel Oil; Gmwda Group 1 - Non/V.Slow Decomp.Wast; Gmwda Group 2 - Slow Decomp./Slight So; Gmwda Group 3 - Only As Follows; Gmwda Group 5 - Only As Follows; Household Waste; Inorganic Acids; Iron & Cpds; Kerosene And Derv.; Lead & Cpds; Max.Waste Permitted By Licence; Mineral Oils; Organic Acids + Related Cmpds; Organo-Metallic Cmpds; Phenols, Analogues/Derivatives; Plaster; Plasterboard; Scrap Metal; Scrap Rubber (Including Tyres); Silver & Cpds; Tin & Cpds; Titanium & Cpds; Zinc & Cpds Prohibited Waste: Explosive Waste; Liquid Wastes; Mineral Processing Wastes; Pressurised Cont'Rs/Waste Therein; Slag, Boiler/Flue Cleanings; Sludge Wastes; Violently Reactive Wastes; Waste In Drums; Waste N.O.S.	A10SW (W)	729	2	386460 400000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
238	**Registered Waste Treatment or Disposal Sites** Licence Holder: Manchester Cabins Ltd Licence Reference: 00863/92 Site Location: Albion Works, Drewett Street, Miles Platting, MANCHESTER, Greater Manchester, M10 8AR Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Treatment Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Site exempt from licenceExempt Dated: 1st July 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Storage Reclaimed Materials Scrap Rubber (Including Tyres) Prohibited Waste: Explosive Waste Liquid Wastes Malodorous Waste Pressurized Containers/Waste Therein Sludge Wastes Special Wastes Violently Reactive Wastes Waste In Drums Waste N.O.S.	A6NW (SW)	933	2	386340 399750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	**Control of Major Accident Hazards Sites (COMAH)** Name: GOLDEN LTD Location: Dean Lane, Newton Heath, MANCHESTER, Greater Manchester, M40 3AA Reference: Not Supplied Type: Lower Tier **Status: Record Ceased To Be Supplied Under COMAH Regulations** Positional Accuracy: Manually positioned to the road within the address or location	A16SW (NE)	320	7	387853 400810
240	**Planning Hazardous Substance Consents** Name: L'Oreal Golden Ltd Location: L'Oreal Buildings, Oldham Road, MANCHESTER, Lancashire, M40 3AA Authority: Manchester City Council, Planning Department Application Ref: 058432/Hsc/North1/00 Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 120 Application date: 25th January 2000 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	282	6	387940 400765

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian Rocks (Undifferentiated)	A11SE (NW)	0	1	387318 400243
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A11SE (SW)	0	1	387312 400239
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (E)	0	1	387366 400258
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (NW)	0	1	387318 400243
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (SW)	0	1	387232 400166
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (SE)	27	1	387463 400000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (S)	30	1	387318 400000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (S)	53	1	387379 400000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (SE)	97	1	387608 400000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NE (S)	151	1	387467 399876
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NW (SE)	248	1	387756 399893
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (SW)	257	1	387000 399976
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (SW)	257	1	386999 399977

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SW)	305	1	387058 399845
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NW (SW)	314	1	387000 399883
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (W)	337	1	386829 400157
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NW (SE)	457	1	387605 399588
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SW (N)	584	1	387187 400920
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	651	1	387615 399390

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	690	1	386500 400000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6SE (SW)	699	1	386865 399500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6SE (SW)	699	1	386838 399518
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15NW (NW)	747	1	387000 401000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15NW (N)	770	1	387000 401026
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SW (S)	799	1	387669 399250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15NW (N)	850	1	387000 401119
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SW (N)	866	1	387219 401333
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SE (N)	967	1	387479 401416
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A4NE (SE)	997	1	388022 399191
241	**BGS Recorded Mineral Sites** Site Name: Mitchell Street Brickworks Location: Newton Heath, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15091 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NW (E)	0	1	387725 400380
242	**BGS Recorded Mineral Sites** Site Name: Newton Brick Works Location: Newton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95120 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Manchester Marls Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A11SE (SW)	0	1	387280 400195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
243	**BGS Recorded Mineral Sites** Site Name: Cheetham Fold Clay Pit Location: Cheetham Fold, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95124 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12SE (E)	454	1	388174 399945
244	**BGS Recorded Mineral Sites** Site Name: Philips Park Brick Works Location: Clayton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95126 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7SE (S)	565	1	387359 399474
245	**BGS Recorded Mineral Sites** Site Name: Philips Park Brick Works Location: Clayton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95125 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	665	1	386930 399504
246	**BGS Recorded Mineral Sites** Site Name: Williams Road Sand Pit Location: Failsworth, Oldham, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15099 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	808	1	388230 401215
247	**BGS Recorded Mineral Sites** Site Name: Moston Brickworks Location: Moston, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15085 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A15NW (NW)	859	1	386960 401105
248	**BGS Recorded Mineral Sites** Site Name: Miles Platting Brick Works Location: Miles Platting, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95121 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A6SE (SW)	933	1	386605 399404

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 387070, 399770 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 47.60 mg/kg Cadmium Measured Concentration: 1.40 mg/kg Chromium Measured Concentration: 204.80 mg/kg Lead Measured Concentration: 302.00 mg/kg Nickel Measured Concentration: 51.30 mg/kg	A7NW (SW)	364	1	387070 399770
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 386860, 399870 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 41.70 mg/kg Cadmium Measured Concentration: 1.80 mg/kg Chromium Measured Concentration: 96.40 mg/kg Lead Measured Concentration: 283.20 mg/kg Nickel Measured Concentration: 42.80 mg/kg	A6NE (SW)	432	1	386860 399870
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 387740, 399600 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 54.70 mg/kg Cadmium Measured Concentration: 1.90 mg/kg Chromium Measured Concentration: 93.40 mg/kg Lead Measured Concentration: 465.00 mg/kg Nickel Measured Concentration: 48.40 mg/kg	A8NW (SE)	500	1	387740 399600
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 387220, 399210 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 40.50 mg/kg Cadmium Measured Concentration: 1.00 mg/kg Chromium Measured Concentration: 71.10 mg/kg Lead Measured Concentration: 412.40 mg/kg Nickel Measured Concentration: 31.50 mg/kg	A3NW (S)	857	1	387220 399210
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 387720, 399180 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 79.50 mg/kg Cadmium Measured Concentration: 1.00 mg/kg Chromium Measured Concentration: 87.30 mg/kg Lead Measured Concentration: 425.80 mg/kg Nickel Measured Concentration: 56.60 mg/kg	A4NW (S)	880	1	387720 399180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 386750, 399310 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 20.20 mg/kg Cadmium Measured Concentration: 1.10 mg/kg Chromium Measured Concentration: 68.10 mg/kg Lead Measured Concentration: 282.00 mg/kg Nickel Measured Concentration: 24.40 mg/kg	A6SE (SW)	922	1	386750 399310
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Manchester Count Id: 300 Arsenic Minimum Concentration: 3.00 mg/kg Arsenic Average Concentration: 28.00 mg/kg Arsenic Maximum Concentration: 1008.00 mg/kg Cadmium Minimum Concentration: 0.30 mg/kg Cadmium Average Concentration: 1.40 mg/kg Cadmium Maximum Concentration: 80.30 mg/kg Chromium Minimum Concentration: 29.00 mg/kg Chromium Average Concentration: 92.00 mg/kg Chromium Maximum Concentration: 1252.00 mg/kg Lead Minimum Concentration: 20.00 mg/kg Lead Average Concentration: 270.00 mg/kg Lead Maximum Concentration: 2687.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 32.00 mg/kg Nickel Maximum Concentration: 137.00 mg/kg	A11SE (NW)	0	1	387318 400243
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11SE (NW)	0	8	387318 400243
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11SE (NW)	0	-	387318 400243
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NW)	0	1	387293 400280
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	0	1	387331 400251

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387301 400000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	42	1	387318 400000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SE (SE)	0	1	387400 400101
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SE (SE)	0	1	387400 400101
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
249	**Contemporary Trade Directory Entries** Name: Uk Basements Ltd Location: 24, Kerswell Walk, Manchester, Lancashire, M40 2AH Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (NE)	99	-	387437 400501
250	**Contemporary Trade Directory Entries** Name: Briscoe Lane Service Station Location: 86-90, Briscoe Lane, MANCHESTER, M40 2TH Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (E)	111	-	388000 400241
250	**Contemporary Trade Directory Entries** Name: Briscoe Lane Petrol Services Location: 86-90, Briscoe Lane, Manchester, M40 2TH Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (E)	131	-	388016 400228
251	**Contemporary Trade Directory Entries** Name: Co-Op Pharmacy Location: 9 Old Church St, Manchester, Lancashire, M40 2JF Classification: Chemists' & Pharmacists' Suppliers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A16SE (NE)	131	-	387946 400600
252	**Contemporary Trade Directory Entries** Name: Prescotts Transport Location: Briscoe Lane, Manchester, M40 2TX Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SW (E)	154	-	387879 400111
253	**Contemporary Trade Directory Entries** Name: Newton Domestic Appliance Location: 56, Old Church Street, Manchester, M40 2JF Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (E)	174	-	388058 400503
254	**Contemporary Trade Directory Entries** Name: Enterprise Cleaning Location: 20, Scotland Street, Manchester, M40 1LJ Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (E)	193	-	388151 400363
255	**Contemporary Trade Directory Entries** Name: Welding Engineers Location: Unit 1-4, Navigation Trading Estate, Bower Street, Newton Heath, Manchester, M40 2AR Classification: Roller Shutter Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (W)	193	-	386977 400142
256	**Contemporary Trade Directory Entries** Name: First Choice Furniture & Beds Location: 1043, Oldham Road, Manchester, M40 2EH Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SW (NE)	195	-	387800 400675
256	**Contemporary Trade Directory Entries** Name: Quality Design Ltd Location: 4, Hopwood Street, Manchester, Lancashire, M40 2FA Classification: Bags, Belts & Accessories - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SW (NE)	196	-	387789 400674
257	**Contemporary Trade Directory Entries** Name: Specialised Transmission Services Location: Unit 1 Worrall St,Newton Heath, Manchester, M40 2ED Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A15SE (N)	202	-	387416 400604

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
258	**Contemporary Trade Directory Entries** Name: Julie'S Homebrew Location: 881-883, Oldham Road, Manchester, M40 2EE Classification: Brewery Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (N)	218	-	387320 400575
259	**Contemporary Trade Directory Entries** Name: Mathers Foundry Ltd Location: Park Works, Grimshaw Lane, Manchester, M40 2BA Classification: Die-Casting Equipment & Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SW)	220	-	386996 400044
260	**Contemporary Trade Directory Entries** Name: Mayfair Blinds Location: 94a, Old Church Street, Manchester, M40 2JF Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (E)	221	-	388152 400453
261	**Contemporary Trade Directory Entries** Name: Discount Tyres Location: Orford Road, Manchester, M40 1JY Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SE (E)	241	-	388107 400157
261	**Contemporary Trade Directory Entries** Name: Motor Mechanic Location: Orford Road, Manchester, M40 1JY Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SE (E)	241	-	388107 400157
261	**Contemporary Trade Directory Entries** Name: Orford Road Motor Mechanics Location: Unit 3, Orford Road, Manchester, M40 1JY Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (E)	268	-	388130 400140
262	**Contemporary Trade Directory Entries** Name: T A S Tyres & Exhausts Location: 239-241, Briscoe Lane, Manchester, M40 2ST Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (S)	245	-	387468 399782
262	**Contemporary Trade Directory Entries** Name: Decorative Designs Location: 239-241, Briscoe Lane, Manchester, M40 2ST Classification: Stained Glass Designers & Producers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (S)	245	-	387468 399782
262	**Contemporary Trade Directory Entries** Name: James Lucas Ltd Location: 239-241, Briscoe Lane, Manchester, M40 2ST Classification: Bacon & Ham Curers & Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (S)	245	-	387468 399782
263	**Contemporary Trade Directory Entries** Name: Yes Group Location: 1328, Oldham Road, Manchester, M40 1EZ Classification: Catering Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	250	-	388052 400665
264	**Contemporary Trade Directory Entries** Name: Maid It Sparkle Location: Chelsea Rd, Manchester, Lancashire, M40 2TR Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12SE (E)	260	-	388051 400097
265	**Contemporary Trade Directory Entries** Name: Pound Shack Location: 69, Old Church Street, Manchester, M40 2JN Classification: Hardware **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (E)	284	-	388225 400444

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
266	**Contemporary Trade Directory Entries** Name: Manchester Drums Location: Bower Street, Newton Heath, Manchester, M40 2AF Classification: Drums, Kegs, Barrels & Casks **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A10SE (W)	286	-	386884 400133
267	**Contemporary Trade Directory Entries** Name: Nuglaze Panel Location: Bower St, Manchester, Lancashire, M40 2BH Classification: PVC-U Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A11SW (W)	289	-	386893 400087
268	**Contemporary Trade Directory Entries** Name: Searchlight Electric Ltd Location: 900, Oldham Road, MANCHESTER, M40 2BS Classification: Lighting Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (W)	296	-	386873 400238
269	**Contemporary Trade Directory Entries** Name: Sunde Technologies Ltd Location: Thorp Rd, Manchester, Lancashire, M40 5BJ Classification: Computer Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A11NW (NW)	302	-	387140 400557
270	**Contemporary Trade Directory Entries** Name: A Leach (Productions) Ltd Location: 31, Dean Lane, Manchester, M40 3AZ Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SW (NE)	304	-	387844 400794
271	**Contemporary Trade Directory Entries** Name: Recon Packaging Location: Bower Street, Newton Heath, Manchester, M40 2AF Classification: Drums, Kegs, Barrels & Casks **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (W)	317	-	386869 400073
271	**Contemporary Trade Directory Entries** Name: M D L Location: Bower Street, Newton Heath, Manchester, M40 2AF Classification: Packaging Materials Manufacturers & Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (W)	349	-	386839 400060
272	**Contemporary Trade Directory Entries** Name: Total Location: 1123 Oldham Rd, Manchester, M40 2EH Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	320	-	388081 400734
272	**Contemporary Trade Directory Entries** Name: The Health Service Station Location: 1123 Oldham Rd, Manchester, M40 2FU Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	320	-	388081 400734
273	**Contemporary Trade Directory Entries** Name: Scrap Cars In Manchester Location: 5, LEWISHAM AVENUE, MANCHESTER, M40 2UR Classification: Car Breakers & Dismantlers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	320	-	387765 399838
274	**Contemporary Trade Directory Entries** Name: Mrs Mops Location: 17, Elstree Avenue, Manchester, M40 2UL Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	327	-	387819 399865
275	**Contemporary Trade Directory Entries** Name: Manchester Mot Centre Location: Unit 17, Reliance Trading Estate, Manchester, M40 3AG Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	372	-	388123 400767

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	**Contemporary Trade Directory Entries** Name: Manchester M O T Centre Location: Unit 17, Reliance Trading Estate, MANCHESTER, M40 3AG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	372	-	388123 400767
275	**Contemporary Trade Directory Entries** Name: T D Autocare Location: Lonsdale Street, Manchester, M40 2FT Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	400	-	388153 400777
275	**Contemporary Trade Directory Entries** Name: Businessgas.Net Location: 1145-1147, Oldham Road, Manchester, Lancashire, M40 2FU Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	409	-	388178 400764
275	**Contemporary Trade Directory Entries** Name: Business Gas.Com Location: 1145, Oldham Road, Manchester, M40 2FU Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	409	-	388178 400764
276	**Contemporary Trade Directory Entries** Name: Ensign Location: Ensign Garage, Robert Street, Manchester, M40 2DX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	377	-	386792 400242
277	**Contemporary Trade Directory Entries** Name: Van Parts Ltd Location: Thorp Mill,Thorp Rd, Manchester, Lancashire, M40 5BL Classification: PVC-U Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (N)	388	-	387200 400700
277	**Contemporary Trade Directory Entries** Name: Orion Upholstery Location: Thorp Rd, Manchester, Lancashire, M40 5BJ Classification: Upholstery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A15SW (N)	402	-	387216 400726
278	**Contemporary Trade Directory Entries** Name: Highbank Jig & Tools Co Ltd Location: Unit 7, Reliance Trading Estate, Manchester, M40 3AG Classification: Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	398	-	388098 400819
278	**Contemporary Trade Directory Entries** Name: Jigsaw Bodystylings Location: Unit 1, Reliance Trading Estate, Manchester, M40 3AG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	429	-	388096 400858
278	**Contemporary Trade Directory Entries** Name: Flexographic Solutions Location: Unit 1, Reliance Trading Estate, Manchester, Lancashire, M40 3AG Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	429	-	388096 400858
278	**Contemporary Trade Directory Entries** Name: Dayton Motor Location: Unit 1b, Reliance Trading Estate, Manchester, M40 3AG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	433	-	388100 400859
278	**Contemporary Trade Directory Entries** Name: P L H Recovery Manchester Scrap My Car Location: Unit 1,Reliance Trading Estate, Manchester, Greater Manchester, M40 3AG Classification: Car Breakers & Dismantlers **Status: Active** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	433	-	388100 400859

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
278	**Contemporary Trade Directory Entries** Name: R H Conversions Location: Unit 12a Reliance Trading Estate,Reliance Street, Manchester, Greater Manchester, M40 3AG Classification: Commercial Vehicle Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	438	-	388144 400835
278	**Contemporary Trade Directory Entries** Name: Manchester Vehicle Painters Location: Unit 2, Reliance Trading Estate, Manchester, M40 3AG Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	445	-	388115 400864
279	**Contemporary Trade Directory Entries** Name: Wintan Easy Foods Ltd Location: Unit 6, Holt Street, MANCHESTER, M40 5AX Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	405	-	386806 400374
279	**Contemporary Trade Directory Entries** Name: New Road Service Station Location: Elvey House, 15, Baltimore Street, Manchester, M40 5AL Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (W)	416	-	386815 400411
279	**Contemporary Trade Directory Entries** Name: Howdens Joinery Manchester Location: Unit 5, Holt Street, Manchester, M40 5AX Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	421	-	386788 400375
280	**Contemporary Trade Directory Entries** Name: Travis Perkins Plc Location: Holt Street,Off Oldham Road, Manchester, Greater Manchester, M40 5AX Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A10NE (W)	416	-	386778 400339
280	**Contemporary Trade Directory Entries** Name: G J D Fabrications Ltd Location: Unit 3-4, Holt Street, Manchester, Lancashire, M40 5AX Classification: Aluminium Fabricators **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	438	-	386759 400352
281	**Contemporary Trade Directory Entries** Name: Bobbies Food Products Location: 11-12a, Unit, Reliance Enterprise Park, Manchester, Lancashire, M40 3AL Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	423	-	387987 400898
281	**Contemporary Trade Directory Entries** Name: Quality Pine Location: 6 Reliance St Enterprise Pk, Manchester, Lancashire, M40 3AL Classification: Paint & Varnish Stripping **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	437	-	388020 400902
282	**Contemporary Trade Directory Entries** Name: S B Motorbodies Ltd Location: 2a, Bower Street, Newton Heath, Manchester, M40 2AF Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (SW)	429	-	386778 400001
283	**Contemporary Trade Directory Entries** Name: United Aluminium Ltd Location: Holt St, Manchester, M40 5AX Classification: Aluminium Fabricators **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10NE (W)	430	-	386746 400282

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
284	**Contemporary Trade Directory Entries** Name: Failsworth Metal Recycling Location: Unit Aa Reliance Trading Est, Manchester, Greater Manchester, M40 3AG Classification: Reclaiming - Waste Products **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A16SE (NE)	439	-	388157 400826
284	**Contemporary Trade Directory Entries** Name: Commercial Vehicle Painters Manchester Location: Unit 2 Reliance Trading Estate, Manchester, Greater Manchester, M40 3AG Classification: Car Painters & Sprayers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A16SE (NE)	442	-	388148 400837
284	**Contemporary Trade Directory Entries** Name: Balti Wines Location: Unit 3, Reliance Trading Estate, Manchester, M40 3AG Classification: Soft Drinks - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	462	-	388136 400871
284	**Contemporary Trade Directory Entries** Name: Tameside Solutions Ltd Location: Unit 3, Reliance Trading Estate, Manchester, M40 3AG Classification: Janitorial Equipment - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	462	-	388136 400871
284	**Contemporary Trade Directory Entries** Name: Chipsaway Tameside Location: Unit 4, Reliance Trading Estate, Manchester, M40 3AG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	478	-	388156 400876
284	**Contemporary Trade Directory Entries** Name: J M R Fabrications Location: Unit 4, Reliance Trading Estate, Manchester, M40 3AG Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	478	-	388156 400876
284	**Contemporary Trade Directory Entries** Name: Auto Body Centre Location: Unit 5 Reliance Trading Estate,Reliance Street, Manchester, Greater Manchester, M40 3AG Classification: Car Body Repairs **Status: Active** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	487	-	388169 400877
285	**Contemporary Trade Directory Entries** Name: Robinson Mesh Products Location: Unit 4 Reliance Enterprise Park, Manchester, Greater Manchester, M40 3AL Classification: Wire Products - Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	449	-	388043 400906
285	**Contemporary Trade Directory Entries** Name: Anglo Joinery Manufacturers Location: Reliance St, Manchester, Lancashire, M40 3EZ Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A16NE (NE)	487	-	388046 400946
285	**Contemporary Trade Directory Entries** Name: Viridor Waste Management Ltd Location: Reliance Street, Manchester, Greater Manchester, M40 3EZ Classification: Waste Disposal Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A16NE (NE)	493	-	388046 400952
285	**Contemporary Trade Directory Entries** Name: Right Price Scaffolding Location: unit 16,Reliance St, Manchester, Lancashire, M40 3EZ Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A16NE (NE)	510	-	388040 400973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
286	**Contemporary Trade Directory Entries** Name: Promotor Direct Ltd Location: Unit 2, 3a, Eagar Street, Manchester, M40 1EP Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	451	-	388192 400810
286	**Contemporary Trade Directory Entries** Name: Hanley Chesworth Ltd Location: Unit 14, Reliance Trading Estate, Manchester, M40 3ET Classification: Drums, Kegs, Barrels & Casks **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	460	-	388186 400828
286	**Contemporary Trade Directory Entries** Name: International Packaging Network Location: Unit 14, Reliance Trading Estate, Manchester, M40 3ET Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	460	-	388186 400828
286	**Contemporary Trade Directory Entries** Name: Chair Fillings Location: Unit 15, Reliance Trading Estate, Manchester, M40 3AG Classification: Foam Products - Rubber & Plastics **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	480	-	388208 400836
287	**Contemporary Trade Directory Entries** Name: S C S Motors Location: Unit 9, Reliance Enterprise Park, Manchester, M40 3AL Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16SE (NE)	454	-	387981 400932
287	**Contemporary Trade Directory Entries** Name: Rani Frozen Foods Location: Unit 7-8, Reliance Enterprise Park, Manchester, M40 3AL Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A16NE (NE)	475	-	387975 400955
288	**Contemporary Trade Directory Entries** Name: T & K Location: 3, Altham Walk, Manchester, M40 5LD Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SE (N)	461	-	387291 400833
289	**Contemporary Trade Directory Entries** Name: Tyco Control Systems Ltd Location: Wormald Park, Grimshaw Lane, Manchester, M40 2WL Classification: Automation Systems & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	486	-	386679 400168
289	**Contemporary Trade Directory Entries** Name: Wormald Fire Systems Location: Wormald Park, Grimshaw Lane, Manchester, M40 2WL Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	486	-	386679 400168
289	**Contemporary Trade Directory Entries** Name: Jonson Controls Location: Tyco Park,Grimshaw Lane, Manchester, Greater Manchester, M40 2WL Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10SE (W)	488	-	386677 400170
289	**Contemporary Trade Directory Entries** Name: Johnson Controls Location: Grimshaw Lane, Manchester, M40 2AX Classification: Door Manufacturers - Industrial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	488	-	386677 400170
289	**Contemporary Trade Directory Entries** Name: Johnson Control Location: Grimshaw Lane, Manchester, Greater Manchester, M40 2WL Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10SE (W)	488	-	386677 400170

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
290	**Contemporary Trade Directory Entries** Name: Tyreworld Location: 704, Oldham Road, Manchester, M40 2AA Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A10SE (W)	493	-	386676 400252
291	**Contemporary Trade Directory Entries** Name: K M H Printers Location: Chapter Street, Manchester, Lancashire, M40 2AY Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	497	-	386695 400024
292	**Contemporary Trade Directory Entries** Name: Budget Greeting Cards Location: Prelude House, Chapter Street, Manchester, M40 2AY Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (SW)	528	-	386690 399955
292	**Contemporary Trade Directory Entries** Name: Budget Greeting Cards Ltd Location: Prelude House, Chapter Street, Manchester, M40 2AY Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (SW)	548	-	386684 399924
293	**Contemporary Trade Directory Entries** Name: Tyco Fire Solutions Location: Tyco Park,Grimshaw Lane, Manchester, Greater Manchester, M40 2WL Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SE (W)	528	-	386639 400135
293	**Contemporary Trade Directory Entries** Name: Johnson Controls Ltd Location: Tyco Park,Grimshaw Lane, Manchester, Greater Manchester, M40 2WL Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SE (W)	544	-	386622 400158
294	**Contemporary Trade Directory Entries** Name: Maxi Haulage Ltd Location: 2, Monsall Road, Manchester, M40 8FZ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	544	-	386635 400311
294	**Contemporary Trade Directory Entries** Name: Sapphire Garage Location: 1-3, Monsall Road, Manchester, M40 8FZ Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (W)	544	-	386635 400311
295	**Contemporary Trade Directory Entries** Name: David Audley Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	557	-	387440 399471
295	**Contemporary Trade Directory Entries** Name: Robert Edward Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	557	-	387440 399471
295	**Contemporary Trade Directory Entries** Name: 151 Products Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	557	-	387440 399471
295	**Contemporary Trade Directory Entries** Name: Kennoh Cleaning & Care Support Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	557	-	387440 399471

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
295	**Contemporary Trade Directory Entries** Name: Kosmo Services Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	557	-	387440 399471
296	**Contemporary Trade Directory Entries** Name: Medic Bath Co Ltd Location: Ashfield Works, Briscoe Lane, Manchester, M40 2XG Classification: Disability Equipment - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (S)	569	-	387057 399555
297	**Contemporary Trade Directory Entries** Name: Kuehne & Nagel Drinks Logistics Location: Monsall Road, Manchester, M40 8PA Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	577	-	386643 400434
297	**Contemporary Trade Directory Entries** Name: Kurt Lachenmeier (Uk) Ltd Location: Monsall Road, Manchester, M40 8PA Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	577	-	386643 400434
297	**Contemporary Trade Directory Entries** Name: John Smith Ltd Location: Monsall Road, Manchester, M40 8PA Classification: Brewers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	577	-	386643 400434
298	**Contemporary Trade Directory Entries** Name: Weir Pumps Ltd Location: Park Works, Grimshaw Lane, Manchester, M40 2BA Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	577	-	386591 400254
298	**Contemporary Trade Directory Entries** Name: High Access Cleaning & Maintenance Ltd Location: Unit 3, Stanley House, 7, Monsall Road, Manchester, M40 8FY Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	611	-	386561 400279
299	**Contemporary Trade Directory Entries** Name: Choice Game Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XR Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: Samuel Howarth Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: Choice Game Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XR Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: Kurpas Meats Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XS Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: T Ritchie C & E Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, Lancashire, M40 2XS Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
299	**Contemporary Trade Directory Entries** Name: United Cattle Products Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, Lancashire, M40 2XS Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: Harvey Ashworth (Manchester) Ltd Location: Manchester Abattoir,Riverpark Rd, Manchester, M40 2XR Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (S)	582	-	387364 399456
299	**Contemporary Trade Directory Entries** Name: Hanson Business Support Uk Ltd Location: Riverpark Rd, Manchester, Lancashire, M40 2XP Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SE (S)	582	-	387365 399456
299	**Contemporary Trade Directory Entries** Name: Pennine Meats Location: Manchester Abattoir,Riverpark Ind Est,Riverpark Rd, Manchester, Lancashire, M40 2XP Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SE (S)	602	-	387318 399446
300	**Contemporary Trade Directory Entries** Name: Azura Location: Chapter St, Manchester, M40 2AY Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SE (W)	582	-	386619 399985
301	**Contemporary Trade Directory Entries** Name: D-Energi Location: Unit D, Madison Place, Northampton Road, Manchester, M40 5AG Classification: Gas Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (NW)	583	-	387062 400846
302	**Contemporary Trade Directory Entries** Name: Kennoh Cleaning & Care Support Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SW (S)	590	-	387128 399517
303	**Contemporary Trade Directory Entries** Name: S C S Motors Ltd Location: Unit 6 Reliance Enterprise Park, Manchester, Greater Manchester, M40 3AL Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A16NE (NE)	594	-	388185 400997
304	**Contemporary Trade Directory Entries** Name: River Park Press Ltd Location: Market Hall Unit 3, Riverpark Trading Estate, Riverpark Road, Manchester, M40 2XP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	620	-	387240 399454
304	**Contemporary Trade Directory Entries** Name: S I G Technical Insulation Location: Block 1,River Park, Manchester, Greater Manchester, M40 2XP Classification: Insulation Materials **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SE (S)	632	-	387238 399442
304	**Contemporary Trade Directory Entries** Name: A Burns Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	632	-	387238 399442

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
305	**Contemporary Trade Directory Entries** Name: Alloy Bodies Location: Jubilee Works, Clifton Street, Miles Platting, Manchester, M40 8HN Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	624	-	386754 399692
306	**Contemporary Trade Directory Entries** Name: Fine Castings Location: 800, Oldham Road, Manchester, M40 2AB Classification: Fireplaces & Mantelpieces **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	629	-	386540 400115
307	**Contemporary Trade Directory Entries** Name: Grace Motor Engineers Location: Chapter Street, Manchester, Lancashire, M40 2AY Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	649	-	386573 399919
307	**Contemporary Trade Directory Entries** Name: Eckersley Motors Location: UNIT 1-3, GOODIER STREET, MANCHESTER, M40 2BD Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	680	-	386533 399933
308	**Contemporary Trade Directory Entries** Name: Hbs Uk Cleaning Services Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (S)	650	-	387128 399455
308	**Contemporary Trade Directory Entries** Name: Northern Optical Manchester Co Ltd Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Classification: Optical Goods - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (S)	650	-	387128 399455
309	**Contemporary Trade Directory Entries** Name: Asaka Computer Systems Location: Riverpark Rd, Manchester, Lancashire, M40 2XP Classification: Computer Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (S)	655	-	387352 399384
310	**Contemporary Trade Directory Entries** Name: Texaco Location: 55, St. Marys Road, Manchester, M40 3AR Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A16NW (NE)	659	-	387875 401150
310	**Contemporary Trade Directory Entries** Name: Murco Petroleum Ltd Location: 55, St. Marys Road, Manchester, M40 3AR Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16NW (NE)	659	-	387875 401150
311	**Contemporary Trade Directory Entries** Name: Prestige Autos Location: Wilsons House, Wilsons Park, Monsall Road, Manchester, Lancashire, M40 8WN Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NW (W)	665	-	386533 400396
311	**Contemporary Trade Directory Entries** Name: Tresu Location: Unit 1, Wilsons Park, Monsall Road, Manchester, Lancashire, M40 8WN Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NW (W)	665	-	386533 400396

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
311	**Contemporary Trade Directory Entries** Name: Data Design & Assembly Services Location: Unit 1-4a, Wilsons Park, Monsall Road, Manchester, Lancashire, M40 8WN Classification: Electronic Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NW (W)	665	-	386533 400396
311	**Contemporary Trade Directory Entries** Name: Durham Duplex Location: Office L Wilsons Park,Monsall Road, Manchester, Greater Manchester, M40 8WN Classification: Tool Sharpening, Repairing & Servicing **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A10NW (W)	668	-	386518 400356
311	**Contemporary Trade Directory Entries** Name: S M O P C T Ltd Location: Wilsons House Wilsons Park,Monsall Road, Manchester, Greater Manchester, M40 8WN Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	680	-	386517 400393
311	**Contemporary Trade Directory Entries** Name: Sapphire Garage Location: Unit 1 2 3,Monsall Rd, Manchester, Lancashire, M40 8FZ Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10NW (W)	682	-	386514 400392
312	**Contemporary Trade Directory Entries** Name: Clynder Cables Ltd Location: 3, Lord North Street, MANCHESTER, M40 8AD Classification: Cable & Wire Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	665	-	386668 399739
312	**Contemporary Trade Directory Entries** Name: Princes Soft Drinks Division Location: Lord North Street, Manchester, M40 2HJ Classification: Soft Drinks - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	680	-	386660 399724
313	**Contemporary Trade Directory Entries** Name: Roanza Location: Briscoe Lane, Manchester, Greater Manchester, M40 2NL Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SW (SW)	668	-	386956 399488
313	**Contemporary Trade Directory Entries** Name: North Manchester Commercials Location: Briscoe Lane, Manchester, Lancashire, M40 2NL Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (SW)	668	-	386956 399488
313	**Contemporary Trade Directory Entries** Name: Its All In The Image Location: 230 Briscoe Lane, Manchester, Greater Manchester, M40 2XG Classification: Kitchen Furniture Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (SW)	680	-	386914 399495
313	**Contemporary Trade Directory Entries** Name: N N C Contracts Hire Ltd Location: Briscoe La, Manchester, Lancashire, M40 2NL Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SW (SW)	704	-	386958 399448
314	**Contemporary Trade Directory Entries** Name: Shell Location: 571, Oldham Road, Manchester, M40 5AF Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	671	-	386495 400145

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**Contemporary Trade Directory Entries** Name: Monsal Service Station Location: 571, Oldham Road, Manchester, M40 5AF Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	671	-	386495 400145
315	**Contemporary Trade Directory Entries** Name: The Electricity Advisory Centre Location: Monsall RdWilsons Pk, Manchester, Lancashire, M40 8WN Classification: Electricity Companies **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10NW (W)	674	-	386510 400348
315	**Contemporary Trade Directory Entries** Name: Power To Light Location: Unit 10f, Wilsons Park, Monsall Road, MANCHESTER, M40 8WN Classification: Electronic Equipment - Manufacturers & Assemblers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	716	-	386466 400344
315	**Contemporary Trade Directory Entries** Name: Data Design Location: Unit 10G, Wilsons Park, Monsall Road, Manchester, Lancashire, M40 8WN Classification: Electronic Equipment - Manufacturers & Assemblers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	716	-	386466 400344
315	**Contemporary Trade Directory Entries** Name: Charlton Fabrics Ltd Location: Unit 10f, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	719	-	386462 400342
315	**Contemporary Trade Directory Entries** Name: Abbey R X Ltd Location: Unit 10a, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Optical Goods - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	719	-	386462 400342
315	**Contemporary Trade Directory Entries** Name: Bravo Tango Cleaning Services Ltd Location: Wilsons Park,Monsall Road, Manchester, Greater Manchester, M40 8WN Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A10NW (W)	720	-	386462 400342
316	**Contemporary Trade Directory Entries** Name: Addax Products Location: 36, Irlam Street, Manchester, M40 2BW Classification: Stationery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	696	-	386490 400017
316	**Contemporary Trade Directory Entries** Name: E M R Group Location: Irlam Street, MANCHESTER, M40 2BP Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	718	-	386471 400002
317	**Contemporary Trade Directory Entries** Name: Honour Freight Solutions Ltd Location: Wilsons Pk,Monsall Rd, Manchester, Lancashire, M40 8WN Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10NW (W)	714	-	386461 400304
317	**Contemporary Trade Directory Entries** Name: Boggart Brewery Location: Unit 7, Wilsons Park, Monsall Road, MANCHESTER, M40 8WN Classification: Brewers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	719	-	386452 400282
318	**Contemporary Trade Directory Entries** Name: Sinter Studio Location: One Central Park, Northampton Road, Manchester, M40 5BP Classification: Tile Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	715	-	386649 400681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
319	**Contemporary Trade Directory Entries** Name: Mont Blanc Location: Arkady,Unit2 Briscoe La, Manchester, Lancashire, M40 2XG Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SW (SW)	729	-	386928 399433
320	**Contemporary Trade Directory Entries** Name: Nortons Services Location: NORTON TYRES, NORTON STREET, NEWTON HEATH, MANCHESTER, M40 8HD Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	744	-	386521 399813
321	**Contemporary Trade Directory Entries** Name: Anglo European Ltd Location: 228, Briscoe Lane, Manchester, M40 2XG Classification: Steel Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SE (SW)	745	-	386831 399468
321	**Contemporary Trade Directory Entries** Name: Northern Butchers Hide Markets Ltd Location: 228, Briscoe Lane, Manchester, M40 2XG Classification: Leather Merchants & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SE (SW)	745	-	386831 399468
321	**Contemporary Trade Directory Entries** Name: Anglo European Location: 228 Briscoe La, Manchester, Lancashire, M40 2XG Classification: Steel Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A6SE (SW)	745	-	386831 399467
322	**Contemporary Trade Directory Entries** Name: M & G Repairs Location: Unit 11b, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	748	-	386434 400344
322	**Contemporary Trade Directory Entries** Name: Qepos Solution Ltd Location: Unit 12a, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	766	-	386411 400321
322	**Contemporary Trade Directory Entries** Name: Draf Engineering Services Ltd Location: Unit 12c, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Pumps - Sales, Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	766	-	386411 400321
322	**Contemporary Trade Directory Entries** Name: S L J Engineering Services Location: Unit 12c, Wilsons Park, Monsall Road, Manchester, Lancashire, M40 8WN Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	766	-	386411 400321
322	**Contemporary Trade Directory Entries** Name: Heart & Solar Location: Unit 20, Wilsons Park, Monsall Road, Manchester, M40 8WN Classification: Electricity Generating & Distributing Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	799	-	386376 400310
323	**Contemporary Trade Directory Entries** Name: Emr Manchester Location: Irlam Street, Manchester, M40 2BP Classification: Recycling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	761	-	386422 400023

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
324	**Contemporary Trade Directory Entries** Name: Unit 6 Auto Location: 6, Beckford Street, Manchester, M40 5AE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	770	-	386400 400100
324	**Contemporary Trade Directory Entries** Name: Jewson Location: Beckford Street, Manchester, M40 5AJ Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	798	-	386373 400086
324	**Contemporary Trade Directory Entries** Name: Jewson Ltd Location: Beckford Street, MANCHESTER, M40 5AJ Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	798	-	386373 400086
324	**Contemporary Trade Directory Entries** Name: Shawford Building Services Location: Beckford Street,Newton Heath, Manchester, Greater Manchester, M40 5AE Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A10SW (W)	834	-	386336 400088
324	**Contemporary Trade Directory Entries** Name: Manchester Safety Towers Location: Beckford St, Manchester, M40 5AE Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SW (W)	834	-	386337 400085
324	**Contemporary Trade Directory Entries** Name: Manchester Safety Tower Sales Location: Unit 2, Beckford Street, Manchester, M40 5AE Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	845	-	386326 400091
325	**Contemporary Trade Directory Entries** Name: Plant & Automation Ltd Location: Lord North Street, Miles Platting, Manchester, M40 8HT Classification: Tube Bending **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	777	-	386558 399699
326	**Contemporary Trade Directory Entries** Name: Kreativ Location: Quays Rech,10 Langworthy Rd, Manchester, Lancashire, M40 5FS Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A15NE (N)	785	-	387412 401214
327	**Contemporary Trade Directory Entries** Name: Philips Park Cemetery Location: Hulme Hall La, Manchester, Lancashire, M40 8HE Classification: Cemeteries & Crematoria **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SW (S)	801	-	386951 399346
328	**Contemporary Trade Directory Entries** Name: Lennox Industries Location: Unit 22,Wilsons Pk,Monsall Rd, Manchester, Lancashire, M40 8WN Classification: Heating Equipment - Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NW (W)	816	-	386357 400302
328	**Contemporary Trade Directory Entries** Name: Towpro Engineering Ltd Location: UNIT 23, WILSONS PARK, MONSALL ROAD, MANCHESTER, M40 8WN Classification: Trailers & Towing Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	833	-	386338 400286
329	**Contemporary Trade Directory Entries** Name: Crescent Motors Location: 17, Beckford Street, Manchester, M40 5AE Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	828	-	386338 400144

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
329	**Contemporary Trade Directory Entries** Name: Beckford Street Tyre Services Location: 16, Beckford Street, Manchester, M40 5AE Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	843	-	386323 400140
330	**Contemporary Trade Directory Entries** Name: Hanson Aggregates Location: Norton Street, Miles Platting, Manchester, Greater Manchester, M40 8HD Classification: Concrete & Mortar Ready Mixed **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A6NW (SW)	834	-	386419 399814
330	**Contemporary Trade Directory Entries** Name: Norton Services Ltd Location: Norton Street, Miles Platting, Manchester, M40 8HD Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	834	-	386419 399814
330	**Contemporary Trade Directory Entries** Name: K S L Crane Hire Location: Norton Street, Miles Platting, Manchester, Lancashire, M40 8HD Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	834	-	386419 399814
330	**Contemporary Trade Directory Entries** Name: Nortons Tyres Manchester Location: Norton Street, Miles Platting, Manchester, M40 8HD Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	882	-	386375 399793
330	**Contemporary Trade Directory Entries** Name: Birmingham H I A B Hire Services Location: Norton Street, Miles Platting, Manchester, M40 8HD Classification: Cargo Handling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	882	-	386375 399793
331	**Contemporary Trade Directory Entries** Name: Doug Priestley Transport Location: Briscoe La, Manchester, Lancashire, M40 2XG Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A6SE (SW)	835	-	386826 399366
332	**Contemporary Trade Directory Entries** Name: Manchester Crane Hire Location: Norton St, Miles Platting, Manchester, M40 8HD Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	844	-	386451 399736
332	**Contemporary Trade Directory Entries** Name: Birmingham Hiab Hire Location: Norton Street, Miles Platting, Manchester, Greater Manchester, M40 8HD Classification: Road Haulage Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	848	-	386448 399734
332	**Contemporary Trade Directory Entries** Name: B S Diesels Location: Norton St, Miles Platting, Manchester, M40 8HD Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	852	-	386444 399732
332	**Contemporary Trade Directory Entries** Name: Autodeutsch Location: Providence Works,Norton St, Miles Platting, Manchester, M40 8EH Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A6NW (SW)	853	-	386474 399686
332	**Contemporary Trade Directory Entries** Name: Nortons Hiabs Hire Location: Norton Street, Miles Platting, Manchester, Greater Manchester, M40 8HD Classification: Road Haulage Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	857	-	386440 399729

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
332	**Contemporary Trade Directory Entries** Name: Manchester Recycling & Waste Co Ltd Location: Manchester, M40 8EH Classification: Recycling Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	869	-	386443 399701
332	**Contemporary Trade Directory Entries** Name: Norton Car Sales Location: Unit 10 Providence Works,Norton Street, Miles Platting, Manchester, Greater Manchester, M40 8EH Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	869	-	386443 399701
332	**Contemporary Trade Directory Entries** Name: Clad-It Eco Roofing Solutions Ltd Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Classification: Cladding Suppliers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	869	-	386443 399701
332	**Contemporary Trade Directory Entries** Name: Audi Only Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A6NW (SW)	872	-	386448 399689
332	**Contemporary Trade Directory Entries** Name: Hanson Aggregates Location: Norton St, Miles Platting, Manchester, M40 8HD Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	874	-	386427 399718
332	**Contemporary Trade Directory Entries** Name: Hanson Aggregates Location: Norton St, Miles Platting, Manchester, M40 8HD Classification: Concrete Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	874	-	386427 399718
332	**Contemporary Trade Directory Entries** Name: G S M Industrial Properties Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	892	-	386423 399691
332	**Contemporary Trade Directory Entries** Name: Central Hydraulics Manchester Ltd Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Classification: Hydraulic Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	892	-	386423 399691
332	**Contemporary Trade Directory Entries** Name: Feltham Hydraulics Ltd Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	892	-	386433 399676
333	**Contemporary Trade Directory Entries** Name: Roanza Location: Briscoe Lane, Manchester, Greater Manchester, M40 2NL Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A6SE (SW)	848	-	386753 399396
333	**Contemporary Trade Directory Entries** Name: Roanza Mercedes Benz Truck & Van Location: Enza Mercedes Benz, Briscoe Lane, Manchester, M40 2NL Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6SE (SW)	853	-	386784 399369

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
334	**Contemporary Trade Directory Entries** Name: Clynder Cables Ltd Location: 3, Lord North Street, MANCHESTER, M40 8AD Classification: Ropes & Hawsers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	883	-	386506 399589
334	**Contemporary Trade Directory Entries** Name: J C S Pallets Location: Lord North Street, Manchester, M40 8AD Classification: Pallets, Crates & Packing Cases **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	883	-	386506 399589
334	**Contemporary Trade Directory Entries** Name: Vintage Wings & Radiators Location: Lord North Street, Manchester, M40 8HT Classification: Classic Car Specialists **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A6SW (SW)	924	-	386479 399557
334	**Contemporary Trade Directory Entries** Name: Eyres Forgings Ltd Location: Lord North Street, Manchester, M40 8HT Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A6SW (SW)	924	-	386479 399557
335	**Contemporary Trade Directory Entries** Name: Modern Waste Recycling Ltd Location: Hillbit House, New Street, Manchester, M40 8AW Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (W)	897	-	386308 399919
335	**Contemporary Trade Directory Entries** Name: Worldwide Waste Management Ltd Location: Hillbit House, New Street, MANCHESTER, M40 8AW Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (W)	897	-	386308 399919
335	**Contemporary Trade Directory Entries** Name: Boiler House Supplies Location: Hillbit House, New Street, Manchester, M40 8AW Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (W)	897	-	386308 399919
335	**Contemporary Trade Directory Entries** Name: Majid Bros Plant Location: Hillbit House, New Street, Manchester, Lancashire, M40 8AW Classification: Machinery - Industrial & Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A6NW (W)	898	-	386308 399919
336	**Contemporary Trade Directory Entries** Name: I B C O Ltd Location: Lord North Street, Manchester, M40 8AD Classification: Frozen Food Processors & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A6SE (SW)	901	-	386614 399439
337	**Contemporary Trade Directory Entries** Name: Crawford Commercials Location: 497 A Oldham Rd, Manchester, Lancashire, M40 5AA Classification: Commercial Vehicle Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SW (W)	901	-	386282 400004
337	**Contemporary Trade Directory Entries** Name: Rainbow Group Location: 497, Oldham Road, Manchester, M40 5AA Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	905	-	386274 400029
337	**Contemporary Trade Directory Entries** Name: Johnson & Scott Location: 497, Oldham Road, Manchester, M40 5AA Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SW (W)	906	-	386274 400020

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
338	**Contemporary Trade Directory Entries** Name: Permanoid Ltd Location: 107, Hulme Hall Lane, Manchester, M40 8HH Classification: Cable & Wire Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	922	-	386443 399611
338	**Contemporary Trade Directory Entries** Name: Fixings North West Ltd Location: 107, Hulme Hall Lane, Manchester, M40 8HH Classification: Fasteners & Fixing Devices **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	922	-	386443 399611
338	**Contemporary Trade Directory Entries** Name: Permanoid Ltd Location: 107, Hulme Hall Lane, MANCHESTER, M40 8HH Classification: Cable & Wire Equipment Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	922	-	386443 399611
339	**Contemporary Trade Directory Entries** Name: Nortons Cabins Location: New Street, Miles Platting, Manchester, Greater Manchester, M40 8HD Classification: Container Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (W)	926	-	386310 399830
340	**Contemporary Trade Directory Entries** Name: Multiblend Chemicals Ltd Location: 495, Oldham Road, Manchester, M40 5AA Classification: Chemical Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (W)	929	-	386242 400080
341	**Contemporary Trade Directory Entries** Name: Johnson & Scott Refrigeration Location: 497 Oldham Rd, Manchester, M40 5AA Classification: Refrigeration Equipment - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10SW (W)	952	-	386235 399980
342	**Contemporary Trade Directory Entries** Name: Textino Location: Hulme Hall Lane, Manchester, M40 8YD Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	970	-	386354 399654
342	**Contemporary Trade Directory Entries** Name: Withers & Bolton Location: Hulme Hall Lane, Manchester, M40 8YD Classification: Do It Yourself Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NW (SW)	970	-	386354 399654
343	**Contemporary Trade Directory Entries** Name: Hiab Hire Leeds Location: Drewett Street, Miles Platting, Manchester, Greater Manchester, M40 8HD Classification: Crane Hire, Sales & Service **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A6NW (SW)	970	-	386306 399736
344	**Fuel Station Entries** Name: Briscoe Lane Service Station Location: 86, Briscoe Lane Mitchell Street, Newton Heath , Manchester, Greater Manchester, M40 2TH Brand: Pace Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A12SE (E)	115	-	388008 400242
345	**Fuel Station Entries** Name: Newton Heath Service Station Location: 1123, Oldham Road Reliance Street, Newton Heath , Manchester, Greater Manchester, M40 2AB Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A16SE (NE)	320	-	388081 400734

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
346	**Fuel Station Entries** Name: Mfg Newton Heath Location: St Marys Road , Newton Heath , Manchester, Greater Manchester, M40 3AR Brand: Texaco Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A16NW (NE)	659	-	387875 401150
347	**Fuel Station Entries** Name: Mfg Oldham Road Location: 571, Oldham Road , Newton Heath , Manchester, Greater Manchester, M40 5AF Brand: Shell Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A10SW (W)	671	-	386495 400144
348	**Fuel Station Entries** Name: Moston Service Station Location: Lightbowne Road , Moston , Manchester, Greater Manchester, M40 5EE Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Located by supplier to within 100m	A15NW (N)	711	-	387185 401060
349	**Points of Interest - Commercial Services** Name: Orford Road Motor Mechanics Location: Orford Road, Manchester, M40 1JY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (E)	267	9	388125 400138
349	**Points of Interest - Commercial Services** Name: Orford Road Motor Mechanics Location: Unit 3, Orford Road, Manchester, M40 1JY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (E)	268	9	388129 400140
350	**Points of Interest - Commercial Services** Name: Scrap Cars in Manchester Location: 5 Lewisham Avenue, Manchester, M40 2UR Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (SE)	320	9	387765 399838
351	**Points of Interest - Commercial Services** Name: Manchester MOT Centre Location: Unit 17, Reliance Trading Estate, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	372	9	388123 400767
351	**Points of Interest - Commercial Services** Name: Td Autocare Location: Lonsdale Street, Manchester, M40 2FT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	400	9	388153 400777
351	**Points of Interest - Commercial Services** Name: T D Autocare Location: Lonsdale Street, Manchester, M40 2FT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	400	9	388152 400777
351	**Points of Interest - Commercial Services** Name: T D Autocare Location: Lonsdale Street, Manchester, M40 2FT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	400	9	388153 400777
352	**Points of Interest - Commercial Services** Name: New Road Service Station Location: Elvey House 15, Baltimore Street, Manchester, M40 5AL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NE (W)	416	9	386815 400411

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
353	**Points of Interest - Commercial Services** Name: S & B Motor Bodies Ltd Location: 2a Bower Street, Newton Heath, Manchester, M40 2AF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SE (SW)	422	9	386784 400006
354	**Points of Interest - Commercial Services** Name: S B Motorbodies Ltd Location: 2a Bower Street, Manchester, M40 2AF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SE (SW)	429	9	386778 400001
354	**Points of Interest - Commercial Services** Name: Chapter House Garage Location: Chapter Street, Manchester, M40 2AY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SE (W)	497	9	386695 400024
355	**Points of Interest - Commercial Services** Name: P L H Recovery Manchester Scrap My Car Location: Unit 1, Reliance Street Trading Estate, Reliance Street, Manchester, M40 3AG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A16SE (NE)	433	9	388100 400859
355	**Points of Interest - Commercial Services** Name: Dayton Motor Location: Unit 1b Reliance Street Trading Estate, Reliance Street, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	433	9	388100 400859
355	**Points of Interest - Commercial Services** Name: Upholstery Vehicle Service Ltd Location: Unit 12A, Reliance Trading Estate, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	439	9	388148 400833
355	**Points of Interest - Commercial Services** Name: Upholstery Vehicle Services Location: Unit 12a, Reliance Trading Estate, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	439	9	388148 400833
355	**Points of Interest - Commercial Services** Name: Commercial Vehicle Painters Manchester Location: Unit 2 Reliance Street Trading Estate, Reliance Street, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	442	9	388114 400861
355	**Points of Interest - Commercial Services** Name: Sprinter & Vito Breakers Location: Unit 16, Reliance Trading Estate, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	450	9	388188 400812
355	**Points of Interest - Commercial Services** Name: Manchester Van & Car Location: Unit 16, Reliance Trading Estate, Manchester, M40 3AG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A16SE (NE)	450	9	388188 400812
355	**Points of Interest - Commercial Services** Name: Manchester M O T Centre Location: 3a Eagar Street, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	451	9	388192 400810
355	**Points of Interest - Commercial Services** Name: J M R Fabrications Location: Unit 4, Reliance Trading Estate, Manchester, M40 3AG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A16SE (NE)	478	9	388156 400876

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
355	**Points of Interest - Commercial Services** Name: J M R Fabrications Location: Unit 4, Reliance Trading Estate, Manchester, M40 3AG Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A16SE (NE)	478	9	388156 400876
355	**Points of Interest - Commercial Services** Name: Auto Body Centre Location: Unit 5 Reliance Trading Estate, Reliance Street, Manchester, M40 3AG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	487	9	388169 400877
355	**Points of Interest - Commercial Services** Name: Auto Body Centre Location: Unit 5, Reliance Trading Est, Reliance St/Newton Heath, Manchester, Lancashire, M40 3AL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16SE (NE)	489	9	388169 400880
356	**Points of Interest - Commercial Services** Name: The Alcohol Free Shop Location: Unit 1-2, Holt Street, Manchester, M40 5AX Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (W)	438	9	386750 400326
356	**Points of Interest - Commercial Services** Name: Padimax Ltd Location: Unit 1-2, Holt Street, Manchester, M40 5AX Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (W)	438	9	386750 400326
357	**Points of Interest - Commercial Services** Name: Maxi Haulage Ltd Location: 2 Monsall Road, Manchester, M40 8FZ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (W)	544	9	386635 400311
357	**Points of Interest - Commercial Services** Name: Sapphire Garage Location: 1-3 Monsall Road, Manchester, M40 8FZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NE (W)	569	9	386607 400300
358	**Points of Interest - Commercial Services** Name: Kuehne + Nagel Drinks Logistics Ltd Location: Monsall Road, Manchester, M40 8PA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (W)	577	9	386643 400433
358	**Points of Interest - Commercial Services** Name: Kuehne & Nagel Drinks Logistics Location: Monsall Road, Manchester, M40 8PA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (W)	577	9	386643 400434
359	**Points of Interest - Commercial Services** Name: Mont Blanc Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7SE (S)	582	9	387365 399456
360	**Points of Interest - Commercial Services** Name: S C S Motors Ltd Location: 6 Reliance Street, Manchester, M40 3AL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A16NE (NE)	593	9	388184 400996
361	**Points of Interest - Commercial Services** Name: Klee International Location: Jubilee Works, Clifton Street, Miles Platting, Manchester, M40 8HN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A6NE (SW)	624	9	386754 399692

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
362	**Points of Interest - Commercial Services** Name: Grace Motor Engineers Location: Chapter Street, Manchester, M40 2AY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NE (SW)	649	9	386573 399919
362	**Points of Interest - Commercial Services** Name: Eckersley Motors Location: Units 1 and 2, Goodier Street, Manchester, M40 2BD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (W)	681	9	386533 399933
362	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	701	9	386514 399926
363	**Points of Interest - Commercial Services** Name: Mont Blanc Location: Manchester Abattoir, Riverpark Road, Manchester, M40 2XP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7SW (S)	650	9	387128 399455
364	**Points of Interest - Commercial Services** Name: Mfg Newton Heath Location: St Marys Road, Newton Heath, Manchester, M40 3AR Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A16NW (NE)	659	9	387875 401150
364	**Points of Interest - Commercial Services** Name: Car Wash Location: St Marys Road, Newton Heath, Manchester, Lancashire, M40 3AR Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A16NW (NE)	659	9	387875 401150
365	**Points of Interest - Commercial Services** Name: Oldham Road Service Station Location: 571 Oldham Road, Manchester, M40 5AF Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400144
365	**Points of Interest - Commercial Services** Name: Shell Car Wash Location: 571 Oldham Road, Manchester, M40 5AF Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400144
365	**Points of Interest - Commercial Services** Name: Maxi Haulage Ltd Location: 571 Oldham Road, Manchester, M40 5AF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400145
365	**Points of Interest - Commercial Services** Name: Car Wash Location: 571 Oldham Road, Manchester, M40 5AF Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400145
366	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M40 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	727	9	386459 400014
366	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M40 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A10SW (W)	744	9	386452 399973

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
366	**Points of Interest - Commercial Services** Name: Emr Manchester Location: Irlam Street, Manchester, M40 2BP Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A10SW (W)	761	9	386422 400023
367	**Points of Interest - Commercial Services** Name: M & G Location: Unit 11B Wilsons Park, Monsall Road, Manchester, M40 8WN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (W)	745	9	386436 400341
367	**Points of Interest - Commercial Services** Name: M & G Repairs Location: Unit 11b Wilsons Park, Monsall Road, Manchester, M40 8WN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (W)	745	9	386436 400341
367	**Points of Interest - Commercial Services** Name: M & G Repairs Location: Building 11 Unit B Wilsons Park, Monsall Road, Manchester, M40 8WN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (W)	748	9	386433 400343
368	**Points of Interest - Commercial Services** Name: Vintage Wings & Radiators Ltd Location: Lord North Street, Miles Platting, Manchester, M40 8HT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NE (SW)	777	9	386558 399699
368	**Points of Interest - Commercial Services** Name: Autodeutsch Location: Providence Works, Norton St, Miles Platting, Manchester, M40 8EH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NW (SW)	853	9	386474 399686
368	**Points of Interest - Commercial Services** Name: Auto Deutsch Ltd Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NW (SW)	853	9	386474 399686
368	**Points of Interest - Commercial Services** Name: Manchester Recycling & Waste Co Ltd Location: Unit 10 Providence Works, Norton Street, Manchester, M40 8EH Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A6NW (SW)	870	9	386443 399701
368	**Points of Interest - Commercial Services** Name: Auto Deutsch Ltd Location: Providence Works, Norton Street, Miles Platting, Manchester, M40 8EH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NW (SW)	892	9	386423 399691
369	**Points of Interest - Commercial Services** Name: UK Number 1 Car Wash Location: 1 Walderton Avenue, Manchester, M40 9BU Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A15NE (N)	798	9	387237 401174
370	**Points of Interest - Commercial Services** Name: Crescent Motors Location: 17 Beckford Street, Manchester, M40 5AE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (W)	824	9	386342 400145
370	**Points of Interest - Commercial Services** Name: Crescent Motors Location: Arch 17, Beckford Street, Manchester, M40 5AE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (W)	828	9	386338 400143

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
370	**Points of Interest - Commercial Services** Name: Unit 6 Auto Location: 6 Beckford Street, Manchester, M40 5AE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (W)	865	9	386304 400096
371	**Points of Interest - Commercial Services** Name: Nortons Hiab Services Location: Norton Hiab Services, Norton Street, Miles Platting, Manchester, M40 8EH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A6NW (SW)	835	9	386418 399813
371	**Points of Interest - Commercial Services** Name: Birmingham H I A B Hire Services Location: Norton Tyres, Norton Street, Newton Heath, Manchester, M40 8HD Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A6NW (SW)	883	9	386374 399793
371	**Points of Interest - Commercial Services** Name: Nortons Hiabs Hire Location: Norton Tyres, Norton Street, Newton Heath, Manchester, M40 8HD Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A6NW (SW)	883	9	386374 399793
372	**Points of Interest - Commercial Services** Name: Roanza Truck & Van Location: Briscoe Lane, Manchester, M40 2NL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6SE (SW)	849	9	386752 399395
373	**Points of Interest - Commercial Services** Name: Roanza Mercedes Benz Truck & Van Location: Enza Mercedes Benz, Briscoe Lane, Manchester, M40 2NL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6SE (SW)	854	9	386783 399369
373	**Points of Interest - Commercial Services** Name: Nw Transporting Services Location: Fire Station, Briscoe Lane, Manchester, M40 2XG Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A6SE (SW)	932	9	386745 399300
374	**Points of Interest - Commercial Services** Name: A to Z Windscreens Location: 17 Boar Green Close, Manchester, M40 3AW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A20SE (NE)	927	9	388095 401391
375	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A11SW (SW)	150	9	387090 400033
375	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	157	9	387080 400035
376	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	174	9	387008 400112
377	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	190	9	386992 400107

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
377	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	238	9	386991 400021
377	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	241	9	386987 400020
377	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A11SW (SW)	251	9	386990 400000
377	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	255	9	386990 399993
378	**Points of Interest - Manufacturing and Production** Name: Factory Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	215	9	387752 400691
378	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	216	9	387757 400692
378	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	234	9	387751 400710
378	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	235	9	387755 400711
378	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	265	9	387786 400743
378	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	265	9	387782 400743
379	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15SE (NE)	240	9	387499 400675
379	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A15SE (N)	311	9	387459 400736

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
379	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A15SE (N)	311	9	387459 400736
380	**Points of Interest - Manufacturing and Production** Name: Factory Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	263	9	387840 400752
380	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	264	9	387845 400753
380	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	283	9	387840 400772
380	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	283	9	387837 400771
380	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	317	9	387819 400803
380	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	317	9	387815 400802
381	**Points of Interest - Manufacturing and Production** Name: Newton Silk Mill Business Centre Location: Newton Silk Mill, Holyoak Street, Manchester, M40 1HA Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A16SE (NE)	271	9	388102 400635
382	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A16SW (NE)	314	9	387653 400782
382	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	316	9	387652 400784
383	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11NW (NW)	317	9	386944 400413
383	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A11NW (NW)	370	9	386920 400463

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
384	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11NW (NW)	327	9	387108 400562
385	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A10SE (SW)	348	9	386870 400002
385	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	360	9	386860 399994
385	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	361	9	386859 399994
385	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	377	9	386841 399993
385	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	378	9	386842 399989
385	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	390	9	386832 399984
386	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	350	9	388198 400621
386	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A16SE (NE)	351	9	388199 400620
386	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	371	9	388208 400650
386	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	375	9	388211 400653
387	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A16SE (NE)	396	9	388154 400769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
388	**Points of Interest - Manufacturing and Production** Name: Manchester Industrial Park Location: M40 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	405	9	386778 400308
388	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	423	9	386776 400353
389	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	450	9	387779 400931
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	455	9	387783 400937
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16SW (NE)	456	9	387750 400932
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	457	9	387786 400939
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	459	9	387788 400942
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	459	9	387753 400935
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	461	9	387756 400937
389	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A16NW (NE)	462	9	387749 400938
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	463	9	387794 400947
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	464	9	387797 400948

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	466	9	387799 400951
389	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A16NW (NE)	467	9	387768 400946
389	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NW (NE)	468	9	387803 400953
389	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A16NW (NE)	471	9	387792 400955
390	**Points of Interest - Manufacturing and Production** Name: Reliance Street Enterprise Park Location: M40 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	455	9	387991 400930
390	**Points of Interest - Manufacturing and Production** Name: Enterprise Park Location: M40 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	467	9	388024 400933
391	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SE (W)	508	9	386688 400010
391	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SE (W)	512	9	386684 400009
392	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	526	9	386730 399891
392	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	562	9	386677 399908
393	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NE (NE)	532	9	388128 400958
393	**Points of Interest - Manufacturing and Production** Name: Reliance Street Mechanical Biological Treatment Facility (MBT) - Anaerobic Digestion (BEIS) Location: Reliance Street, Newton Heath, Manchester, M40 3EZ Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to address or location	A16NE (NE)	588	9	388175 400995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
394	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SE (W)	565	9	386608 400088
394	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A10SE (W)	571	9	386601 400093
395	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	589	9	386775 399722
395	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	589	9	386775 399722
395	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	590	9	386786 399707
395	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	590	9	386786 399707
395	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	600	9	386801 399676
395	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	603	9	386797 399677
395	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	606	9	386741 399737
395	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	610	9	386737 399736
395	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	611	9	386713 399768
395	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A6NE (SW)	613	9	386708 399772

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
395	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A6NE (SW)	614	9	386704 399775
395	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	632	9	386761 399673
395	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	635	9	386757 399672
396	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A10NE (W)	622	9	386551 400286
396	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10NW (W)	624	9	386548 400284
397	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	644	9	386791 399625
397	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	645	9	386791 399624
397	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	675	9	386810 399568
397	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	708	9	386780 399550
397	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	708	9	386738 399587
397	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	709	9	386737 399587
397	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	709	9	386780 399549

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
398	**Points of Interest - Manufacturing and Production** Name: Bizspace Ltd Location: Wilsons House Wilsons Park, Monsall Road, Manchester, M40 8WN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A10NW (W)	665	9	386533 400396
399	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SW (SW)	668	9	386910 399510
399	**Points of Interest - Manufacturing and Production** Name: Factory Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A7SW (SW)	680	9	386915 399494
400	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	677	9	386649 399744
400	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	758	9	386591 399685
400	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	763	9	386586 399684
401	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	687	9	386604 399790
401	**Points of Interest - Manufacturing and Production** Name: Ready-Mixed Concrete Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	724	9	386566 399780
402	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	699	9	386484 400029
402	**Points of Interest - Manufacturing and Production** Name: Factory Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A10SW (W)	703	9	386478 400037
403	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	764	9	386840 399440
403	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	764	9	386840 399440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
404	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	866	9	386510 399614
404	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	866	9	386510 399614
404	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SW (SW)	939	9	386444 399581
404	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6SW (SW)	942	9	386440 399581
405	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	893	9	386312 399923
406	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	926	9	386246 400069
406	**Points of Interest - Manufacturing and Production** Name: Works Location: M40 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	930	9	386242 400068
407	**Points of Interest - Public Infrastructure** Name: Weirs Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A11NE (N)	8	9	387327 400331
408	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NW (NE)	8	9	387651 400472
409	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A11NE (NE)	9	9	387455 400411
410	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A11SW (W)	15	9	387181 400216
411	**Points of Interest - Public Infrastructure** Name: Briscoe Lane Service Station Location: 86-90 Briscoe Lane, Manchester, M40 2TH Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (E)	115	9	388008 400242

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
411	**Points of Interest - Public Infrastructure** Name: Briscoe Lane Service Station Location: 86 Briscoe Lane, Manchester, M40 2TH Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (E)	131	9	388016 400228
412	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A11SW (SW)	121	9	387062 400123
413	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NE)	182	9	388045 400551
414	**Points of Interest - Public Infrastructure** Name: K Bolger Location: 13 Warden Lane, Manchester, M40 2FH Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A16SW (NE)	233	9	387698 400706
415	**Points of Interest - Public Infrastructure** Name: Newton Heath Police Station Location: Newton Heath Police Station 40, Silk Street, Manchester, M40 1HE Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A12NE (E)	339	9	388224 400557
416	**Points of Interest - Public Infrastructure** Name: Thorp's Bridge Junction Location: M40 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A15SE (N)	345	9	387273 400694
417	**Points of Interest - Public Infrastructure** Name: Dean Lane Station Location: Dean Avenue, M40 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A16SE (NE)	354	9	387902 400843
418	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	376	9	386858 399969
419	**Points of Interest - Public Infrastructure** Name: Baguley Fold Junction Location: M40 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A8SW (SE)	537	9	387722 399548
420	**Points of Interest - Public Infrastructure** Name: Refuse Destructor Location: M40 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A16NE (NE)	568	9	388159 400982
420	**Points of Interest - Public Infrastructure** Name: Viridor Ltd Location: 6 Reliance Street, Manchester, M40 3AL Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A16NE (NE)	588	9	388175 400995
420	**Points of Interest - Public Infrastructure** Name: Public Recycling Facility Location: M40 Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to an adjacent address or location	A16NE (NE)	651	9	388214 401045

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
421	**Points of Interest - Public Infrastructure** Name: Greater Manchester Police HQ Location: Central Park, Northampton Road (Off Oldham Road), Manchester, M40 5BP Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A14SE (NW)	574	9	386796 400626
422	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	578	9	386704 399837
422	**Points of Interest - Public Infrastructure** Name: Ardwick Junction Location: M40 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	611	9	386719 399759
423	**Points of Interest - Public Infrastructure** Name: Amenity Tip Location: M40 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A16NE (NE)	610	9	388063 401070
424	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	650	9	386647 399793
424	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	728	9	386585 399745
425	**Points of Interest - Public Infrastructure** Name: Texaco Location: 55 St. Marys Road, Manchester, M40 3AR Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A16NW (NE)	658	9	387874 401149
425	**Points of Interest - Public Infrastructure** Name: Murco Petroleum Ltd Location: 55 St. Marys Road, Manchester, M40 3AR Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A16NW (NE)	659	9	387875 401150
425	**Points of Interest - Public Infrastructure** Name: Newton Heath Murco Service Station Location: 55 St. Marys Road, Manchester, M40 3AR Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A16NW (NE)	659	9	387875 401150
425	**Points of Interest - Public Infrastructure** Name: Newton Heath Service Station Location: St Marys Road, Newton Heath, Manchester, Lancashire, M40 3AR Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A16NW (NE)	659	9	387875 401150
426	**Points of Interest - Public Infrastructure** Name: Total Location: 571 Oldham Road, Manchester, M40 5AF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400145
426	**Points of Interest - Public Infrastructure** Name: Shell Location: 571 Oldham Road, Manchester, M40 5AF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400144

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
426	**Points of Interest - Public Infrastructure** Name: Tcs Monsall Location: 571 Oldham Road, Manchester, M40 5AF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400145
426	**Points of Interest - Public Infrastructure** Name: Shell Oldham Road Location: 571 Oldham Road, Manchester, M40 5AF Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10SW (W)	671	9	386495 400145
427	**Points of Interest - Public Infrastructure** Name: Greater Manchester Police Location: One Central Park, Northampton Road, Manchester, M40 5BP Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A14SE (NW)	692	9	386668 400668
428	**Points of Interest - Public Infrastructure** Name: European Metal Recycling Location: Irlam Street, Manchester, M40 2BP Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A10SW (W)	718	9	386471 400002
429	**Points of Interest - Public Infrastructure** Name: Philips Park Cemetery Location: M11 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	742	9	387573 399291
430	**Points of Interest - Public Infrastructure** Name: Philips Park Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A7SE (S)	743	9	387273 399313
431	**Points of Interest - Public Infrastructure** Name: Philips Park Cemetery Location: Hulme Hall La, Manchester, Lancashire, M40 8HE Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to address or location	A7SW (S)	801	9	386951 399346
431	**Points of Interest - Public Infrastructure** Name: Philips Park Cemetery Location: M40 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A7SW (S)	881	9	386945 399264
432	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	831	9	386504 399682
433	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8SE (SE)	866	9	388060 399378
433	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8SE (SE)	867	9	388058 399375
434	**Points of Interest - Public Infrastructure** Name: Modern Waste Recycling Ltd Location: Unit 1 Hillbit House, Miles Platting, Manchester, M40 8AW Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A6NW (W)	898	9	386308 399919

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
435	**Points of Interest - Public Infrastructure** Name: Philips Park Junction Location: M40 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A6SE (SW)	909	9	386711 399350
435	**Points of Interest - Public Infrastructure** Name: Philips Park Fire Station Location: Philips Park Fire Station, Briscoe Lane, Manchester, M40 2XG Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A6SE (SW)	927	9	386747 399305
435	**Points of Interest - Public Infrastructure** Name: Greater Manchester County Fire Service Location: Fire Station, Briscoe Lane, Manchester, M40 2XG Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A6SE (SW)	932	9	386745 399300
435	**Points of Interest - Public Infrastructure** Name: Greater Manchester County Fire Service Location: Fire Station, Briscoe Lane, Manchester, M40 2XG Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A6SE (SW)	932	9	386745 399300
436	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	965	9	386392 399609
436	**Points of Interest - Public Infrastructure** Name: Weirs Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6SW (SW)	999	9	386372 399578
437	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A11NE (NE)	24	9	387482 400439
438	**Points of Interest - Recreational and Environmental** Name: Playground Location: Grimshaw Lane, M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A10SE (W)	454	9	386732 400049
439	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	725	9	388177 399623
440	**Points of Interest - Recreational and Environmental** Name: Playground Location: Joan Street, M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19SE (N)	855	9	387496 401305
441	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	909	9	387692 399143
442	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A3NE (S)	987	9	387243 399068

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
443	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A10NW (W)	999	9	386236 400555

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
444	**Areas of Adopted Green Belt** Authority: Manchester City Council Plan Name: Proposals Map **Status: Adopted** Plan Date: 11th July 2012	A8SW (SE)	583	11	387806 399545
445	**Local Nature Reserves** Name: Clayton Vale Multiple Area: N Area (m2): 525664.49 Source: Natural England Designation Date: 26th July 2006	A8SW (SE)	603	10	387814 399525
446	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	A11NE (NE)	0	4	387450 400550

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
Manchester City Council - Environmental Health Department	October 2017	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Salford City Council - Environmental Health Department	October 2017	Annual Rolling Update
Rochdale Metropolitan Borough Council - Environmental Health Department	October 2017	Annually
Discharge Consents		
Environment Agency - North West Region	April 2022	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	
Integrated Pollution Controls		
Environment Agency - North West Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	April 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Salford City Council - Environmental Health Department	March 2015	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	May 2022	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Water Abstractions		
Environment Agency - North West Region	July 2022	Quarterly
Water Industry Act Referrals		
Environment Agency - North West Region	October 2017	

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	May 2021	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	May 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	May 2022	Quarterly
Flood Defences Environment Agency - Head Office	May 2022	Quarterly
OS Water Network Lines Ordnance Survey	April 2022	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Environment Agency - Head Office	April 2022	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Local Authority Landfill Coverage		
Manchester City Council - Planning Department	February 2003	Not Applicable
Oldham Metropolitan Borough Council	February 2003	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	February 2003	Not Applicable
Salford City Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Manchester City Council - Planning Department	October 2018	
Oldham Metropolitan Borough Council	October 2018	
Rochdale Metropolitan Borough Council - Environmental Health Department	October 2018	
Salford City Council - Environmental Health Department	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	January 2022	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Salford City Council	June 2016	Variable
Planning Hazardous Substance Consents		
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Salford City Council	June 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	December 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2022	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	June 2022	Quarterly
Points of Interest - Education and Health PointX	June 2022	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2022	Quarterly
Points of Interest - Public Infrastructure PointX	June 2022	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2022	Quarterly
Underground Electrical Cables National Grid	May 2021	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
Manchester City Council	October 2020	Quarterly
Oldham Metropolitan Borough Council	October 2020	Quarterly
Rochdale Metropolitan Borough Council	October 2020	Quarterly
Salford City Council	October 2020	Quarterly
Areas of Unadopted Green Belt		
Manchester City Council	October 2020	Quarterly
Oldham Metropolitan Borough Council	October 2020	Quarterly
Rochdale Metropolitan Borough Council	October 2020	Quarterly
Salford City Council	October 2020	Quarterly
Areas of Outstanding Natural Beauty		
Natural England	January 2021	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	
Environment Agency - Head Office	June 2017	Bi-Annually
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2021	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	February 2021	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
4	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
7	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
10	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
11	**Manchester City Council** Town Hall, Albert Square, Manchester, Greater Manchester, M60 2JT	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
298878396_1_1

Customer Reference:
Ten Acres

National Grid Reference:
388530, 400380

Slice:
B

Site Area (Ha):
18.51

Search Buffer (m):
1000

Site Details:

Site at 387600, 400310

Client Details:

Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thorncliffe Park
Chapletown
Sheffield
S35 2PH

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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents					
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 1			2	2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1			Yes	
Pollution Incidents to Controlled Waters	pg 2			1	4
Prosecutions Relating to Authorised Processes	pg 2			1	
Registered Radioactive Substances					
River Quality	pg 3	1		1	1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 3				1
Water Abstractions	pg 3				(*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 4	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 4		1		15

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 7				1
Historical Landfill Sites	pg 7				7
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 8			3	5
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 10			1	3
Potentially Infilled Land (Water)	pg 10			3	30
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 12			1	1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 14	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 14	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 15				Yes
BGS Urban Soil Chemistry Averages	pg 15	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 15	Yes	n/a	n/a	n/a
Mining Instability	pg 15	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 17			7	74
Fuel Station Entries	pg 24			1	2
Points of Interest - Commercial Services	pg 24			6	28
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 27			2	17
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Points of Interest - Recreational and Environmental	pg 30				5
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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 31				1
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 31				1
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 31	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9NW (NW)	0	1	388532 400376
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (S)	27	1	388532 400000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	274	1	387750 400750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	301	1	387600 400800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	310	1	387850 400800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	324	1	387800 400850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	366	1	387350 399500
1	**Local Authority Pollution Prevention and Controls** Name: Woodlowe Coach & Body Works Ltd Location: Atlantic Works, Droylsden Road, Newton Heath, MANCHESTER, Greater Manchester, M10 6HD Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/38/93 Dated: 24th May 1994 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	B13SW (NW)	406	2	388246 400652
2	**Local Authority Pollution Prevention and Controls** Name: Heath Service Station Location: 1370 Oldham Road, Newton Heath, MANCHESTER, Lancashire, M40 1EZ Authority: Manchester City Council, Environmental Health Department Permit Reference: Pfs/49/98 Dated: 23rd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	B13SW (NW)	447	2	388249 400733
3	**Local Authority Pollution Prevention and Controls** Name: Failsworth Filling Station Location: 15 / 49 Oldham Road, Failsworth, MANCHESTER, Lancashire, M35 0BR Authority: Oldham Metropolitan Borough Council, Environmental Health Department Permit Reference: 4-003 Dated: 2nd September 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	666	3	388451 400822
4	**Local Authority Pollution Prevention and Controls** Name: Old Church Filling Station Location: Oldham Road, Failsworth, MANCHESTER, Lancashire, M35 0BH Authority: Oldham Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	B13NE (N)	854	3	388593 400949
	Nearest Surface Water Feature	B13SW (N)	369	-	388422 400656

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Pollution Incidents to Controlled Waters** Property Type: Connection To Surface Drains Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: Tributary Moston Brk Incident Date: 15th September 1995 Incident Reference: 95612350 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B9SW (SW)	421	4	388300 400100
6	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Natural Note: Moston Brook; Natural Ochre Incident Date: 9th February 1996 Incident Reference: 96610242 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B13NW (N)	828	4	388300 401200
7	**Pollution Incidents to Controlled Waters** Property Type: No Premises Identified Location: Bottom Of Mill Lane, Failsworth, OLDHAM, Lancashire Authority: Environment Agency, North West Region Pollutant: General Biodegradable : Tree Cuttings Note: Not Supplied Incident Date: 17th May 1999 Incident Reference: 27409 Catchment Area: Medlock Receiving Water: River Stretch (Freshwater) Cause of Incident: Unauthorised Activity : Flytipping: MOU Response C Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	B13NW (N)	880	4	388400 401195
7	**Pollution Incidents to Controlled Waters** Property Type: WSC Sewage, Sewerage & Supply: Anglian Water Limited Location: Moston, MOSTON, Greater Manchester Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 26th October 1999 Incident Reference: 33986 Catchment Area: Irk Receiving Water: River Stretch (Freshwater) Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	B13NW (N)	883	4	388405 401195
7	**Pollution Incidents to Controlled Waters** Property Type: Connection To Surface Drains Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: Moston Brook; Washing Machine Incident Date: 14th September 1995 Incident Reference: 95612352 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B13NW (N)	884	4	388400 401200
8	**Prosecutions Relating to Authorised Processes** Location: Land off Rothwell Street, Newton Heath, Manchester, M40 1EL Prosecution Text: Keeping Controlled Waste Comprising Around 250 Scrap Motor Vehicles And Associated Material In Breakers Yard. Prosecution Act: Epa S33(1)(B) & S33(6) Hearing Date: 2nd March 2001 Verdict: Guilty Fine: 2500 Costs: 1463.32 Positional Accuracy: Manually positioned to the road within the address or location	B13SW (NW)	475	4	388287 400723

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Qsl At Summit To Empress Processing Estimated Distance (km): 27.6 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	B9NW (N)	0	4	388479 400587
	River Quality Name: Moston Bk GQA Grade: River Quality F Reach: Qsl At Hale Lane Failsworth To Irk Estimated Distance (km): 5.6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	B13NW (N)	461	4	388378 401057
	River Quality Name: Medlock GQA Grade: River Quality E Reach: Lords Bk To Irwell Estimated Distance (km): 9.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	B5SW (S)	822	4	388378 399339
9	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 15th May 2006 Incident Reference: 399273 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: General Biodegradable Materials And Wastes: Vegetable Cuttings And Deposits Pollutant: Inert : Construction / Demolition Material	B13NW (N)	831	4	388452 401087
	Water Abstractions Operator: Manchester Abattoir Licence Number: 2569006021 Permit Version: 100 Location: Borehole At Clayton Mill Bridge, Manchester Authority: Environment Agency, North West Region Abstraction: Slaughtering: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 909 Yearly Rate (m3): 250030 Details: Land At Phillips Park, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 22nd May 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B6SW (SE)	1421	4	389100 399500
	Water Abstractions Operator: Astor Chemicals Limited Licence Number: 2569006011 Permit Version: Not Supplied Location: Rochdale Canal, Beresford Street, FAILSWORTH Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 600 Yearly Rate (m3): 54552 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B14NW (NE)	1452	4	389200 401100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	(W)	0	5	388000 400376
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B9NW (NW)	0	5	388532 400376
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B9NW (NW)	0	5	388532 400376
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
10	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 638.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	B13SW (N)	222	6	388446 400671
11	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 287.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Moston Brook Catchment Name: Mersey Primacy: 1	B13NW (N)	677	6	388245 401136
12	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 9.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B13NW (N)	713	6	388247 401098
13	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B13NW (N)	716	6	388245 401102

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B13NW (N)	721	6	388247 401107
15	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B13NW (N)	725	6	388246 401112
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 845.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	B5SW (S)	730	6	388316 399504
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 446.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Moston Brook Catchment Name: Mersey Primacy: 1	B13NW (N)	745	6	388299 401124
18	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 18.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	B13SE (NE)	836	6	388698 400737
19	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 64.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 2	B13SE (NE)	836	6	388698 400737
20	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 25.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	B13SE (NE)	854	6	388715 400742
21	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 9.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	B13SE (NE)	879	6	388740 400748
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 290.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B9SE (SE)	882	6	388740 399938

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 127.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	B13SE (NE)	887	6	388749 400750
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 207.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	B13NW (N)	977	6	388477 401258
25	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 45.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	B5SW (S)	988	6	388550 399556

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**BGS Recorded Landfill Sites** Site Name: Clayton Vale Location: Clayton, MANCHESTER, Gt Manchester, M11 Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate	B5SW (S)	539	-	388526 399577
27	**Historical Landfill Sites** Licence Holder: Central Electricity Generating Board Location: Bank Bridge Road, Manchester Name: Clayton Vale Power Station Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16476 First Input Date: 31st December 1901 Last Input Date: 31st December 1980 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9178 BGS Ref: Not Supplied Other Ref: GDO F001,RD/LIC/045/76	B5NW (S)	527	4	388336 399729
28	**Historical Landfill Sites** Licence Holder: Central Electricity Generating Board Location: Bank Bridge Road, Manchester Name: Clayton Vale Power Station Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16480 First Input Date: 31st December 1965 Last Input Date: 31st December 1968 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9729 BGS Ref: Not Supplied Other Ref: RD/LIC/045/76,GDO F001	B5SW (S)	536	4	388562 399582
29	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Clayton, Manchester, Greater Manchester Name: Clayton Vale Operator Location: Stuart Street Power Station Boundary Accuracy: As Supplied Provider Reference: EAHLD32041 First Input Date: 31st December 1901 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 2777 Other Ref: Not Supplied	B5SW (S)	538	4	388527 399578
30	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Newton Heath, Manchester, Greater Manchester Name: Land off Reliance Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16433 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F041	B13NW (N)	602	4	388274 401009

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Failsworth, Greater Manchester Name: Land at Mill Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16434 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: G109	B13NW (N)	641	4	388308 400961
32	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Moston, Manchester, Greater Manchester Name: Land to the rear of Fairway Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16384 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F021, G036	B13NW (N)	687	4	388366 401157
33	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Mill Street, Failsworth, Greater Manchester Name: Land off Mill Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16429 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: G104	B13NW (N)	819	4	388432 401089
34	**Licensed Waste Management Facilities (Locations)** Licence Number: 50081 Location: Rothwell Street, Newton Heath, Manchester, M40 1EL Operator Name: Hafiz Mohammed Operator Location: 3 , Oldham, Lancs, OL4 1EL Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Issued** Issued: 3rd July 2001 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SW (NW)	441	4	388257 400708
34	**Licensed Waste Management Facilities (Locations)** Licence Number: 50081 Location: Land/premises At, Rothwell Street, Newton Heath, Manchester, M40 1EL Operator Name: Hygrade Motor Spares Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Expired** Issued: 3rd July 2001 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SW (NW)	441	4	388257 400708

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	**Licensed Waste Management Facilities (Locations)** Licence Number: 104837 Location: Hygrade Motor Spares, Rothwell Street, Newton Heath, Manchester, M40 1EL Operator Name: Mr Mohammed Qadeer & Mr Shafqut Ali Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Vehicle Depollution Facility <5000 tps **Licence Status: Modified** Issued: 25th March 2013 Last Modified: 11th July 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SW (NW)	463	4	388292 400687
35	**Licensed Waste Management Facilities (Locations)** Licence Number: 400829 Location: Unit 26 Failsworth Ind Est, Morton Street, Failsworth, Oldham, Lancashire, M35 0BN Operator Name: Blackstone Breakers Limited Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Vehicle Depollution Facility <5000 tps **Licence Status: Revoked** Issued: 1st November 2013 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 20th September 2016 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SW (N)	673	4	388391 400921
36	**Licensed Waste Management Facilities (Locations)** Licence Number: 53606 Location: Morton Street, Failsworth, Manchester, M35 0BN Operator Name: Mr Adam Peter Stott & Mr David John Koomen Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Transferred** Issued: 29th March 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13NW (N)	721	4	388364 401019
36	**Licensed Waste Management Facilities (Locations)** Licence Number: 404537 Location: A1 Jap Spares Ltd, Mill Lane, Failsworth, Manchester, M35 0BJ Operator Name: A1 Jap Spares Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Vehicle depollution facility **Licence Status: Issued** Issued: 24th April 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	B13NW (N)	733	4	388400 401000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Licensed Waste Management Facilities (Locations)** Licence Number: 50048 Location: Mill Lane, Failsworth, Manchester, M35 0BJ Operator Name: Khan Gustasaf Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Modified** Issued: 7th June 2002 Last Modified: 11th June 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13NW (N)	779	4	388385 401078
38	**Licensed Waste Management Facilities (Locations)** Licence Number: 50439 Location: Manchester Auto Spares, Hobson Street, Failsworth, Manchester, M35 0JH Operator Name: Mr Graham Sykes & Mr Robert Lewtas Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: End of Life Vehicles **Licence Status: Modified** Issued: 24th February 2006 Last Modified: 24th July 2012 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	B13SE (N)	826	4	388621 400840
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		0	7	388532 400376
	Local Authority Landfill Coverage Name: Oldham Metropolitan Borough Council - Has not been able to supply Landfill data		589	8	388683 400620
39	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	B13NW (N)	461	-	388309 400969
40	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B5NW (S)	644	-	388336 399723
41	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	B13NW (N)	768	-	388348 401182
42	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B5NE (S)	986	-	388662 399648
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	454	-	388318 400069
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	464	-	388344 400089
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B13SW (NW)	474	-	388346 400620
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	540	-	388348 399973
47	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9SW (S)	574	-	388393 399972

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13SW (N)	631	-	388377 400891
49	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NW (SW)	652	-	388238 399750
50	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5NW (SW)	653	-	388282 399779
51	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B13NW (N)	673	-	388308 401119
52	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B9SE (SE)	716	-	388658 400195
53	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B13NW (N)	722	-	388376 401156
54	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B5NW (S)	731	-	388482 399836
55	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NW (S)	766	-	388386 399711
56	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B13NW (N)	835	-	388378 401156
57	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5NE (S)	845	-	388609 399788
58	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B13SE (N)	852	-	388686 400789
59	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9NE (E)	853	-	388808 400430
60	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NE (S)	861	-	388656 399799
61	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B5SW (S)	879	-	388345 399533
62	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5SW (S)	881	-	388316 399522
63	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B5NE (S)	899	-	388609 399726
64	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13NW (N)	903	-	388451 401185
65	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13SE (NE)	903	-	388774 400733
66	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B9SE (SE)	920	-	388869 400192
67	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13NE (N)	933	-	388606 401069
68	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5SW (S)	937	-	388258 399424

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9NE (E)	943	-	388902 400361
70	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5SW (S)	964	-	388348 399450
71	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13SE (NE)	974	-	388827 400790
72	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13NW (N)	975	-	388496 401241
73	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B5SW (S)	986	-	388536 399548
74	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B10NW (E)	988	-	388934 400499
75	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13NE (N)	995	-	388695 401052
76	**Registered Waste Treatment or Disposal Sites** Licence Holder: M Hafiz Licence Reference: Eawml50081 Site Location: Rothwell Street, Newton Heath, Manchester, Greater Manchester, M40 1el Operator Location: 3 Morris Street, Oldham, Lancashire, Ol4 1el Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 3rd July 2001 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: New Licence, Wastes Not To Hand Scrap Motor Vehicles (Inferred From Regis Listing)	B13SW (NW)	431	4	388250 400700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Registered Waste Treatment or Disposal Sites				
77	Licence Holder: Breakdown Services Manchester Ltd Licence Reference: 01127 Site Location: Failsworth Autospares, Morton Street, Failsworth, MANCHESTER, Greater Manchester, M35 0BN Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st March 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Ferrous Metal Scrap Fibreglass Max.Waste Permitted By Licence Non-Ferrous Metal Scrap Paper/Cardboard Plastics Presorted Scrap Metal Restricted To Rubber Scrap Vehicles Textiles Wood Prohibited Waste: Asbestos (Other Than Parts Of Vehicles Bulk Powders Clinical Wastes Explosive Waste Pcbs Pressurised Wastes Special Wastes N.O.S. Violently Reactive Waste Waste Drums (Unless Pre-Cleaned) Waste N.O.S.	B13NW (N)	712	4	388370 401000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian Rocks (Undifferentiated)	B9NW (NW)	0	1	388532 400376
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NW (W)	0	1	388500 400376
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5NE (S)	30	1	388599 399727
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NW (NW)	248	1	388532 400376
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5SW (S)	457	1	388297 399577
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B17SW (N)	866	1	388468 401325
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5SW (S)	997	1	388500 399247

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 388260, 399690 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 22.60 mg/kg Cadmium Measured Concentration: 3.60 mg/kg Chromium Measured Concentration: 92.40 mg/kg Lead Measured Concentration: 126.40 mg/kg Nickel Measured Concentration: 37.20 mg/kg	B5NW (S)	715	1	388260 399690
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Manchester Count Id: 300 Arsenic Minimum Concentration: 3.00 mg/kg Arsenic Average Concentration: 28.00 mg/kg Arsenic Maximum Concentration: 1008.00 mg/kg Cadmium Minimum Concentration: 0.30 mg/kg Cadmium Average Concentration: 1.40 mg/kg Cadmium Maximum Concentration: 80.30 mg/kg Chromium Minimum Concentration: 29.00 mg/kg Chromium Average Concentration: 92.00 mg/kg Chromium Maximum Concentration: 1252.00 mg/kg Lead Minimum Concentration: 20.00 mg/kg Lead Average Concentration: 270.00 mg/kg Lead Maximum Concentration: 2687.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 32.00 mg/kg Nickel Maximum Concentration: 137.00 mg/kg	B9SW (S)	0	1	388532 400200
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	B9NW (NW)	0	9	388532 400376
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	B9NW (NW)	0	-	388532 400376
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	1	388532 400000
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	1	388532 400376

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	**Contemporary Trade Directory Entries** Name: M W Transport Services Location: 2, Briscoe Lane, Manchester, M40 1JX Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9NW (W)	279	-	388237 400361
79	**Contemporary Trade Directory Entries** Name: Manchester Car Sales Location: 1370, Oldham Road, Manchester, M40 1EZ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (NW)	455	-	388257 400735
79	**Contemporary Trade Directory Entries** Name: Manchester Car Sales Location: Oldham Rd, Manchester, Lancashire, M40 1EZ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (NW)	456	-	388251 400745
80	**Contemporary Trade Directory Entries** Name: Hygrade Motor Salvage Location: Rothwell Street, MANCHESTER, M40 1EL Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (NW)	463	-	388293 400686
80	**Contemporary Trade Directory Entries** Name: Hygrade Motor Spares Location: Rothwell Street, Manchester, M40 1EL Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (NW)	463	-	388293 400686
80	**Contemporary Trade Directory Entries** Name: Hygrade Motor Spares Location: Rothwell Street, Manchester, Lancashire, M40 1EL Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (NW)	463	-	388293 400686
81	**Contemporary Trade Directory Entries** Name: M Kelly Location: 3, Winnall Walk, Manchester, Lancashire, M40 1HL Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9NW (NW)	470	-	388360 400590
82	**Contemporary Trade Directory Entries** Name: M40 Cleaning Services Location: 217, Droylsden Road, Manchester, M40 1NY Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9NW (SE)	615	-	388572 400309
83	**Contemporary Trade Directory Entries** Name: F 1 Cars Location: Oldham Rd, Failsworth, Manchester, M35 0BH Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	616	-	388391 400824
83	**Contemporary Trade Directory Entries** Name: Pvc Vendo Location: Unit 5, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	640	-	388402 400850
83	**Contemporary Trade Directory Entries** Name: Failsworth Filling Station Location: 18, Oldham Road, Failsworth, Manchester, M35 0JE Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	645	-	388426 400822

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	**Contemporary Trade Directory Entries** Name: Washing Machine Service Location: 18, Oldham Road, Failsworth, Manchester, Lancashire, M35 0JE Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	645	-	388426 400822
83	**Contemporary Trade Directory Entries** Name: Texaco Location: 15-49 Oldham Road, Failsworth, Manchester, M35 0JE Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	649	-	388428 400827
83	**Contemporary Trade Directory Entries** Name: Vinyl Techniques Ltd Location: Meadow Ind Est,Hobson St, Failsworth, Manchester, M35 0JJ Classification: Door Manufacturers - Domestic **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	658	-	388454 400800
83	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Filling Station, Oldham Road, Failsworth, M35 0EJ Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	680	-	388464 400826
84	**Contemporary Trade Directory Entries** Name: Ice Kings Location: Unit 2,Victory Pk Ind Est, Failsworth, Manchester, Lancashire, M35 0BG Classification: Refrigeration Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	B13SW (N)	618	-	388434 400750
85	**Contemporary Trade Directory Entries** Name: Pdq Lifting Location: Failsworth Ind Est,Morton St, Failsworth, Manchester, M35 0BN Classification: Lifting Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	634	-	388362 400894
85	**Contemporary Trade Directory Entries** Name: Boardman Bros Ltd Location: Unit 12/15, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, Lancashire, M35 0BN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	642	-	388369 400898
85	**Contemporary Trade Directory Entries** Name: Gatewear Location: Unit 12-15, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Gate Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	642	-	388369 400898
85	**Contemporary Trade Directory Entries** Name: B P M Engineering Services Ltd Location: Unit 18, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Plastics - Machinery & Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	658	-	388358 400936
85	**Contemporary Trade Directory Entries** Name: Dapper Dippers Location: UNIT 18, FAILSWORTH INDUSTRIAL ESTATE, MORTON STREET, FAILSWORTH, MANCHESTER, M35 0BN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	662	-	388393 400900
85	**Contemporary Trade Directory Entries** Name: S W Motor Engineers Location: Sandfield House, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	B13SW (N)	663	-	388392 400904

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**Contemporary Trade Directory Entries** Name: B A R Janatorial Supplies Location: Unit 20, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Janitorial Equipment - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	670	-	388368 400942
85	**Contemporary Trade Directory Entries** Name: Phil Powell Location: Unit 9,Failsworth Ind Est,Morton St, Failsworth, Manchester, Lancashire, M35 0BN Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	676	-	388401 400912
85	**Contemporary Trade Directory Entries** Name: Gold Star Pallet Services Location: Morton Street, Failsworth, Manchester, Greater Manchester, M35 0BN Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	B13SW (N)	678	-	388399 400919
85	**Contemporary Trade Directory Entries** Name: J L Wood & Son Ltd Location: Unit 11, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	680	-	388396 400925
85	**Contemporary Trade Directory Entries** Name: Robeck Engineering Location: Failsworth Ind Est,Morton St, Failsworth, Manchester, M35 0BN Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	687	-	388411 400918
85	**Contemporary Trade Directory Entries** Name: Goldstar Pallet Services Ltd Location: The Yard, Morton Street, Failsworth, Manchester, M35 0BN Classification: Pallets, Crates & Packing Cases **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	688	-	388414 400915
85	**Contemporary Trade Directory Entries** Name: Intadex Location: Morton St, Failsworth, Manchester, Lancashire, M35 0BP Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	688	-	388410 400920
86	**Contemporary Trade Directory Entries** Name: Heritage Engineering North West Ltd Location: Unit 16, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	646	-	388346 400931
87	**Contemporary Trade Directory Entries** Name: Clearcoat Location: Unit 7,Meadow Ind Est,Hobson St, Failsworth, Manchester, M35 0JJ Classification: Spraying - Paint & Coatings **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	673	-	388474 400794
87	**Contemporary Trade Directory Entries** Name: Britmark Ltd Location: Unit 4, Meadow Industrial Estate, Hobson Street, Failsworth, Manchester, M35 0JJ Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	674	-	388474 400795
87	**Contemporary Trade Directory Entries** Name: Manorbrook Ltd Location: Unit 3, Meadow Industrial Estate, Hobson Street, Failsworth, Manchester, M35 0JJ Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	674	-	388474 400795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**Contemporary Trade Directory Entries** Name: North Manchester Powder Coatings Location: Unit 2, Meadow Industrial Estate, Hobson Street, Failsworth, Manchester, M35 0JJ Classification: Coating Specialists **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	B13SW (N)	674	-	388474 400795
87	**Contemporary Trade Directory Entries** Name: Velten Interiors Ltd Location: Unit 7, Meadow Industrial Estate, Hobson Street, Failsworth, Manchester, M35 0JJ Classification: Kitchen Furniture Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	674	-	388474 400795
87	**Contemporary Trade Directory Entries** Name: North Manchester Powder Coatings Location: Unit 2, Meadow Industrial Estate, Hobson Street, Failsworth, Manchester, M35 0JJ Classification: Powder Coatings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	674	-	388474 400795
88	**Contemporary Trade Directory Entries** Name: Prestigious Fabrications Location: Unit 3,Stanfield House,Morton St, Failsworth, Manchester, Lancashire, M35 0BN Classification: Aluminium Fabricators **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13NW (N)	700	-	388392 400960
89	**Contemporary Trade Directory Entries** Name: Turners Garage Location: 21, Oldham Road, Failsworth, Manchester, M35 0BR Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	709	-	388464 400881
89	**Contemporary Trade Directory Entries** Name: Newlink Ltd Location: Unit 25 Failsworth Ind Est,Greenhalgh St, Failsworth, Manchester, Lancashire, M35 0BW Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	750	-	388496 400908
90	**Contemporary Trade Directory Entries** Name: Failsworth Auto Spares Location: Sandfield House, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	733	-	388380 401020
90	**Contemporary Trade Directory Entries** Name: Breakdown Services Ltd Location: Sandfield House, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, Lancashire, M35 0BN Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13NW (N)	733	-	388380 401020
90	**Contemporary Trade Directory Entries** Name: Morton Street Crash Repair Location: Sandfield House, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13NW (N)	733	-	388380 401020
90	**Contemporary Trade Directory Entries** Name: Stott Location: Sandfield House, Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, Lancashire, M35 0BN Classification: Breakdown and Recovery **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13NW (N)	733	-	388380 401020

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**Contemporary Trade Directory Entries** Name: B'Kay Grab Hire Ltd Location: Sandfield House,Morton Street, Failsworth, Manchester, Greater Manchester, M35 0BN Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	734	-	388381 401021
90	**Contemporary Trade Directory Entries** Name: Failsworth Fiat Spares Location: Failsworth, M35 0BN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NW (N)	734	-	388381 401021
91	**Contemporary Trade Directory Entries** Name: Speed Print Services Ltd Location: Brook Street, Failsworth, Manchester, M35 0BS Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	735	-	388542 400794
91	**Contemporary Trade Directory Entries** Name: Tachograph Services M C R Ltd Location: Hobson Street, Failsworth, MANCHESTER, M35 0JH Classification: Industrial Instrument & Apparatus Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	735	-	388542 400794
92	**Contemporary Trade Directory Entries** Name: Northern Marking Location: Corn Street, Failsworth, Manchester, Lancashire, M35 0UE Classification: Road Construction Equipment Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	745	-	388526 400850
92	**Contemporary Trade Directory Entries** Name: Northern Marking Location: Corn Street, Failsworth, Manchester, Lancashire, M35 0UE Classification: Road Marking & Surfacing Equipment & Material Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	745	-	388526 400850
92	**Contemporary Trade Directory Entries** Name: Wheeler Reg Ltd Location: Peel St,Hobson St, Failsworth, Manchester, M35 0JF Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SW (N)	750	-	388536 400842
92	**Contemporary Trade Directory Entries** Name: The Watermain Reconditioning Co Location: 59-63, Hobson Street, Failsworth, Manchester, M35 0JH Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	757	-	388537 400854
92	**Contemporary Trade Directory Entries** Name: Firehawk Ltd Location: 4, Peel Street, Failsworth, Manchester, Lancashire, M35 0UF Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SW (N)	768	-	388543 400866
93	**Contemporary Trade Directory Entries** Name: Alex J Cheetham Ltd Location: Morton Street, Failsworth, MANCHESTER, M35 0BP Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	746	-	388471 400937
93	**Contemporary Trade Directory Entries** Name: L P Autos Ltd Location: Unit 5 Greenhalgh Street, Failsworth, Manchester, Greater Manchester, M35 0BW Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NW (N)	765	-	388488 400946

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	**Contemporary Trade Directory Entries** Name: Rahman Packaging Location: Greenhalgh Street, Failsworth, Manchester, M35 0BW Classification: Aluminium Fabricators **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	783	-	388491 400972
93	**Contemporary Trade Directory Entries** Name: Rahman Packaging Location: Greenhalgh Street, Failsworth, Manchester, M35 0BW Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	784	-	388492 400972
94	**Contemporary Trade Directory Entries** Name: Western Rebores & Co Location: 1, Mill Lane, Failsworth, Manchester, M35 0BJ Classification: Engine Rebuilding & Reconditioning **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SW (N)	778	-	388525 400914
94	**Contemporary Trade Directory Entries** Name: A1 Jap Spares Location: Mill La, Failsworth, Manchester, M35 0BJ Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13NW (N)	794	-	388510 400964
94	**Contemporary Trade Directory Entries** Name: Autoline Accident Repair Centre Ltd Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	805	-	388539 400944
94	**Contemporary Trade Directory Entries** Name: Auto Line Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	805	-	388539 400944
94	**Contemporary Trade Directory Entries** Name: Run Master Location: Unit 2, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (N)	812	-	388523 400977
94	**Contemporary Trade Directory Entries** Name: East M C M O T Ltd Location: Unit 1, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NW (N)	812	-	388523 400977
94	**Contemporary Trade Directory Entries** Name: H N Location: Unit 5 Mill Street, Failsworth, Manchester, Greater Manchester, M35 0BY Classification: Tyre Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	B13NW (N)	839	-	388561 400970
95	**Contemporary Trade Directory Entries** Name: H & J Reclaimed Timber Location: Mill La, Failsworth, Manchester, M35 0BJ Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13NW (N)	809	-	388472 401034
96	**Contemporary Trade Directory Entries** Name: Manchester Auto Spares Ltd Location: Hobson Street, Failsworth, Manchester, M35 0JH Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	814	-	388611 400835
96	**Contemporary Trade Directory Entries** Name: Manchester Japanese Spares Location: Hobson Street, Failsworth, Manchester, M35 0JH Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	814	-	388611 400835

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	**Contemporary Trade Directory Entries** Name: Manchester Motor Spares Location: Hobson Street, Failsworth, Manchester, M35 0JH Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	814	-	388611 400835
96	**Contemporary Trade Directory Entries** Name: R & G Van Spares Location: Hobson Street, Failsworth, Manchester, M35 0JH Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	814	-	388611 400835
96	**Contemporary Trade Directory Entries** Name: Bellis Brothers Tyres Ltd Location: Hobson Street, Failsworth, Manchester, M35 0JH Classification: Tyre Repairs & Retreading **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SE (N)	819	-	388609 400851
96	**Contemporary Trade Directory Entries** Name: Manage Support Services Location: Ground Floor,Barons Court,Manchester Road, Stockport, Cheshire, SK1 9BQ Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SE (N)	842	-	388654 400821
96	**Contemporary Trade Directory Entries** Name: Crown Metal Fabrications Ltd Location: 24-26, Albert Street West, Failsworth, MANCHESTER, M35 0JN Classification: Wire Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SE (N)	857	-	388652 400850
96	**Contemporary Trade Directory Entries** Name: John Gregory & Sons (P M) Ltd Location: 24-26, Albert Street West, Failsworth, Manchester, M35 0JN Classification: Boxes & Cartons **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	857	-	388652 400850
97	**Contemporary Trade Directory Entries** Name: All Round Mobile Car Repairs Location: 37, Brookdale Avenue, Manchester, M40 1GH Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (SE)	869	-	388733 399953
98	**Contemporary Trade Directory Entries** Name: F S Simione Location: Old St. Marys RC School, Griffin Road, Failsworth, Manchester, M35 0UA Classification: Clothing Accessory Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NE (N)	882	-	388578 401021
98	**Contemporary Trade Directory Entries** Name: F S Simione Location: Old St. Marys RC School,Griffin Rd, Failsworth, Manchester, Lancashire, M35 0UA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B13NE (N)	884	-	388578 401024
99	**Contemporary Trade Directory Entries** Name: New Century Blinds Location: 29, William Lister Close, Manchester, M40 1PU Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NW (S)	886	-	388538 399676
99	**Contemporary Trade Directory Entries** Name: Drain Services N W Ltd Location: 211, Culcheth Lane, Manchester, M40 1WB Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NW (S)	922	-	388568 399655

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	**Contemporary Trade Directory Entries** Name: Pun Enterprise Location: Griffin Rd, Failsworth, Manchester, Lancashire, M35 0UA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13NE (N)	894	-	388631 400964
100	**Contemporary Trade Directory Entries** Name: Performance Developments Location: Oldham Rd, Failsworth, Manchester, Lancashire, M35 0BH Classification: Window Tinting **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13NE (N)	917	-	388662 400958
101	**Contemporary Trade Directory Entries** Name: Dr Pest Control Location: 4, CARNOUSTIE CLOSE, MANCHESTER, M40 3NF Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	B17SW (N)	971	-	388261 401381
102	**Contemporary Trade Directory Entries** Name: Y K H Motors Location: 101, OLDHAM ROAD, FAILSWORTH, MANCHESTER, M35 0BH Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NE (N)	990	-	388696 401041
103	**Fuel Station Entries** Name: Heath Service Station Location: 1370, Oldham Road , Newton Heath , Manchester, Greater Manchester, M40 2NW Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	B13SW (NW)	458	-	388254 400745
104	**Fuel Station Entries** Name: Failsworth Service Station Location: 15-49, Oldham Road , Failsworth , Manchester, Greater Manchester, M35 0BR Brand: Shell Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	B13SW (N)	666	-	388451 400822
105	**Fuel Station Entries** Name: Old Church Service Station Location: Oldham Road , Failsworth , Oldham, Greater Manchester, M35 0BH Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	B13NE (N)	972	-	388692 401015
106	**Points of Interest - Commercial Services** Name: M W Transport Services Location: 2 Briscoe Lane, Manchester, M40 1JX Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	B9NW (W)	279	10	388237 400361
107	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M40 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13SW (NW)	443	10	388261 400705
107	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	B13SW (NW)	444	10	388263 400702
107	**Points of Interest - Commercial Services** Name: Hygrade Motor Spares Location: Rothwell Street, Manchester, M40 1EL Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13SW (NW)	463	10	388293 400685

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	**Points of Interest - Commercial Services** Name: M Kelly Location: 3 Winnall Walk, Manchester, M40 1HL Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B9NW (NW)	470	10	388360 400590
108	**Points of Interest - Commercial Services** Name: M Kelly Location: 3 Winnall Walk, Manchester, M40 1HL Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B9NW (NW)	470	10	388360 400590
109	**Points of Interest - Commercial Services** Name: B T C Motor Repairs Ltd Location: Units 13 14 and 15, Morton Street, Failsworth, M35 0BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SW (N)	641	10	388368 400898
109	**Points of Interest - Commercial Services** Name: Gatewear & Co Location: Unit 12-15 Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	B13SW (N)	642	10	388369 400898
109	**Points of Interest - Commercial Services** Name: R G S Wrought Iron Location: Unit 4 Failsworth Industrial Estate, Morton Street, Failsworth, M35 0BN Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	B13SW (N)	645	10	388407 400853
110	**Points of Interest - Commercial Services** Name: Dapper Dippers Location: Unit 18 Failsworth Industrial Estate, Morton Street, Failsworth, M35 0BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SW (N)	662	10	388393 400900
110	**Points of Interest - Commercial Services** Name: Turners Garage Location: 21 Oldham Road, Failsworth, M35 0BR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SW (N)	708	10	388464 400881
110	**Points of Interest - Commercial Services** Name: Alex J Cheetham Ltd Location: Morton Street, Failsworth, Manchester, M35 0BP Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	B13NW (N)	745	10	388470 400936
110	**Points of Interest - Commercial Services** Name: Alex J Cheetham Ltd Location: Morton Street, Failsworth, Manchester, M35 0BP Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	B13NW (N)	746	10	388471 400937
110	**Points of Interest - Commercial Services** Name: L P Autos Ltd Location: Unit 5, Greenhalgh Street, Failsworth, M35 0BW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	765	10	388488 400946
110	**Points of Interest - Commercial Services** Name: Western Rebores & Co Location: 1 Mill Lane, Failsworth, M35 0BJ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SW (N)	779	10	388527 400913
110	**Points of Interest - Commercial Services** Name: Autoline Accident Repair Centre Ltd Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	804	10	388538 400943

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	**Points of Interest - Commercial Services** Name: Auto-Line Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	805	10	388539 400944
110	**Points of Interest - Commercial Services** Name: Auto Line Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	805	10	388539 400944
110	**Points of Interest - Commercial Services** Name: Automobile Auto -Line Motor Body Repairs Location: Unit 4, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	805	10	388539 400944
110	**Points of Interest - Commercial Services** Name: East M C M O T Ltd Location: Unit 1 Victory Park Industrial Estate, Mill Lane, Failsworth, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	812	10	388523 400977
110	**Points of Interest - Commercial Services** Name: T J Automotives Location: Unit 2, Victory Park Industrial Estate, Failsworth, Manchester, M35 0BG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	813	10	388524 400978
111	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	B13NW (N)	678	10	388327 400994
111	**Points of Interest - Commercial Services** Name: Failsworth Fiat Spares Location: Failsworth Fiat Spares Sandfield House, Morton Street, Failsworth, M35 0BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	728	10	388377 401016
111	**Points of Interest - Commercial Services** Name: Morton Street Crash Repair Location: Sandfield House Failsworth Industrial Estate, Morton Street, Failsworth, Manchester, M35 0BN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13NW (N)	733	10	388380 401020
111	**Points of Interest - Commercial Services** Name: Failsworth Auto Spares Location: Morton Street, Failsworth, M35 0BN Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13NW (N)	734	10	388381 401021
111	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M35 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13NW (N)	737	10	388325 401073
112	**Points of Interest - Commercial Services** Name: Tachograph Services Location: Hobson Street, Failsworth, Manchester, M35 0JH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SW (N)	735	10	388542 400794
112	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	B13SE (N)	805	10	388609 400821

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**Points of Interest - Commercial Services** Name: Bellis Brothers Tyres Ltd Location: J Bellis and Sons, Hobson Street, Failsworth, M35 0JH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (N)	813	10	388604 400847
112	**Points of Interest - Commercial Services** Name: Oldham Van Spares Location: Hobson Street, Failsworth, Manchester, M35 0JH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (N)	814	10	388611 400835
113	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M35 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13NW (N)	789	10	388389 401088
113	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M35 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	B13NW (N)	790	10	388444 401037
114	**Points of Interest - Commercial Services** Name: Advanced Car Services Location: 14 Askett Close, Manchester, M40 1DD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (NE)	824	10	388704 400696
115	**Points of Interest - Commercial Services** Name: Dr Pest Control Location: 4 Carnoustie Close, Manchester, M40 3NF Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	B17SW (N)	971	10	388261 401381
116	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13SW (NW)	411	10	388248 400659
116	**Points of Interest - Manufacturing and Production** Name: Tank Location: M40 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13SW (NW)	440	10	388283 400651
117	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: M35 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	651	10	388366 400916
118	**Points of Interest - Manufacturing and Production** Name: Failsworth Industrial Estate Location: M35 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	651	10	388386 400891
118	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	701	10	388458 400877
118	**Points of Interest - Manufacturing and Production** Name: Works Location: M35 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B13SW (N)	704	10	388460 400880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13SW (N)	664	10	388484 400753
119	**Points of Interest - Manufacturing and Production** Name: Works Location: M35 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B13SW (N)	675	10	388498 400752
120	**Points of Interest - Manufacturing and Production** Name: Tank Location: M35 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	B13SW (N)	716	10	388571 400718
120	**Points of Interest - Manufacturing and Production** Name: Tank Location: M35 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13SE (N)	754	10	388582 400770
120	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13SE (N)	757	10	388578 400782
120	**Points of Interest - Manufacturing and Production** Name: Tank Location: M35 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13SE (N)	775	10	388623 400746
120	**Points of Interest - Manufacturing and Production** Name: Works Location: M35 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B13SE (N)	782	10	388603 400789
121	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13NW (N)	782	10	388492 400969
121	**Points of Interest - Manufacturing and Production** Name: Works Location: M35 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B13NW (N)	783	10	388497 400963
122	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NW (S)	840	10	388559 399759
123	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B13SE (N)	852	10	388651 400842
123	**Points of Interest - Manufacturing and Production** Name: Works Location: M35 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B13SE (N)	858	10	388657 400845

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	**Points of Interest - Manufacturing and Production** Name: Tank Location: M35 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B13NE (N)	928	10	388646 401004
125	**Points of Interest - Public Infrastructure** Name: Failsworth Filling Station Location: 18 Oldham Road, Failsworth, Manchester, M35 0JE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (N)	645	10	388426 400822
125	**Points of Interest - Public Infrastructure** Name: Failsworth Service Station Location: 18 Oldham Road, Failsworth, Manchester, M35 0JE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (N)	645	10	388426 400822
125	**Points of Interest - Public Infrastructure** Name: Texaco Location: 15-49 Oldham Road, Failsworth, Manchester, M35 0BR Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (N)	649	10	388428 400827
125	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Station Location: Filling Station, Oldham Road, Failsworth, M35 0EJ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (N)	666	10	388451 400822
125	**Points of Interest - Public Infrastructure** Name: Failsworth Service Station Location: 15-49 Oldham Road, Failsworth, Manchester, M35 0JE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (N)	666	10	388451 400822
126	**Points of Interest - Public Infrastructure** Name: B'kay Grab Hire Ltd Location: Sandfield House, Morton Street, Failsworth, Manchester, M35 0BN Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B13NW (N)	734	10	388381 401021
127	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B13NW (N)	797	10	388328 401145
127	**Points of Interest - Public Infrastructure** Name: Weir Location: M40 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B13NW (N)	801	10	388332 401147
128	**Points of Interest - Public Infrastructure** Name: Weir Location: M35 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B13SE (NE)	849	10	388709 400743
128	**Points of Interest - Public Infrastructure** Name: Morrisons Petrol Station Location: Poplar Street, Failsworth, M35 0HY Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SE (NE)	946	10	388792 400793
129	**Points of Interest - Public Infrastructure** Name: Graveyard Location: M35 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B13NE (N)	865	10	388586 400980

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
130	**Points of Interest - Public Infrastructure** Name: David's Drains Ltd Location: 211 Culcheth Lane, Manchester, M40 1WB Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B5NW (S)	922	10	388568 399655
131	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B5SW (S)	928	10	388341 399488
131	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B5SW (S)	931	10	388341 399484
131	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B5SW (S)	972	10	388366 399452
131	**Points of Interest - Public Infrastructure** Name: Weir Location: M11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	B5SW (S)	973	10	388369 399452
132	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5NW (S)	728	10	388290 399694
132	**Points of Interest - Recreational and Environmental** Name: Playground Location: Amos Avenue, M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5NW (S)	732	10	388299 399695
133	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B9SE (SE)	814	10	388763 400223
134	**Points of Interest - Recreational and Environmental** Name: Playground Location: Nr Miriam Street, M40 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B9NE (E)	945	10	388902 400395
134	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B9NE (E)	953	10	388910 400395

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	**Areas of Adopted Green Belt** Authority: Manchester City Council Plan Name: Proposals Map **Status: Adopted** Plan Date: 11th July 2012	B5SW (S)	583	11	388561 399581
136	**Local Nature Reserves** Name: Clayton Vale Multiple Area: N Area (m2): 525664.49 Source: Natural England Designation Date: 26th July 2006	B5SW (S)	603	13	388528 399575
137	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	B13SW (N)	0	5	388532 400700

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
Manchester City Council - Environmental Health Department	October 2017	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - North West Region	April 2022	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	
Integrated Pollution Controls		
Environment Agency - North West Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	April 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	May 2022	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Water Abstractions		
Environment Agency - North West Region	July 2022	Quarterly
Water Industry Act Referrals		
Environment Agency - North West Region	October 2017	
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	May 2021	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	May 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	May 2022	Quarterly
Flood Defences Environment Agency - Head Office	May 2022	Quarterly
OS Water Network Lines Ordnance Survey	April 2022	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Environment Agency - Head Office	April 2022	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North West Region - South Area	April 2022	Quarterly
Local Authority Landfill Coverage		
Manchester City Council - Planning Department	February 2003	Not Applicable
Oldham Metropolitan Borough Council	February 2003	Not Applicable
Tameside Metropolitan Borough Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Manchester City Council - Planning Department	October 2018	
Oldham Metropolitan Borough Council	October 2018	
Tameside Metropolitan Borough Council	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	January 2022	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Planning Hazardous Substance Consents		
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2022	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	December 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2022	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	June 2022	Quarterly
Points of Interest - Education and Health PointX	June 2022	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2022	Quarterly
Points of Interest - Public Infrastructure PointX	June 2022	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2022	Quarterly
Underground Electrical Cables National Grid	May 2021	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
Manchester City Council	October 2020	Quarterly
Oldham Metropolitan Borough Council	October 2020	Quarterly
Tameside Metropolitan Borough Council	October 2020	Quarterly
Areas of Unadopted Green Belt		
Manchester City Council	October 2020	Quarterly
Oldham Metropolitan Borough Council	October 2020	Quarterly
Tameside Metropolitan Borough Council	October 2020	Quarterly
Areas of Outstanding Natural Beauty		
Natural England	January 2021	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	
Environment Agency - Head Office	June 2017	Bi-Annually
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2021	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	February 2021	Bi-Annually

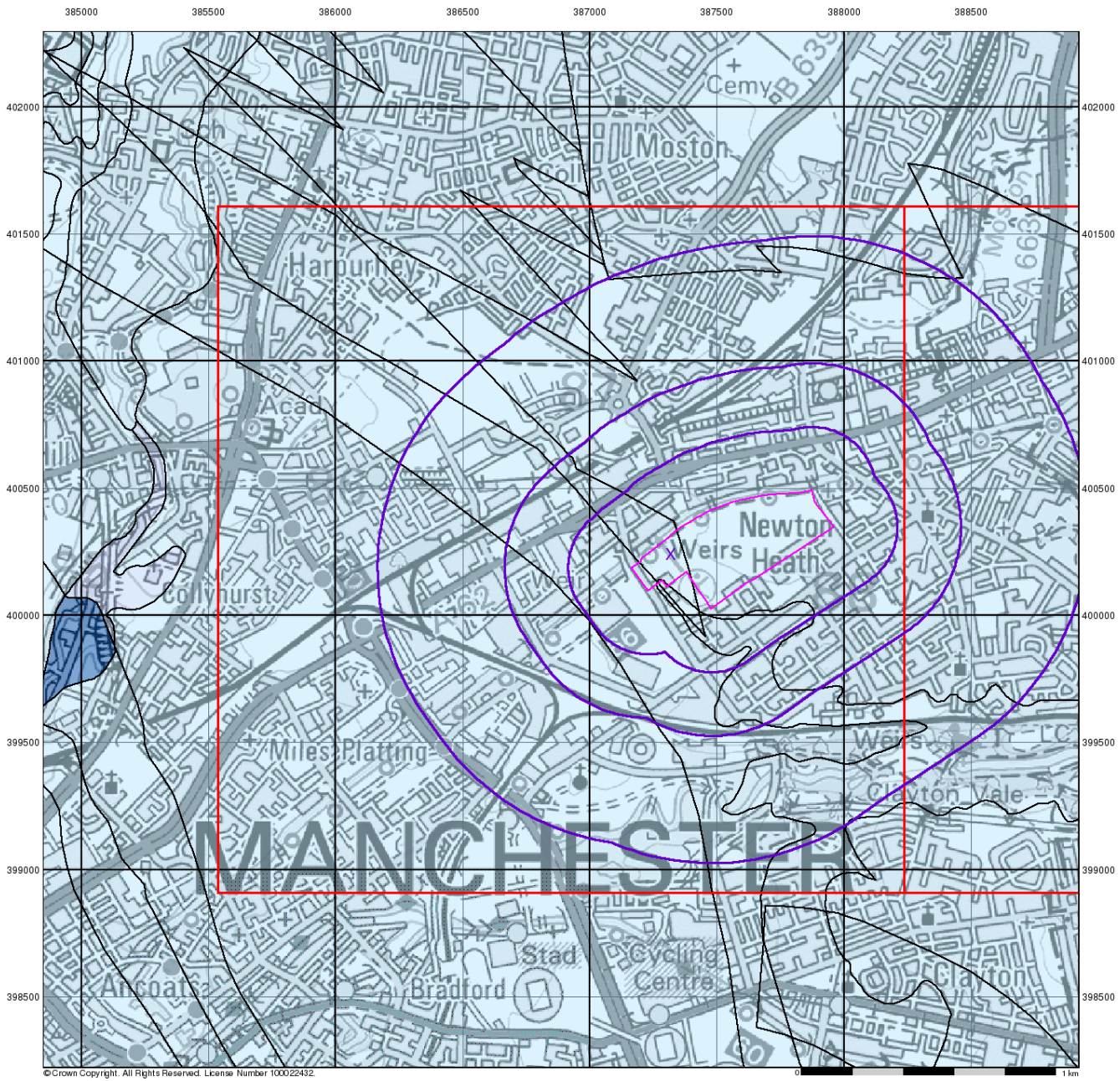
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
3	**Oldham Metropolitan Borough Council - Environmental Health Department** Area Office West End House, West End Street, Oldham, Lancashire, OL1 6DW	Telephone: 0161 911 4503 Fax: 0161 678 4550 Website: www.oldham.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
6	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
7	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
8	**Oldham Metropolitan Borough Council** Civic Centre, P O Box 55, West Street, Oldham, Lancashire, OL1 1XN	Telephone: 0161 911 3000 Fax: 0161 678 4550 Website: www.oldham.gov.uk
9	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
11	**Manchester City Council** Town Hall, Albert Square, Manchester, Greater Manchester, M60 2JT	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
12	**Tameside Metropolitan Borough Council** Wellington Road, Ashton-under-Lyne, Lancashire, OL6 6DL	Telephone: 0161 342 8355 Fax: 0161 342 3070 Website: www.tameside.gov.uk
13	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

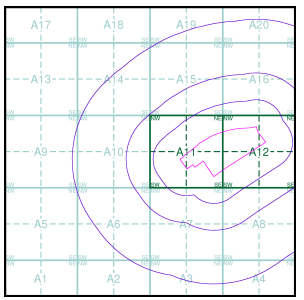
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A

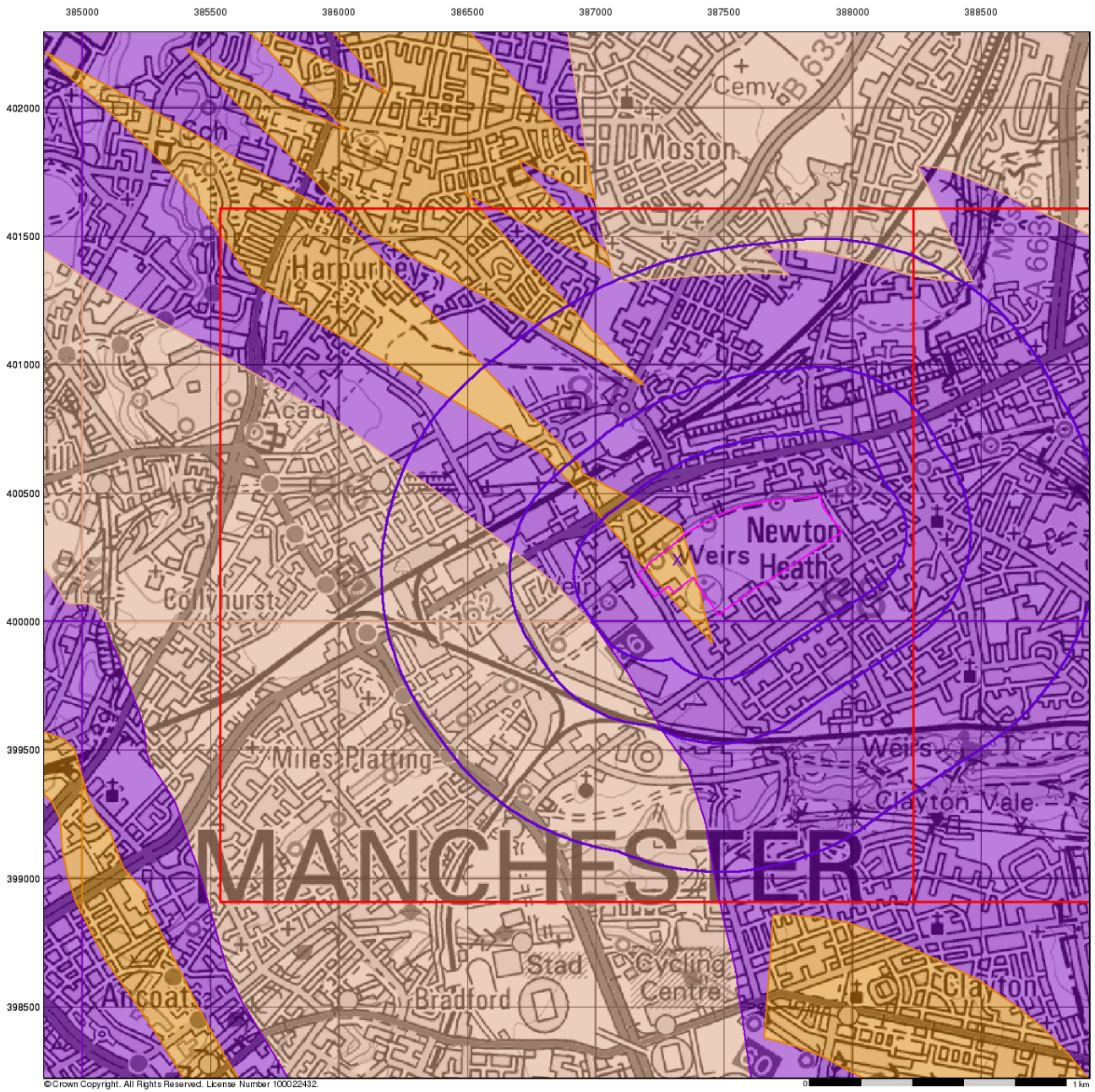


Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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Bedrock Aquifer Designation

General

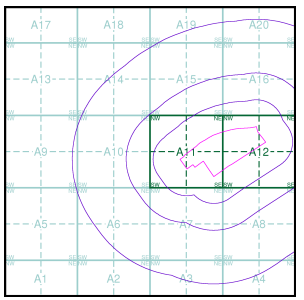
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

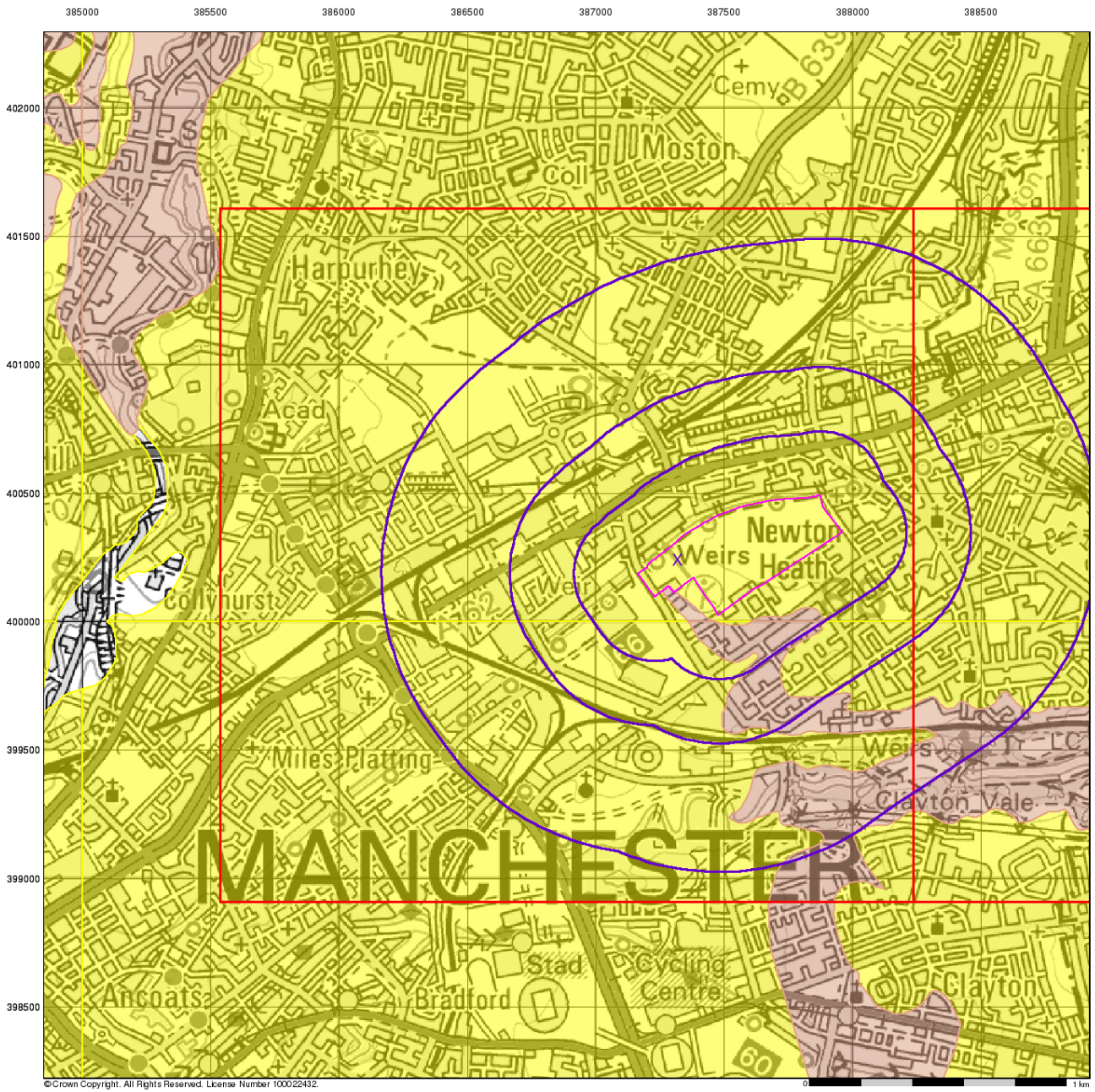


Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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Superficial Aquifer Designation

General

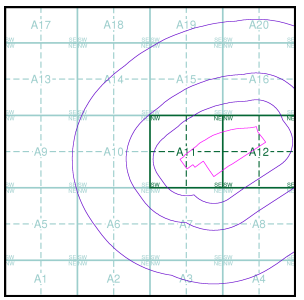
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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Source Protection Zones

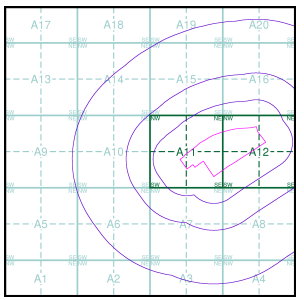
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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Sensitive Land Uses

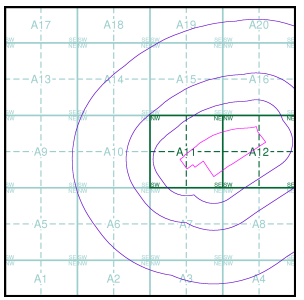
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A

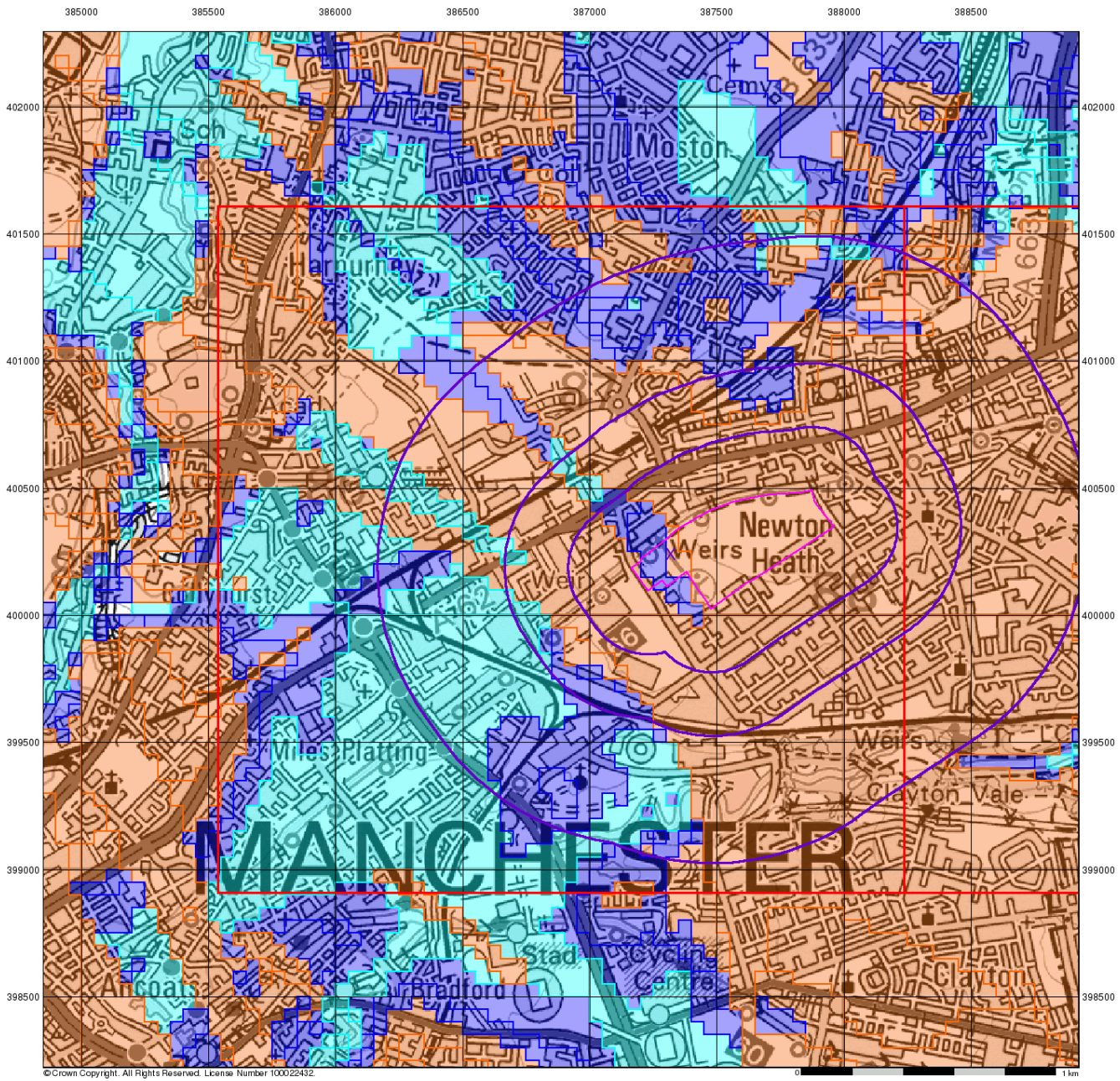


Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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BGS Flood GFS Data

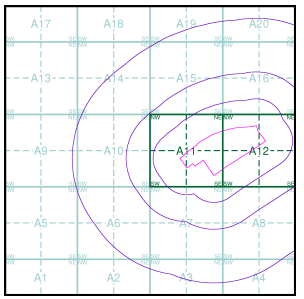
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A

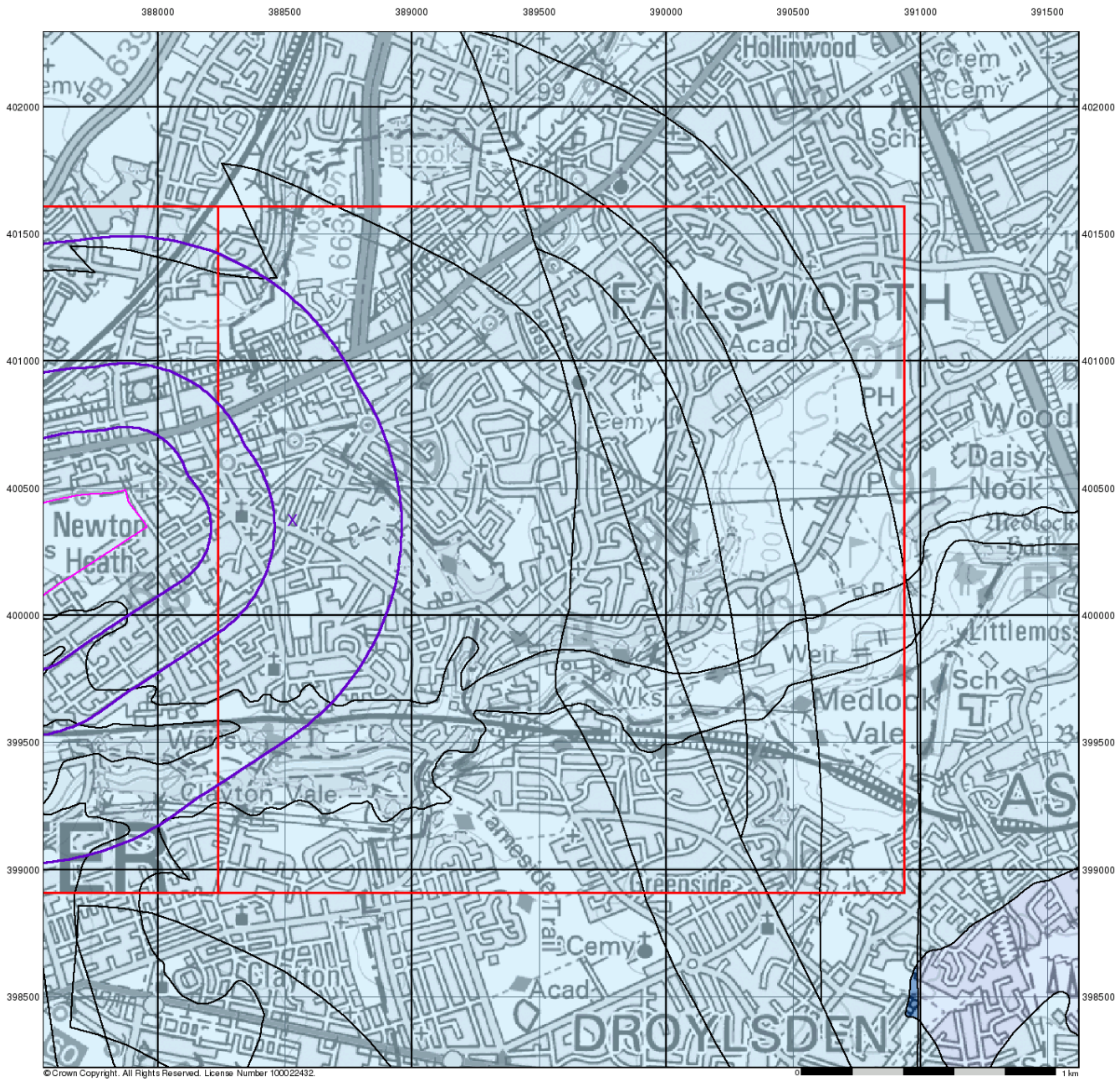


Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

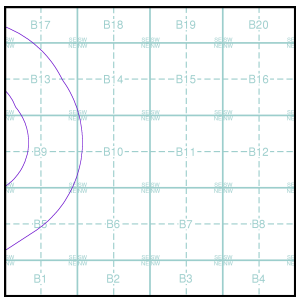
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice B



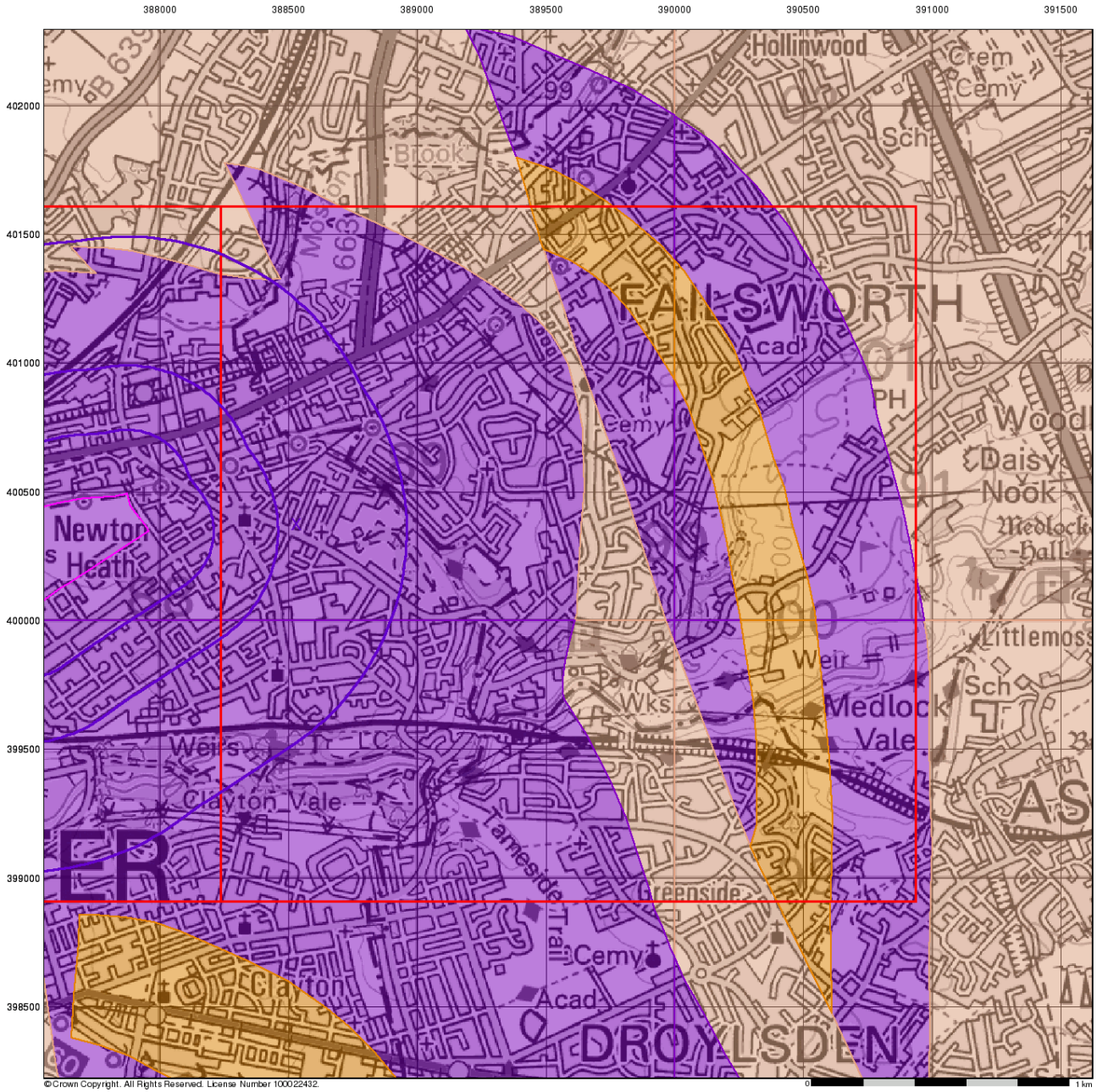
Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Bedrock Aquifer Designation

General

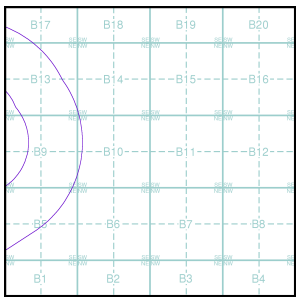
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B



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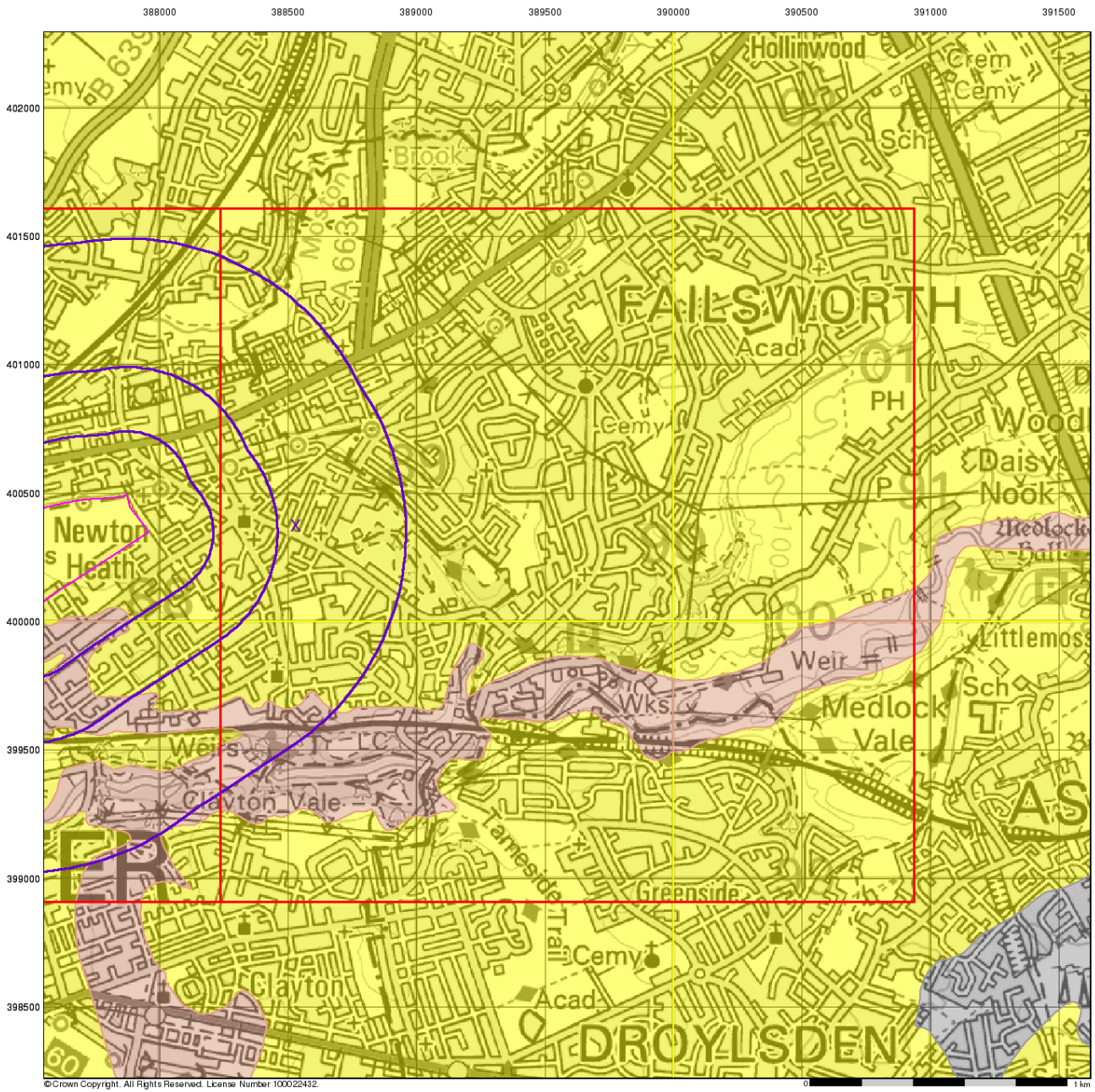
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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Superficial Aquifer Designation

General

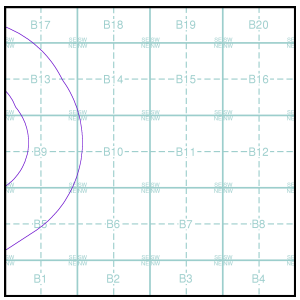
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B



Order Details

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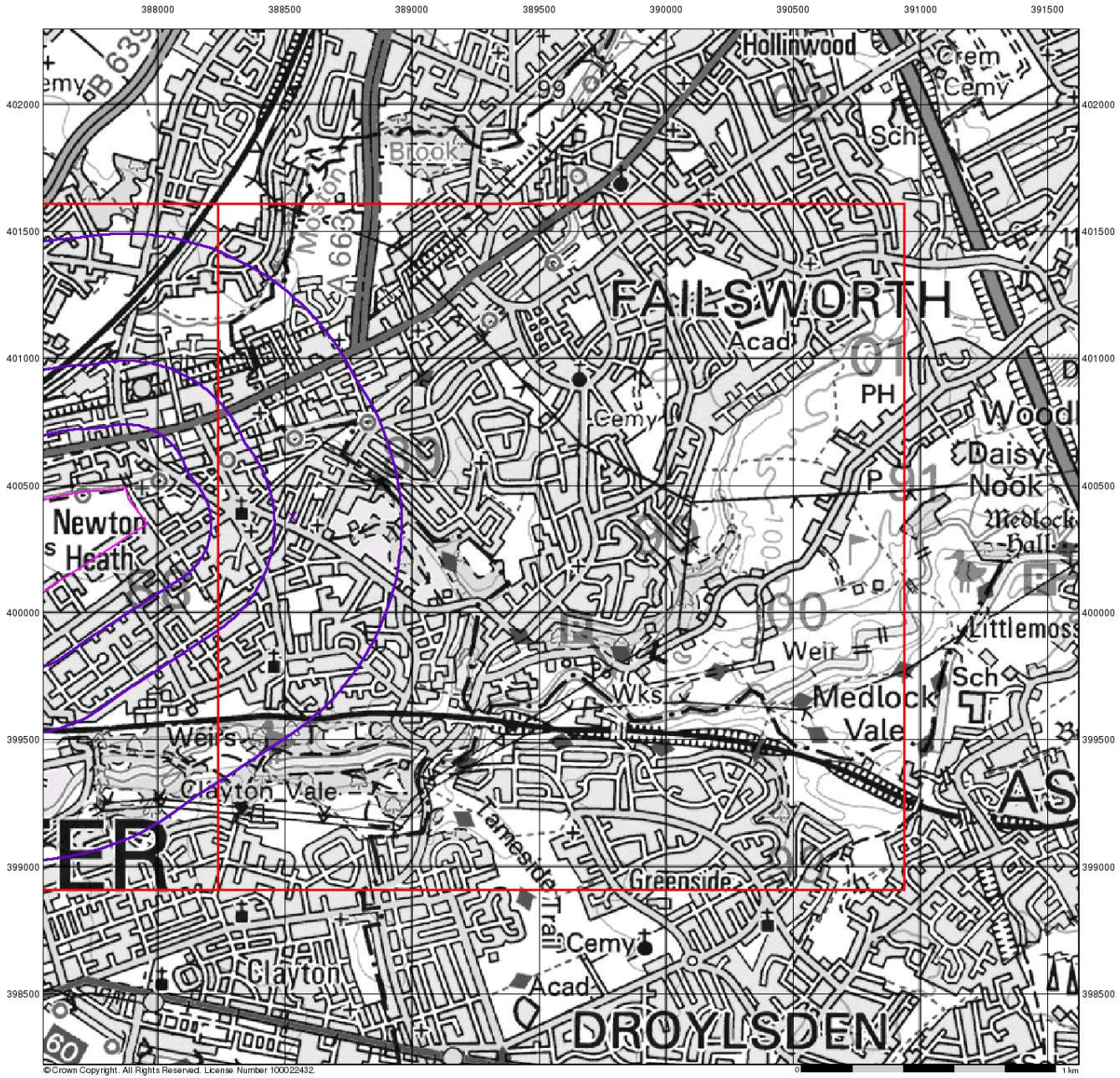
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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Source Protection Zones

General

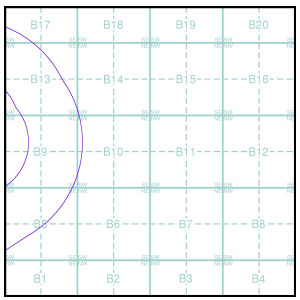
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice B



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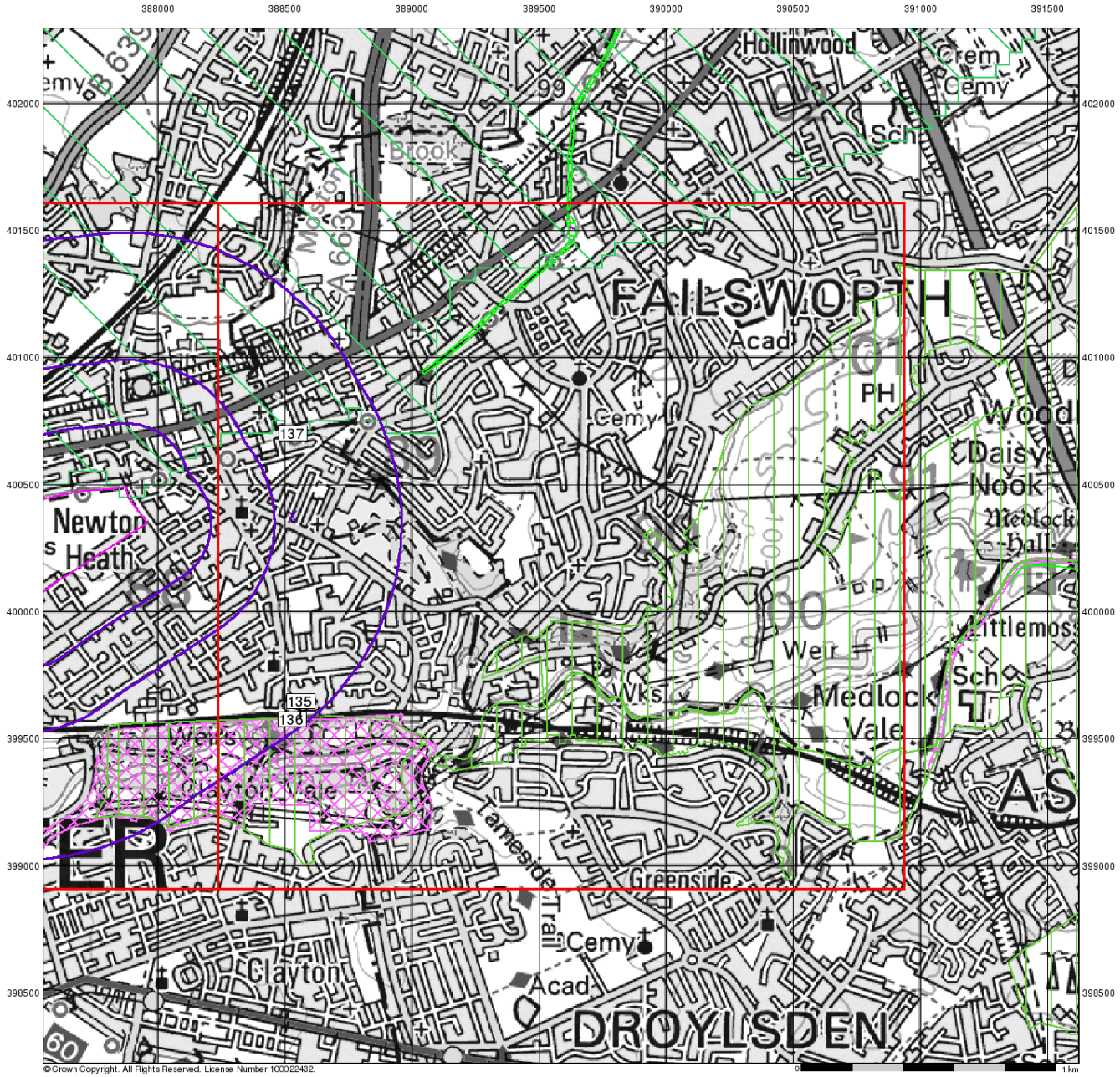
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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Sensitive Land Uses

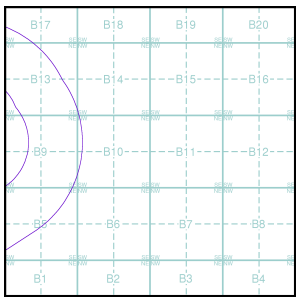
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice B



Order Details

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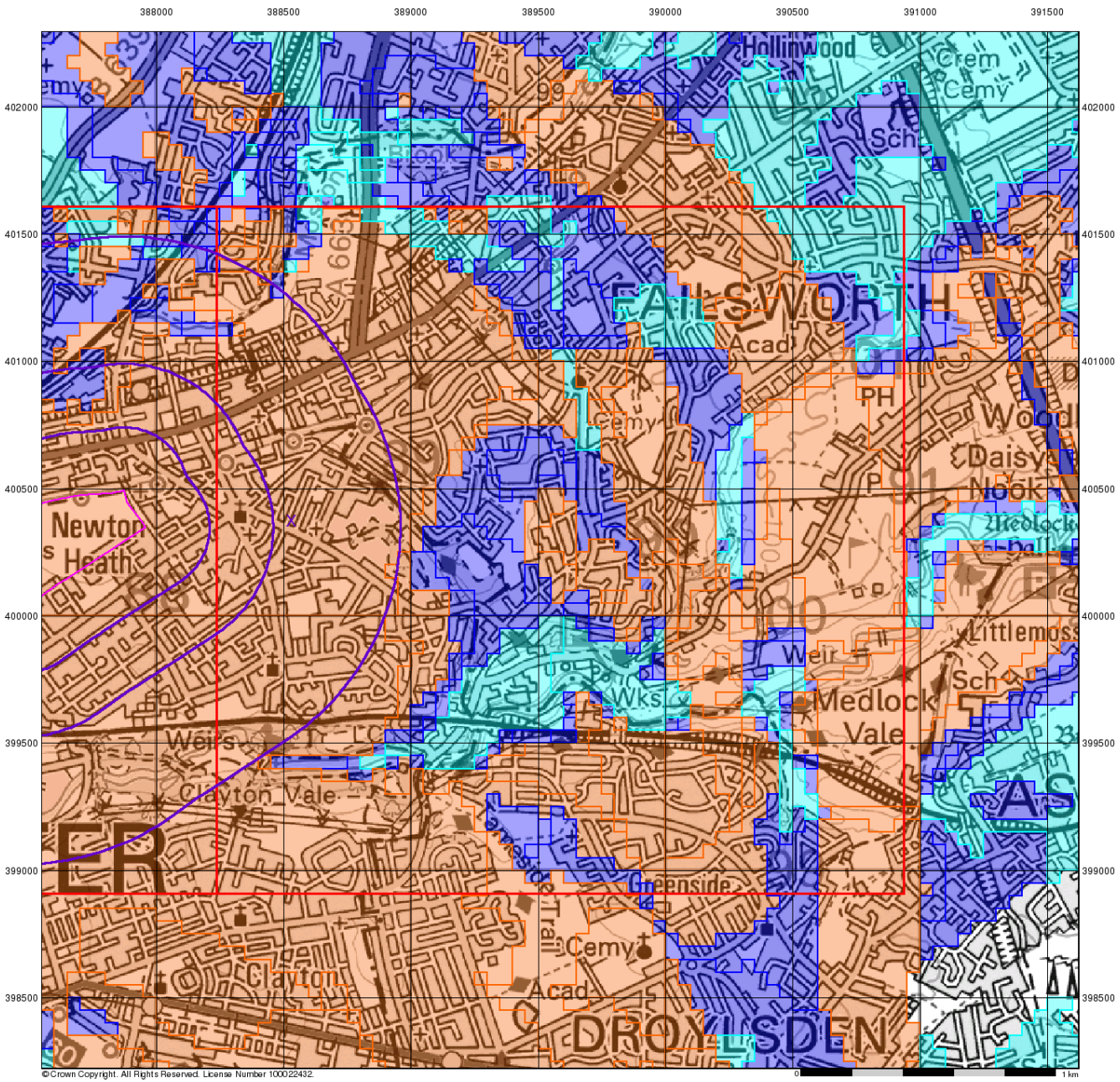
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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BGS Flood GFS Data

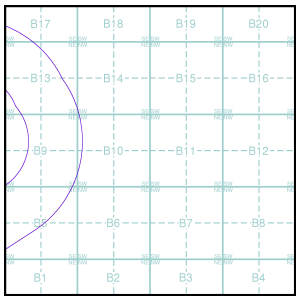
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice B



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National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
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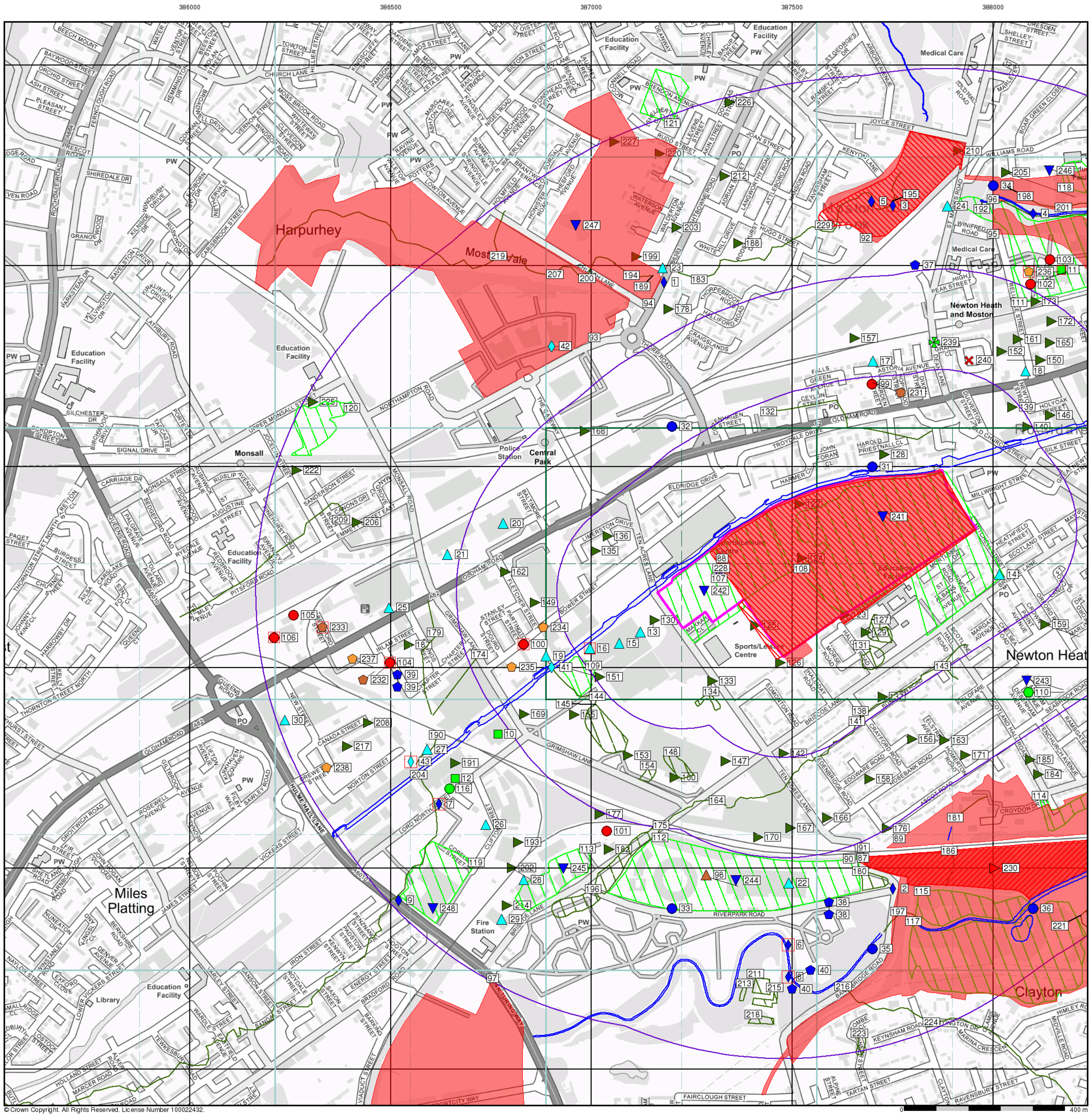
Site Details

Site at 387600, 400310



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General

Specified Site · Specified Buffer(s) · Bearing Reference Point · Map ID

Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

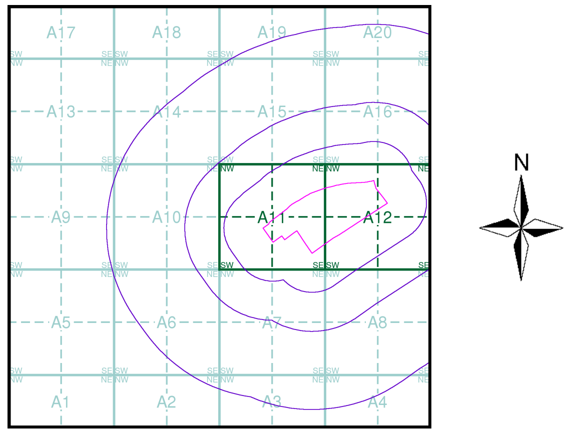
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

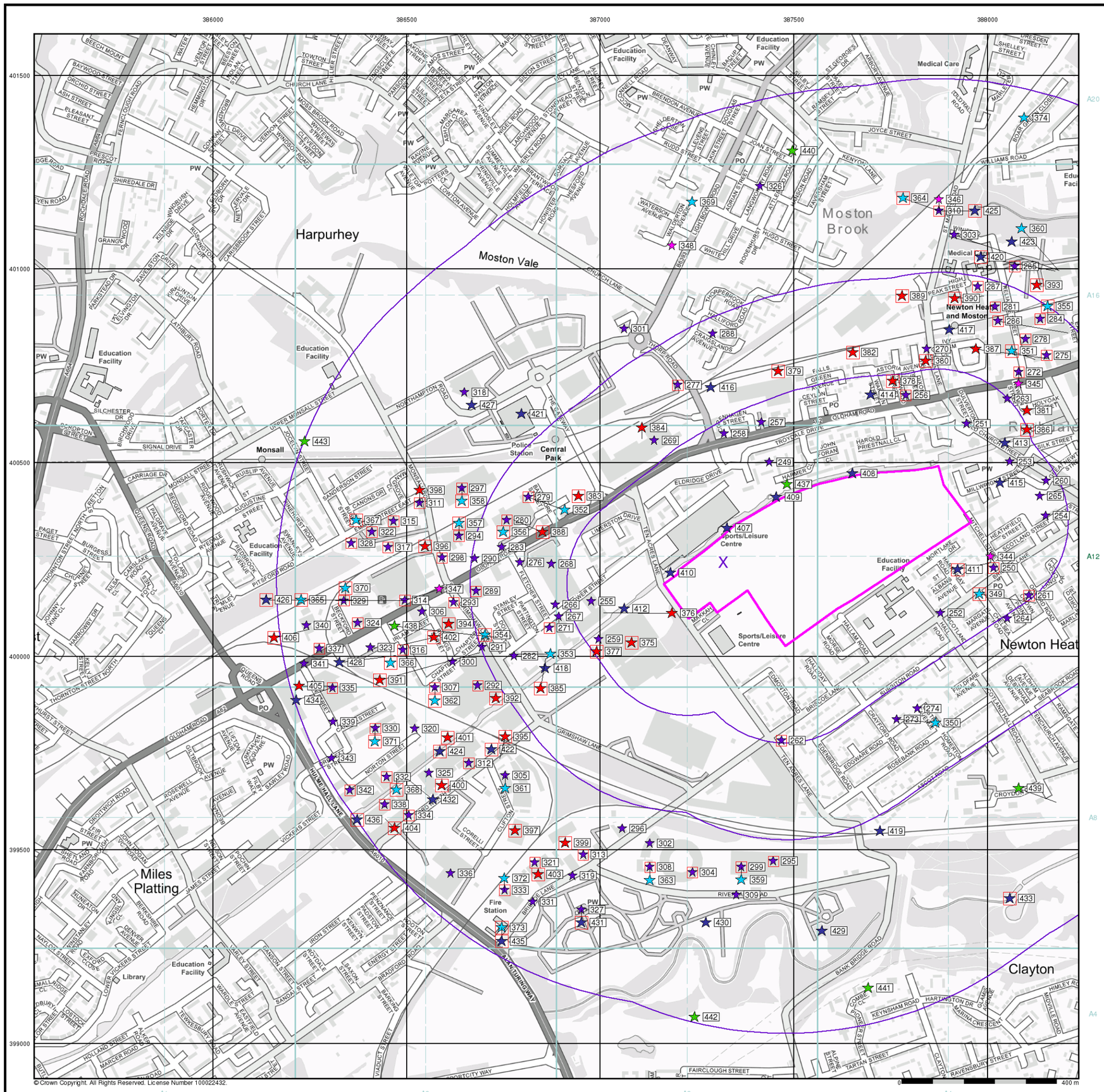
Order Number: 298878396_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Industrial Land Use Map

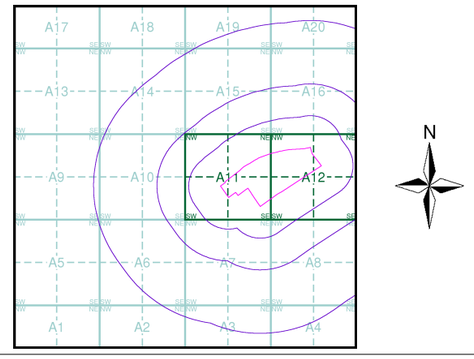
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

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Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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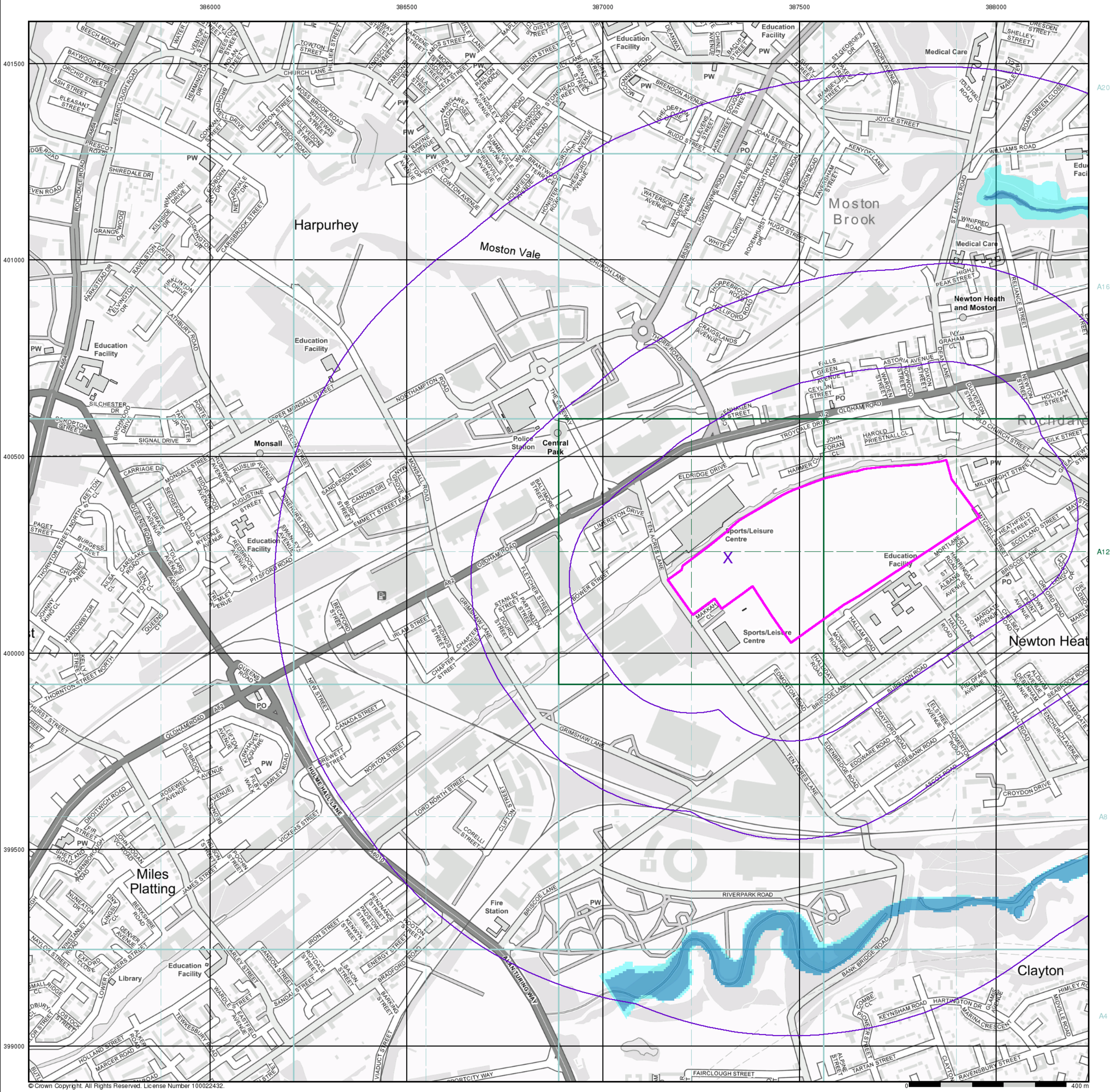

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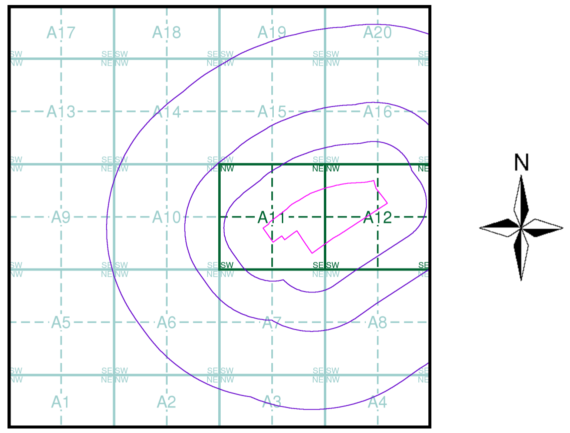
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

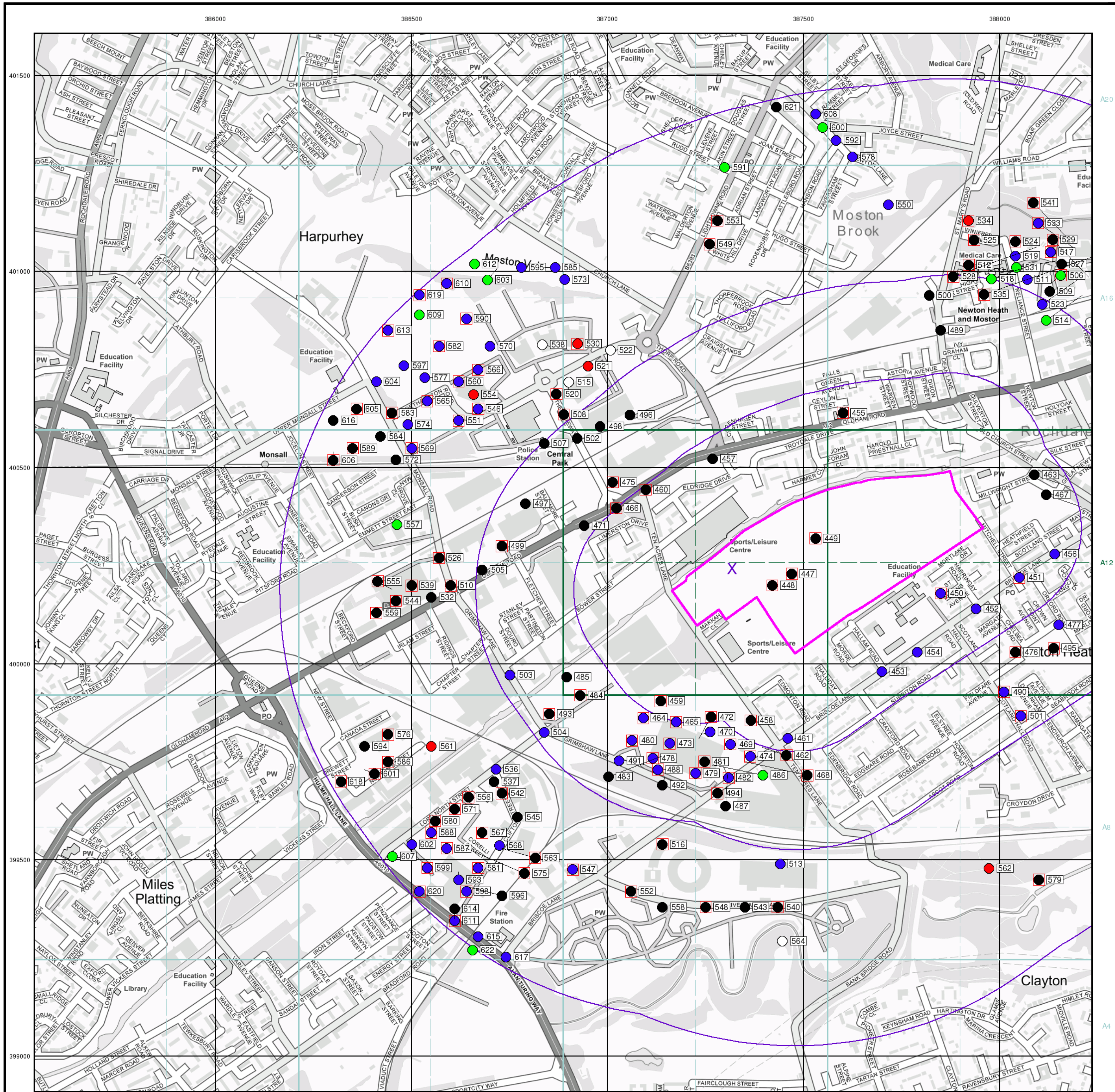
Order Number: 298878396_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

Landmark® INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- 8 Map ID
- Several of Type at Location

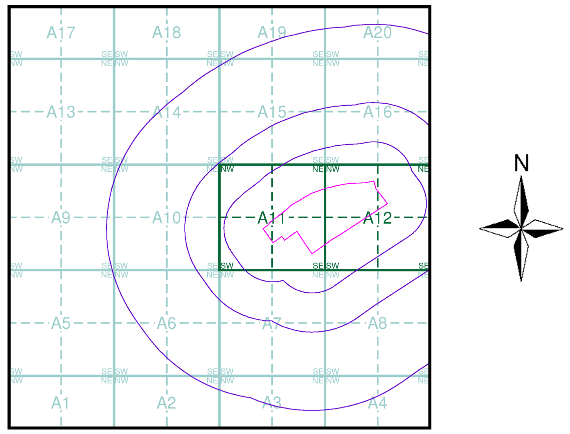
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

Order Number: 298878396_1_1
Customer Ref: Ten Acres
National Grid Reference: 387320, 400240
Slice: A
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

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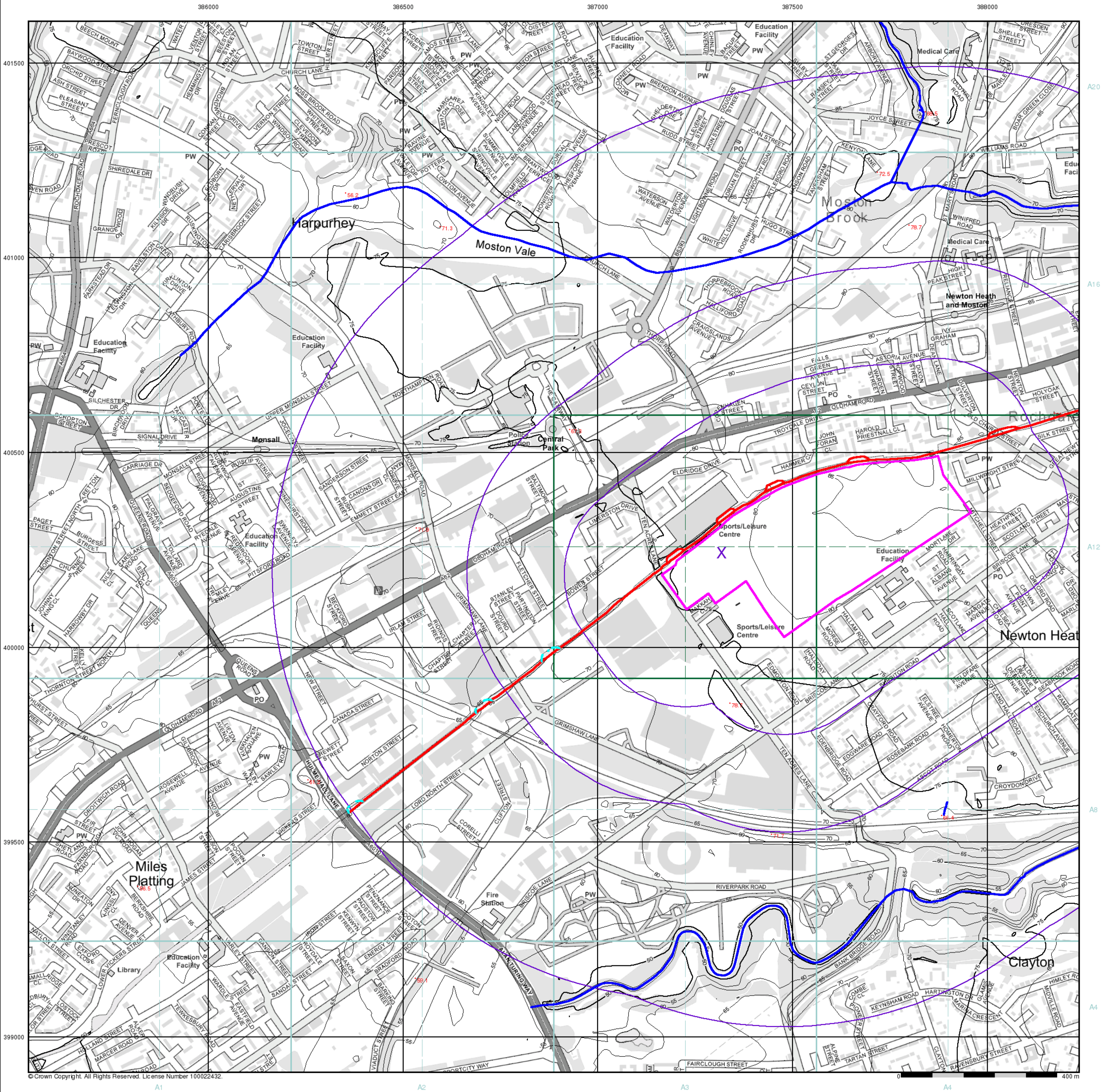

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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

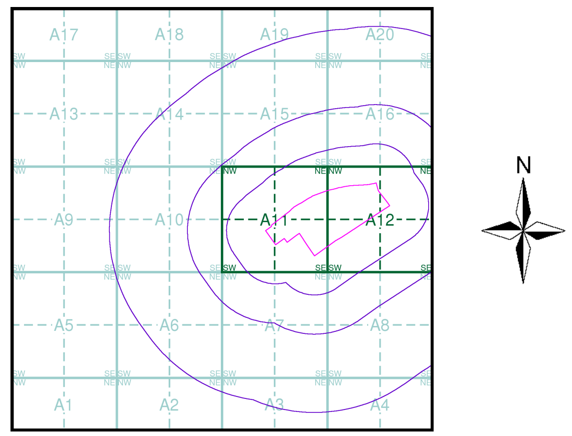
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height 167.3
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A



Order Details

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Slice:	A
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Site at 387600, 400310

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Web: www.envirocheck.co.uk

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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

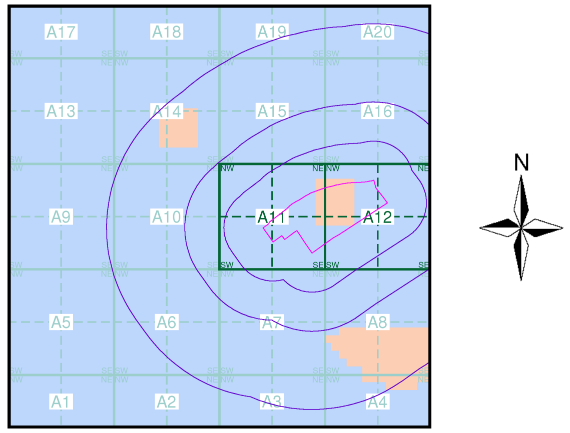
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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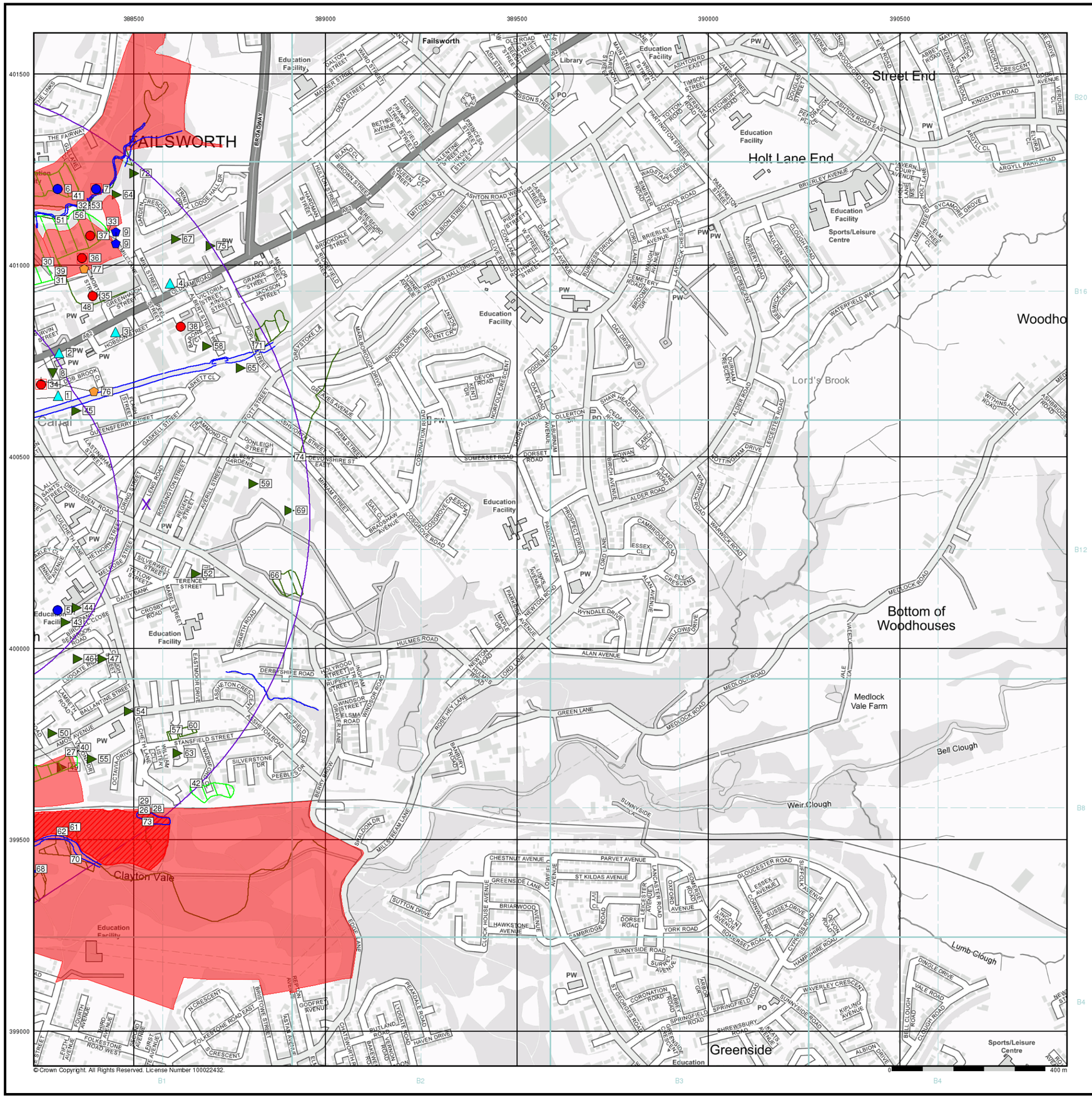

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
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- Licensed Waste Management Facility (Location)
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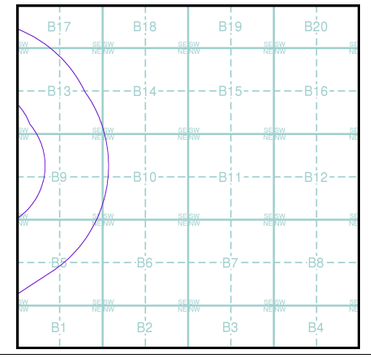
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice B



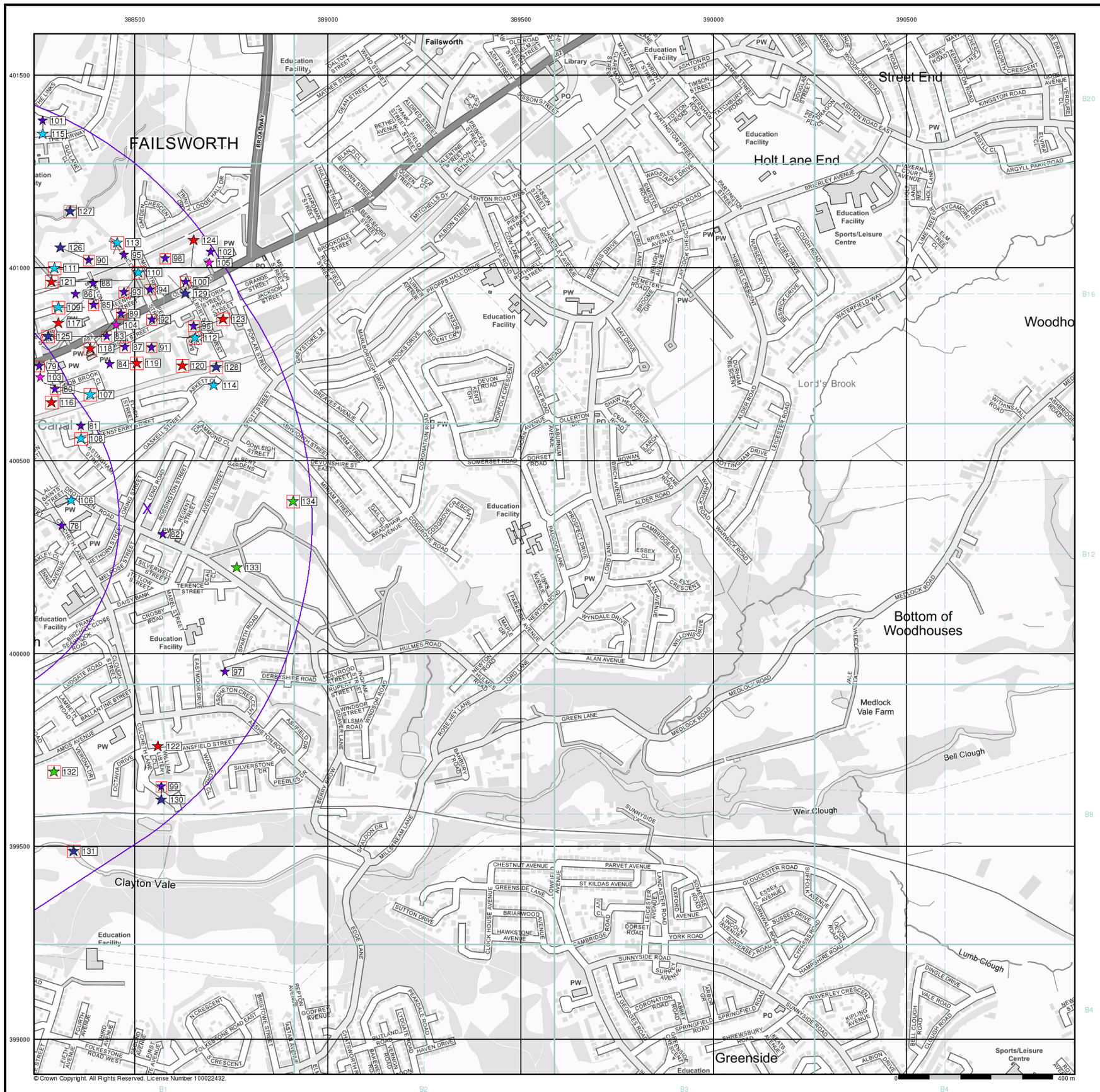
Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Industrial Land Use Map

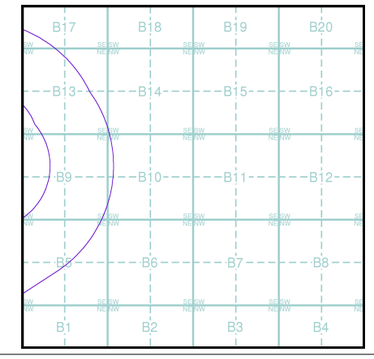
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice B



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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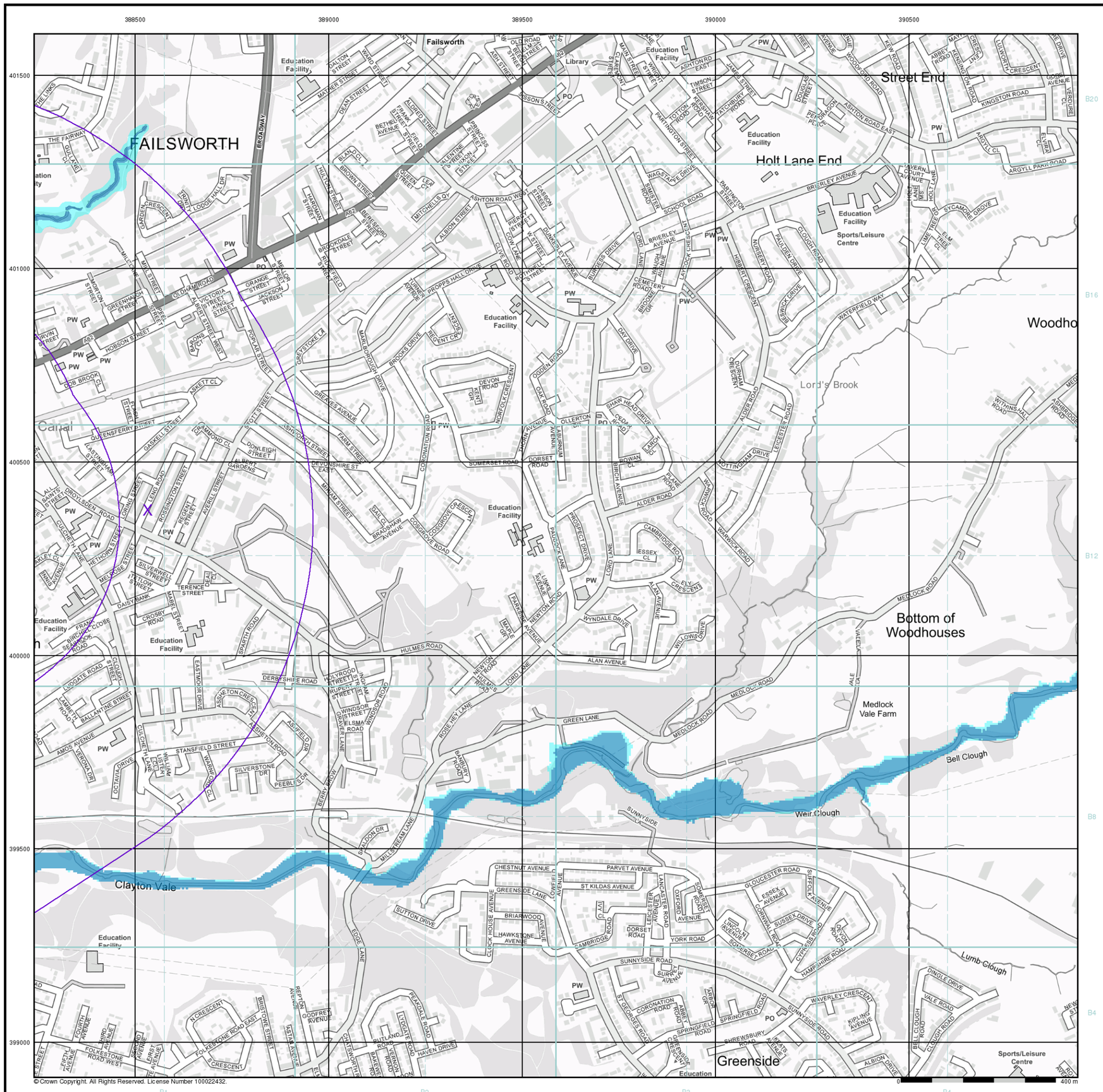

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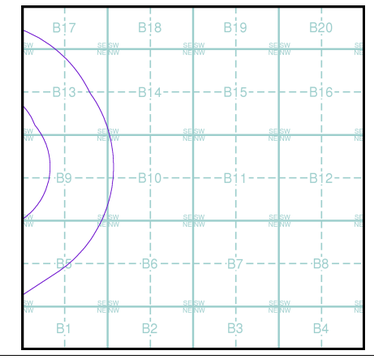
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice B



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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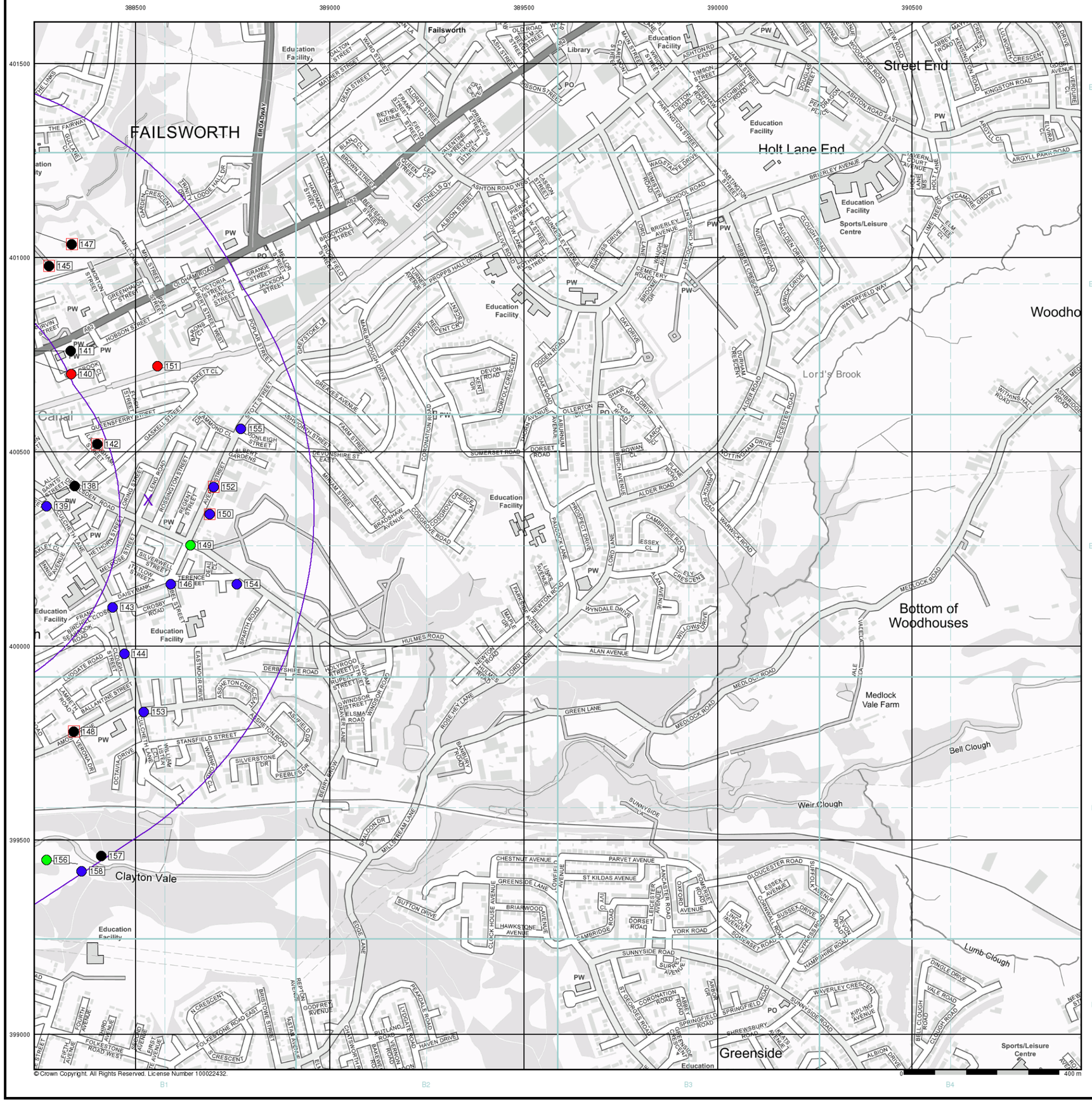

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0 400 m

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

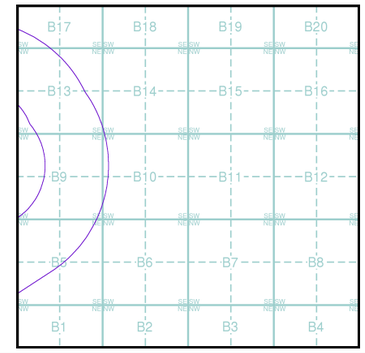
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice B

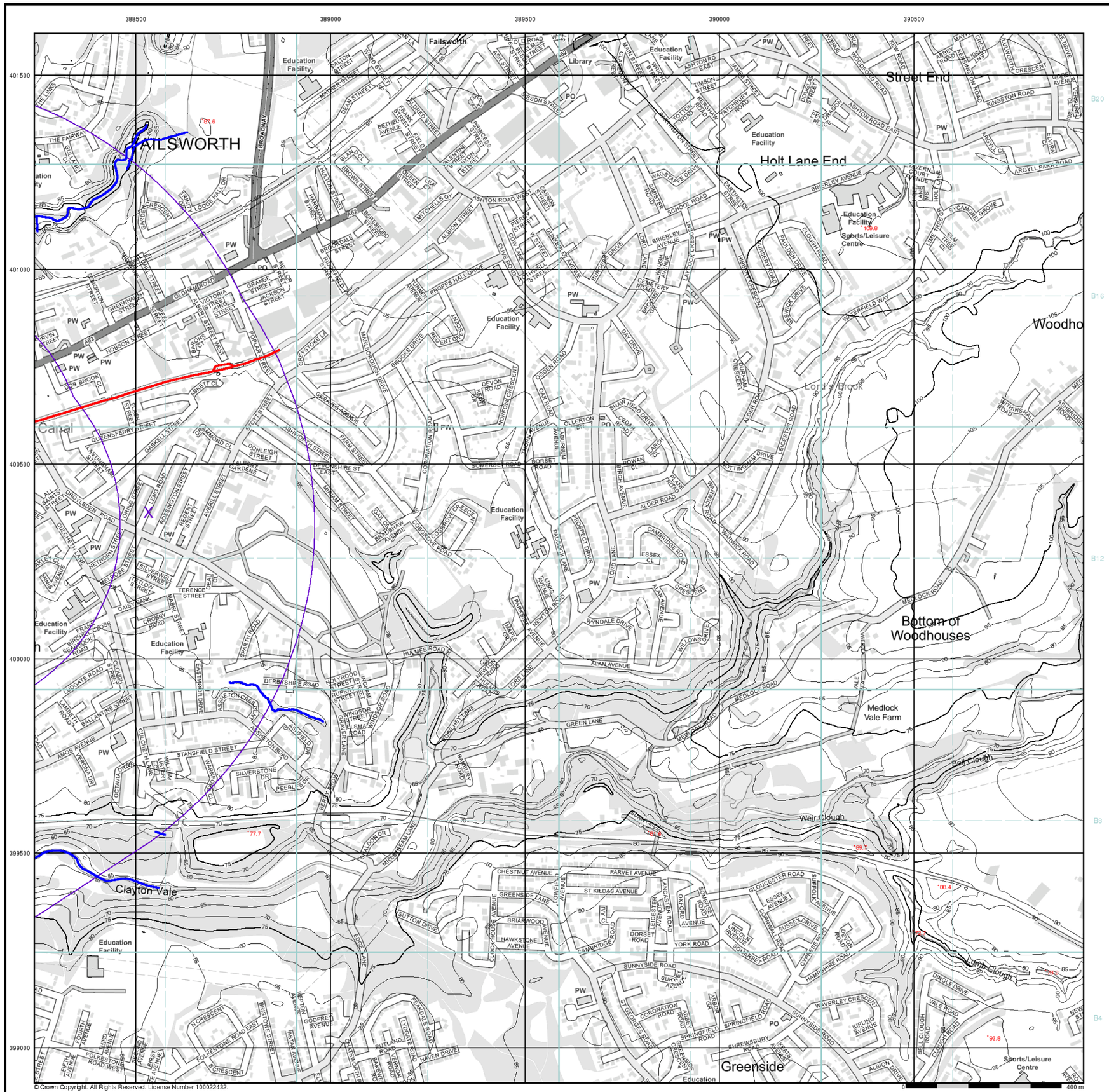


Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

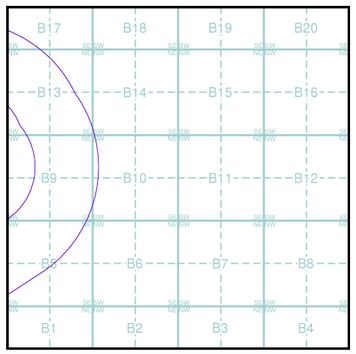
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice B



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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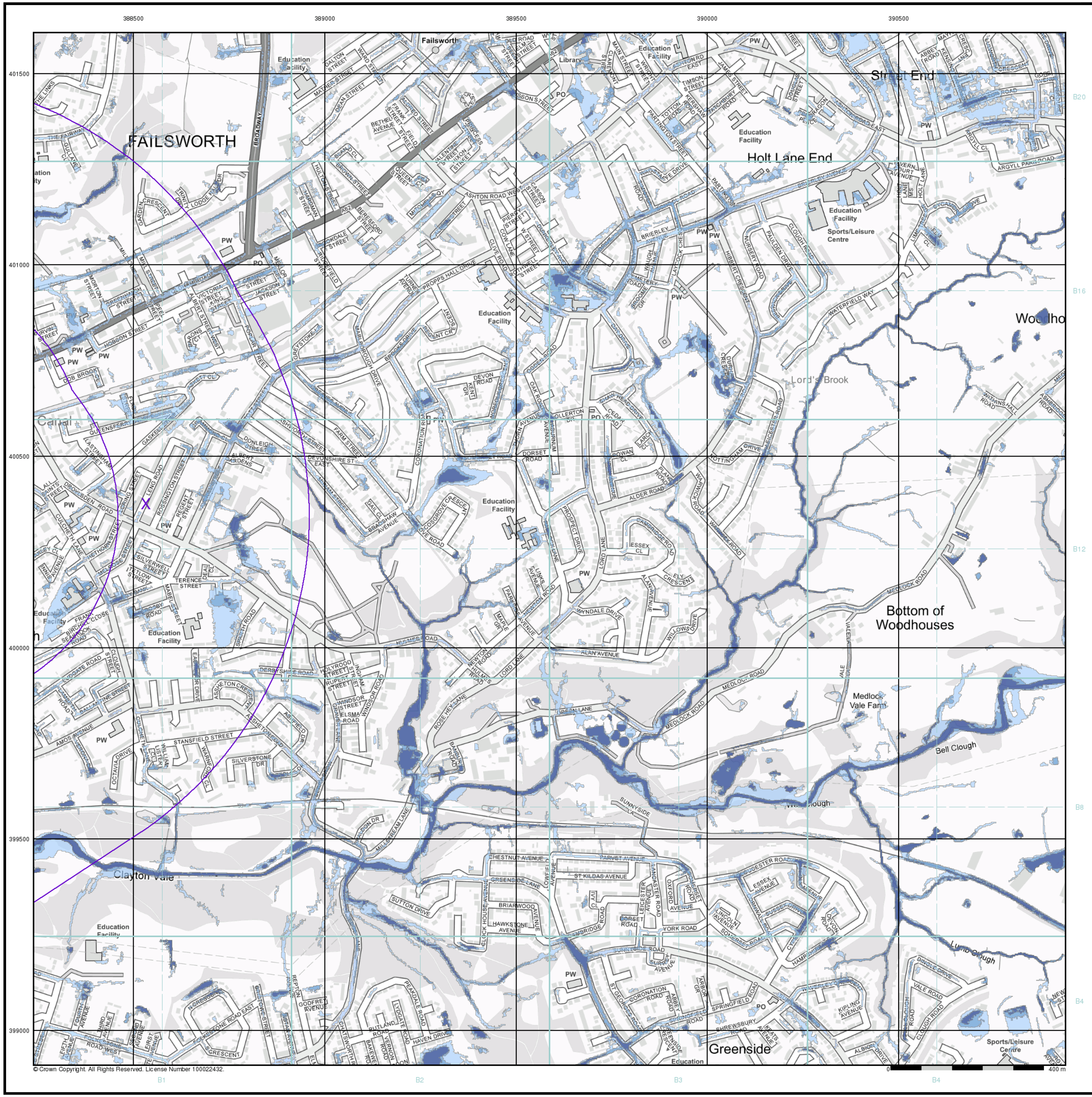


General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

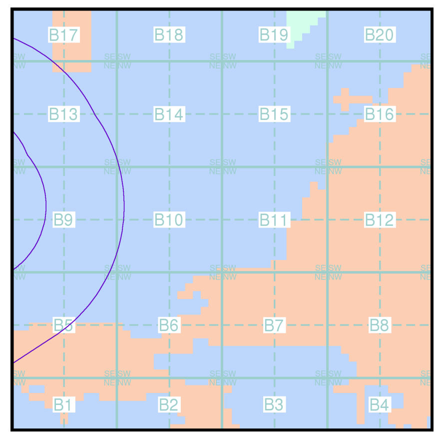
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice B



Order Details

Order Number: 298878396_1_1
Customer Ref: Ten Acres
National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details

Site at 387600, 400310

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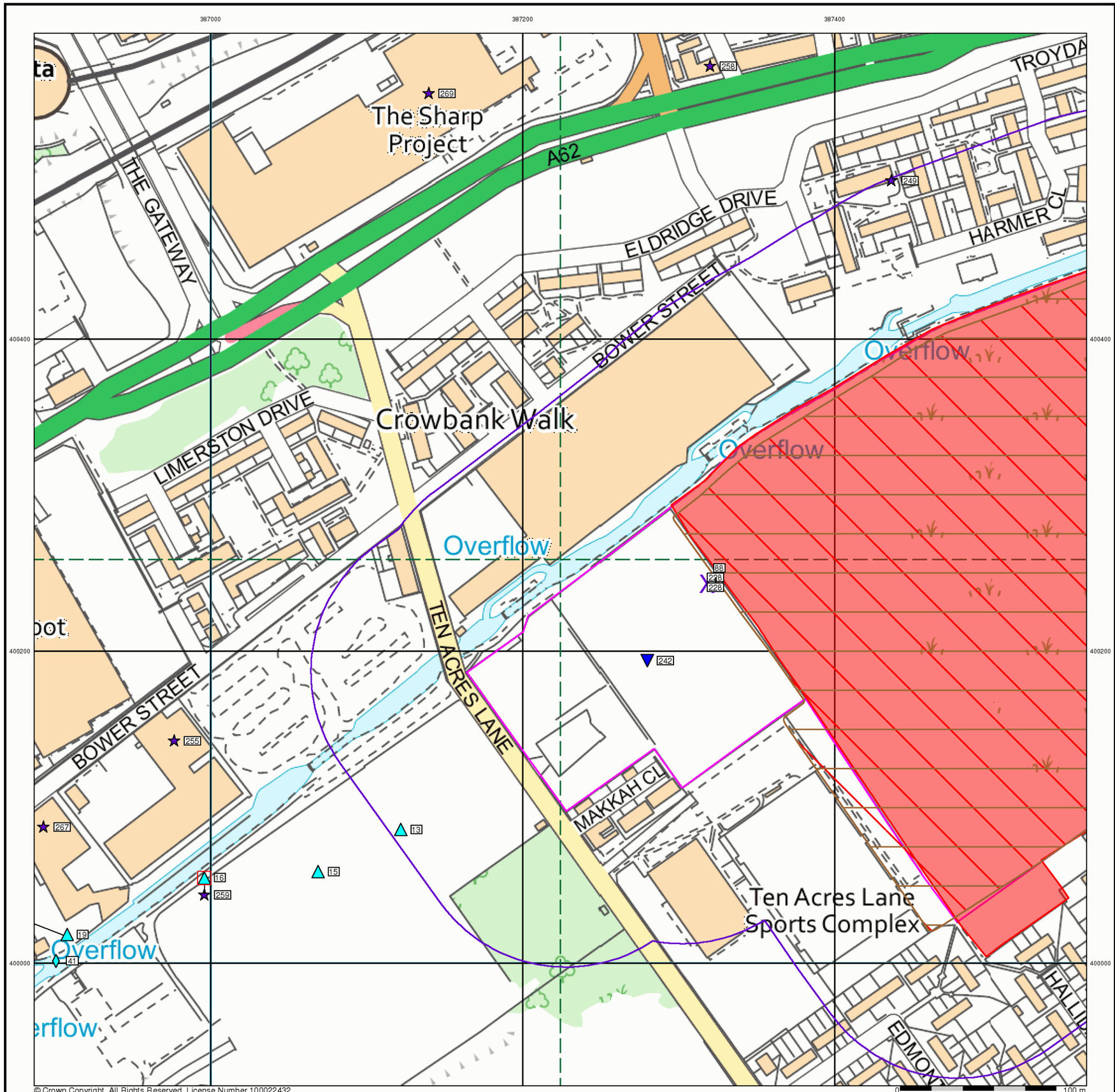
Web: www.envirocheck.co.uk



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Geological

- BGS Recorded Mineral Site

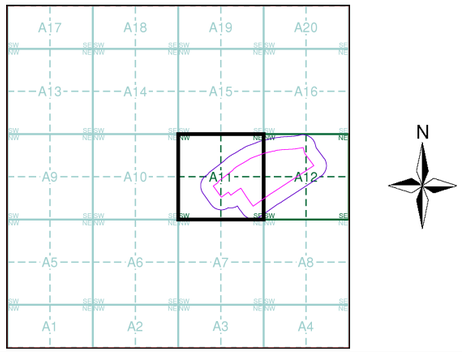
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A11



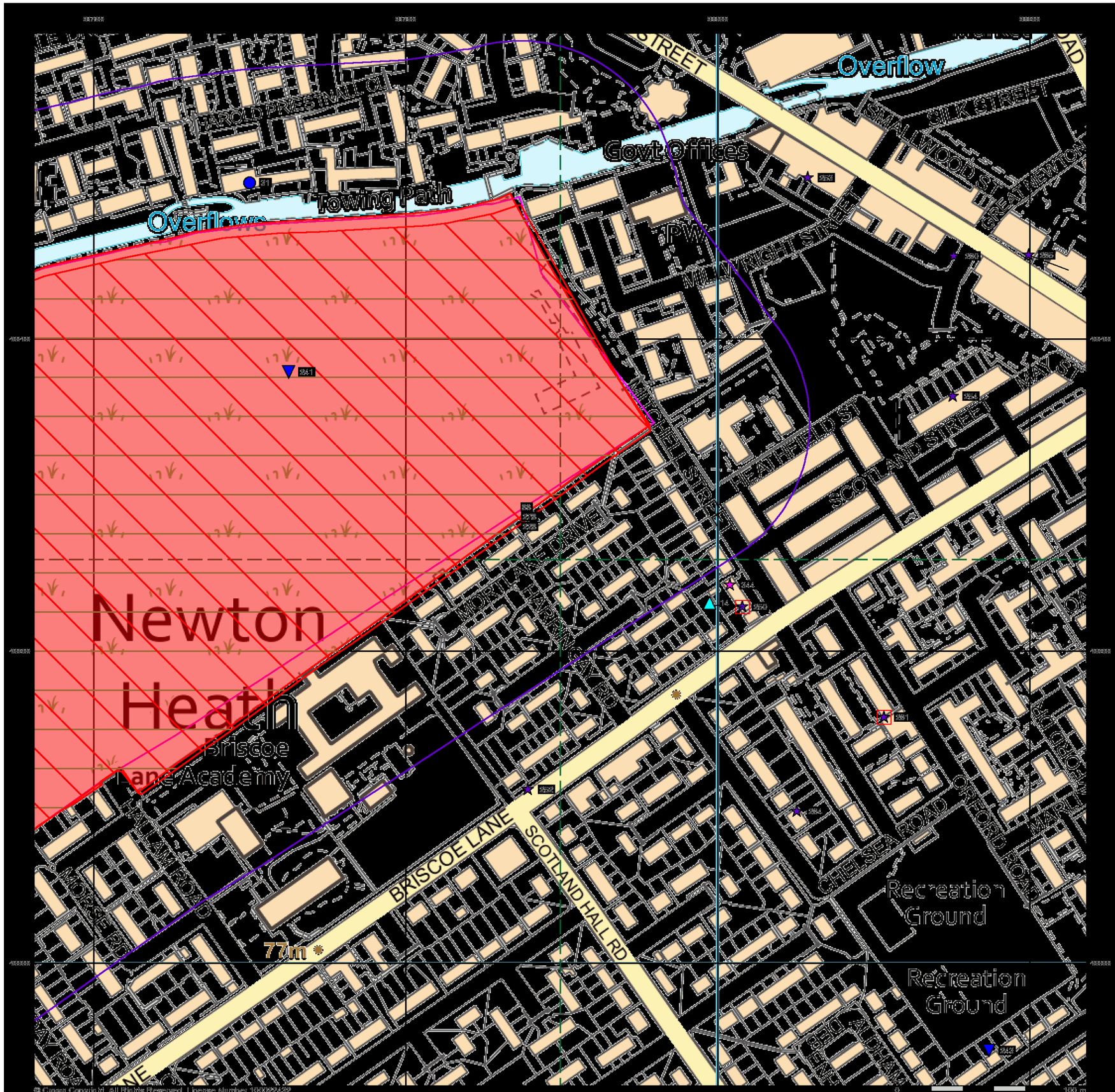
Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Map ID
Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

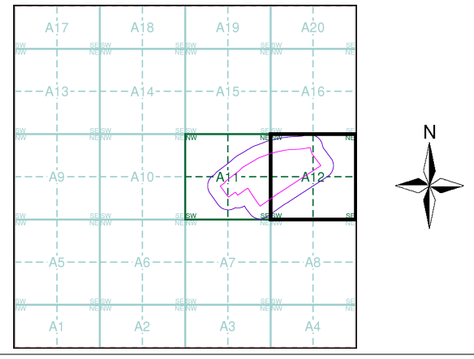
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A12



Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
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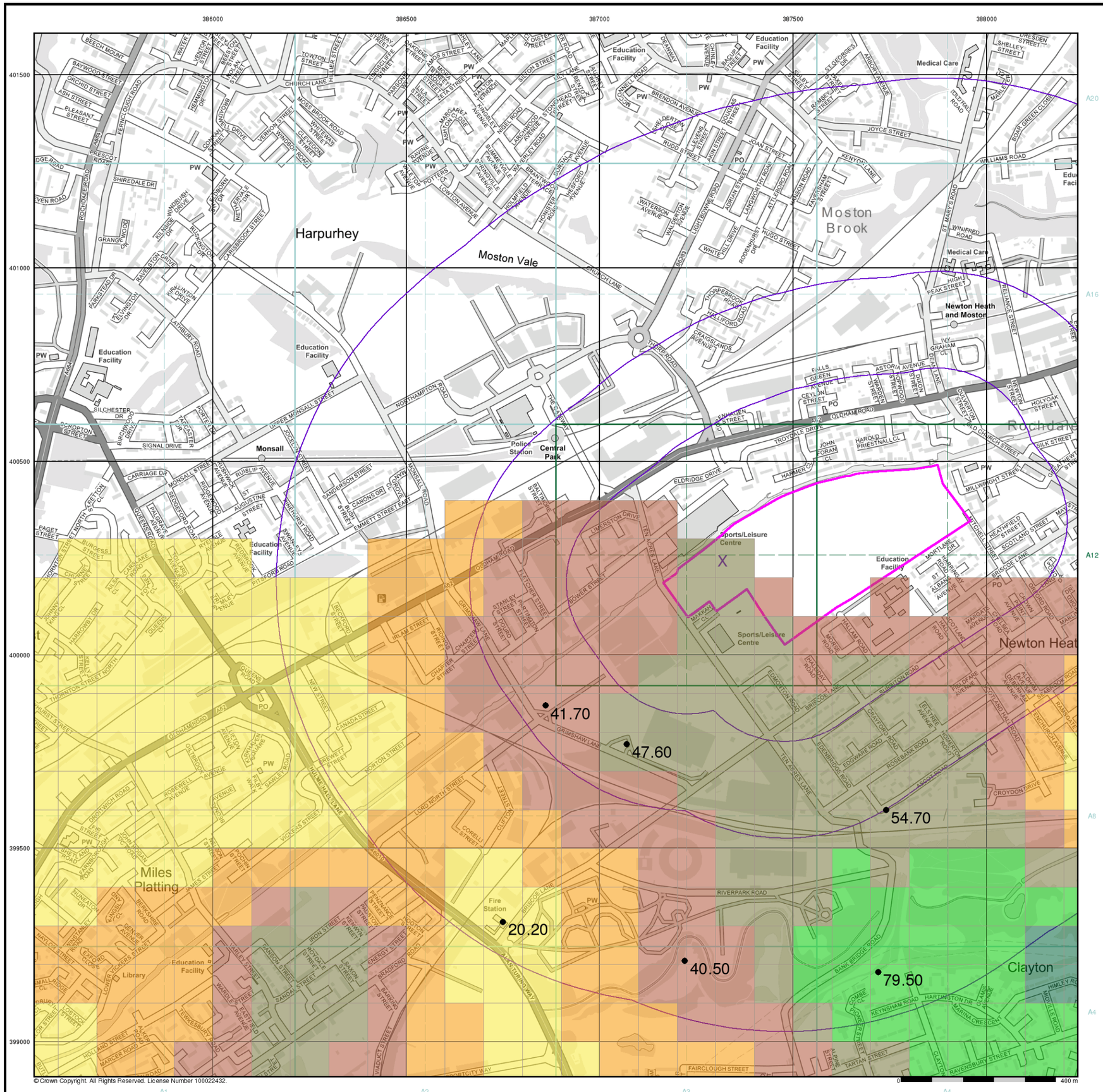
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

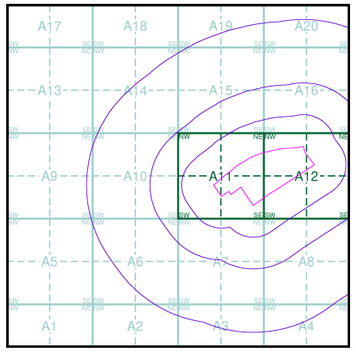
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

< 15
15 - 25
25 - 35
35 - 45
45 - 60
60 - 120
> 120

Urban Soil Chemistry Arsenic - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

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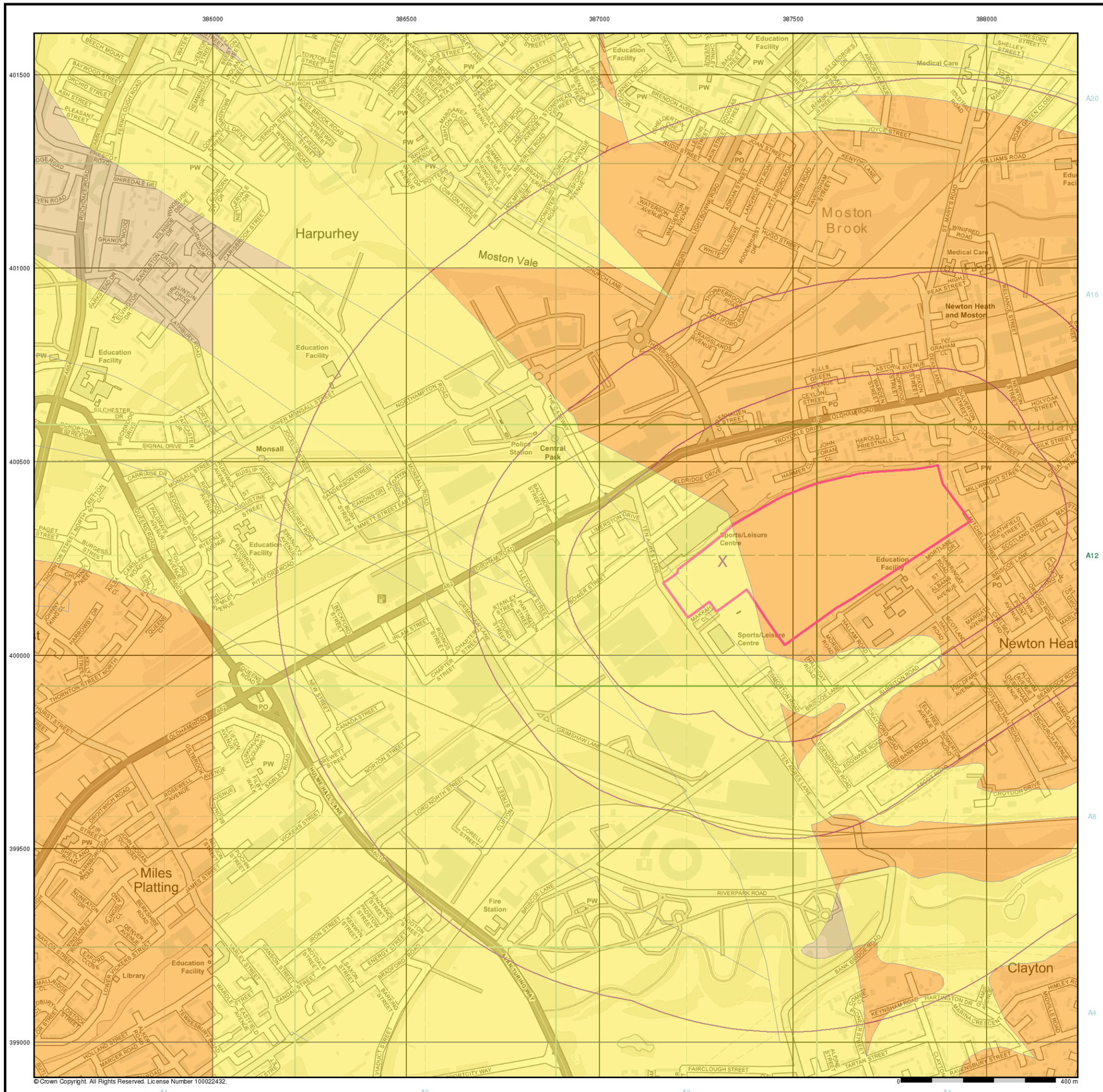

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General

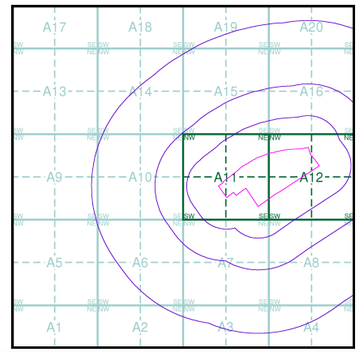
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

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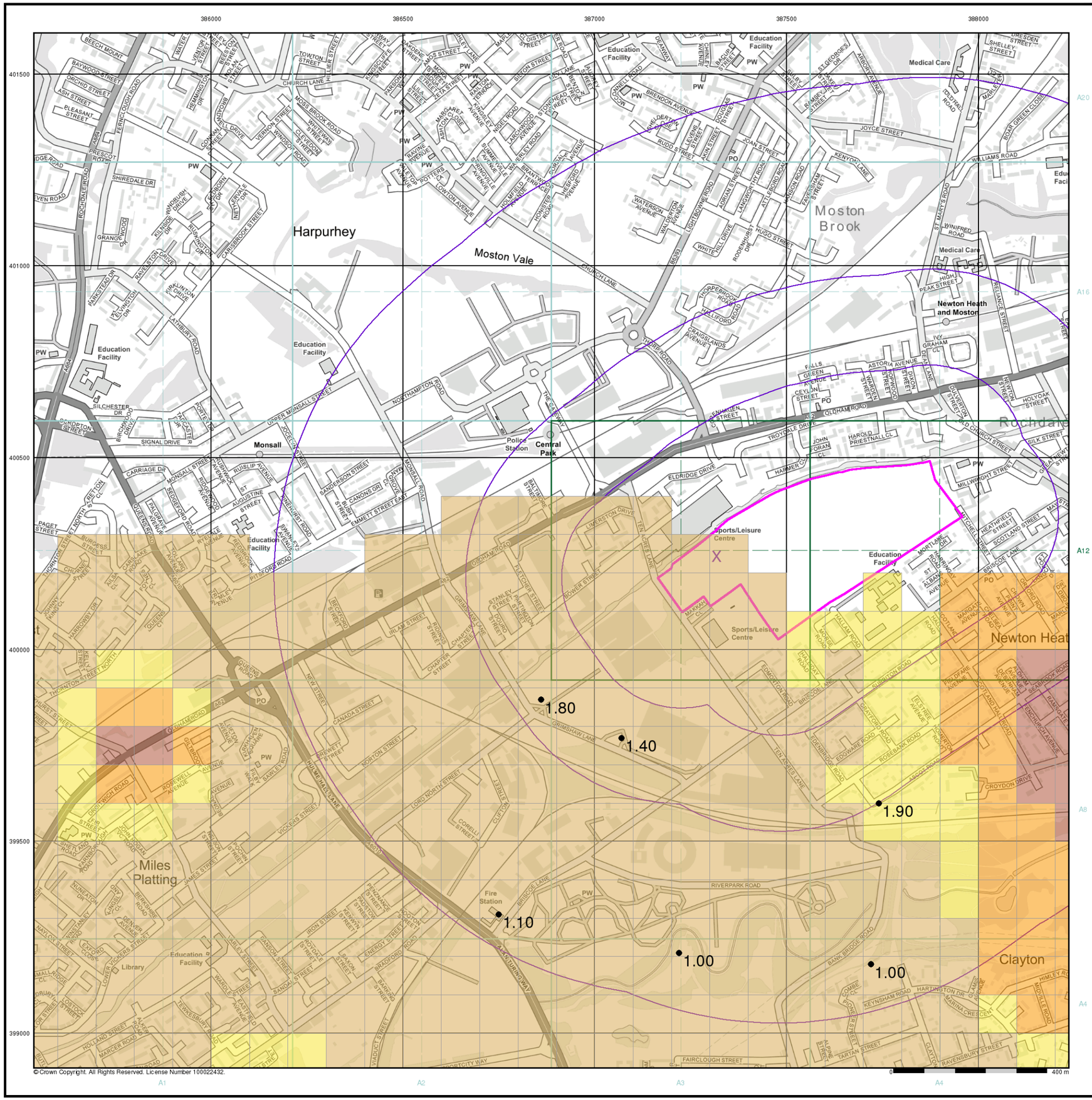

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General

Specified Site | Specified Buffer(s) | Bearing Reference Point

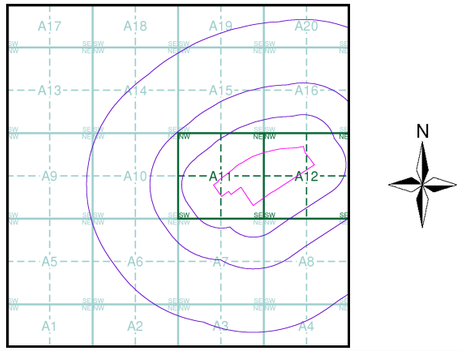
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Urban Soil Chemistry Cadmium - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

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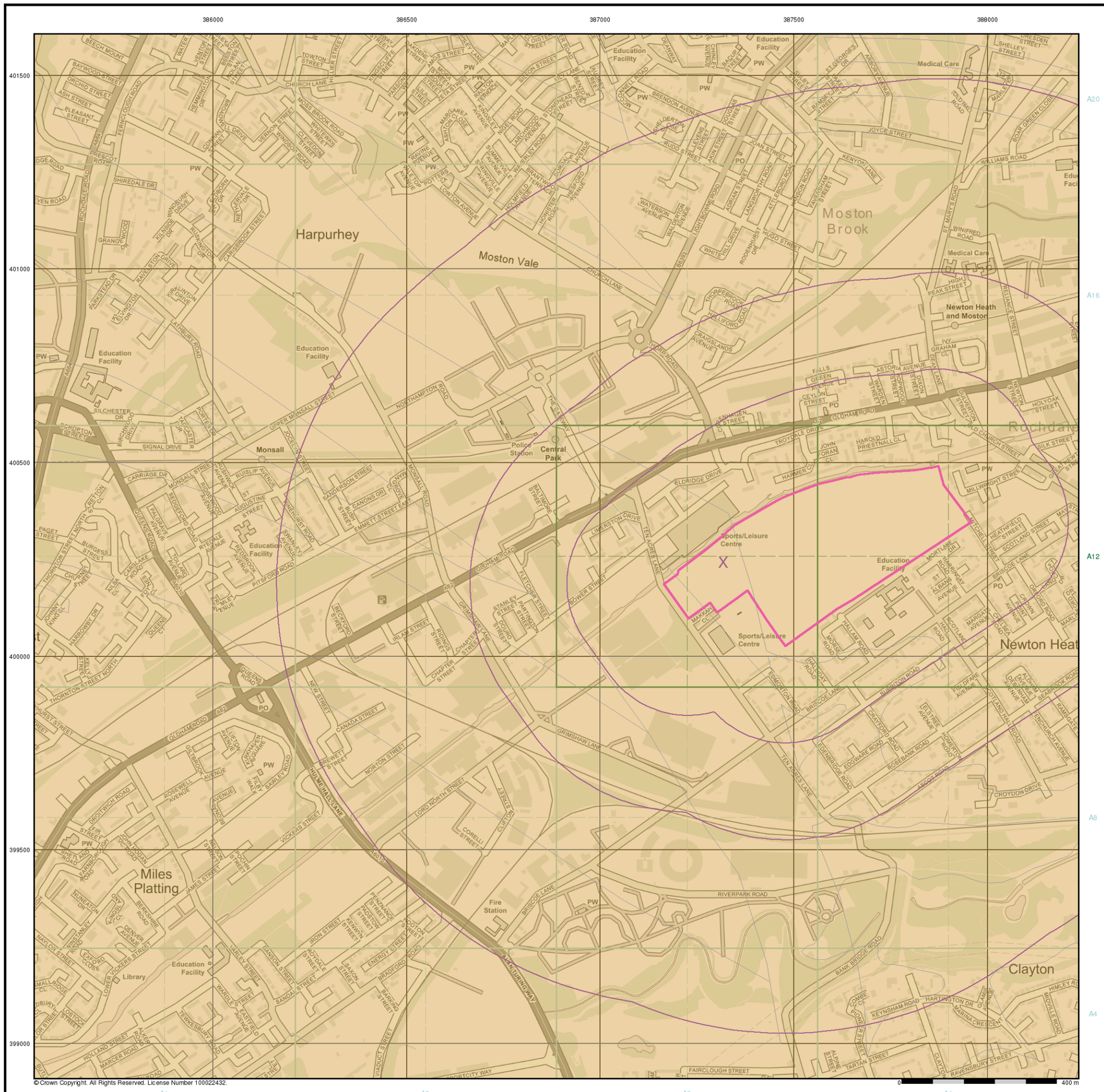


General

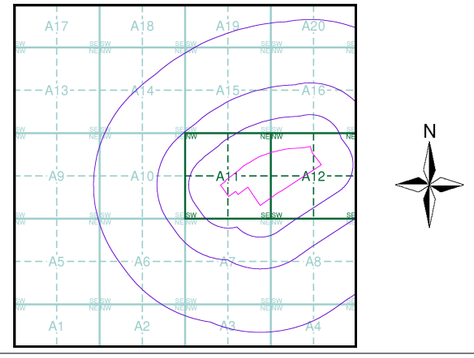
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

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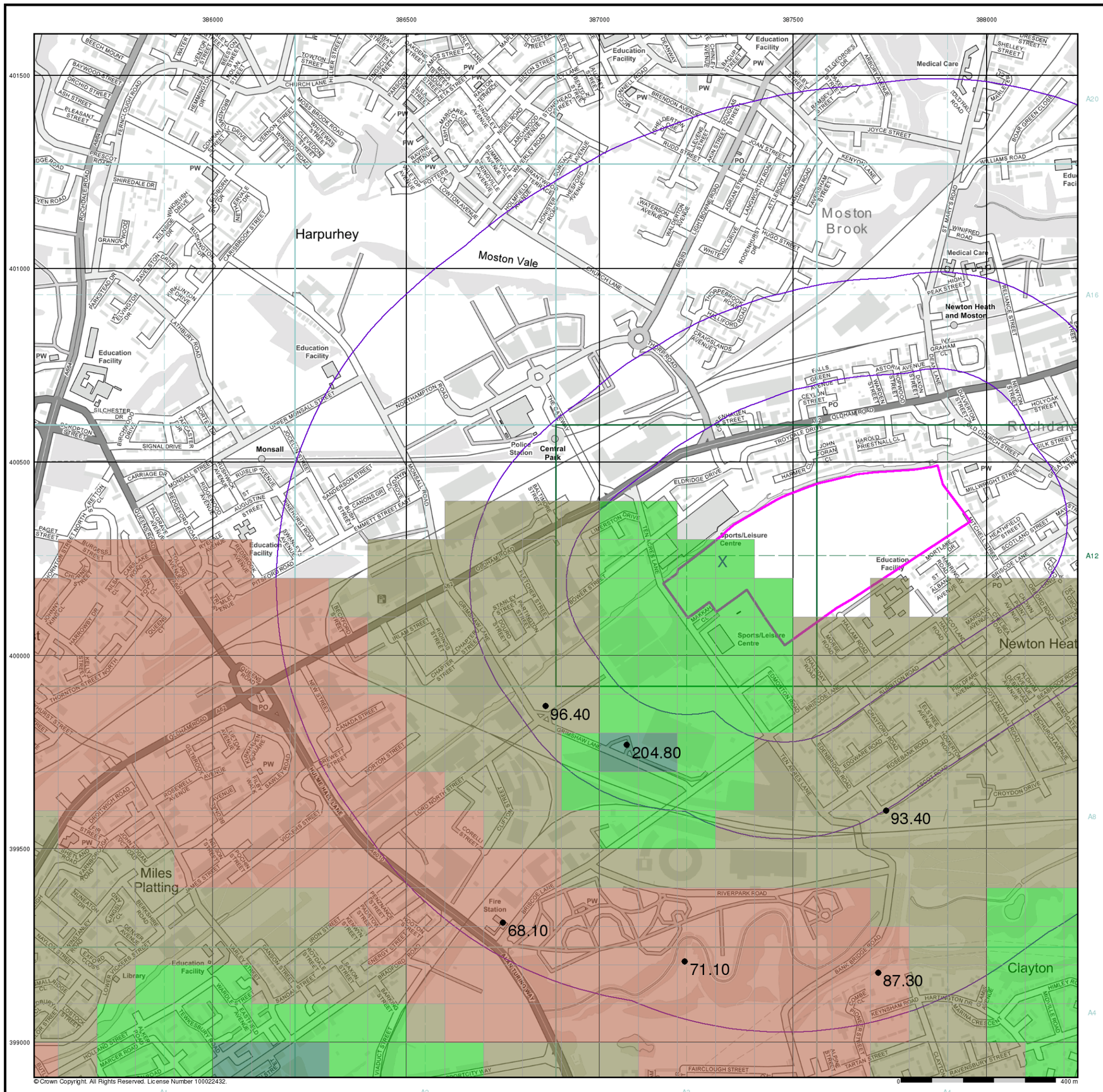

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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

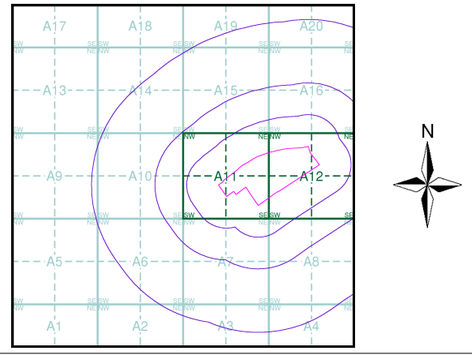
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

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Site at 387600, 400310

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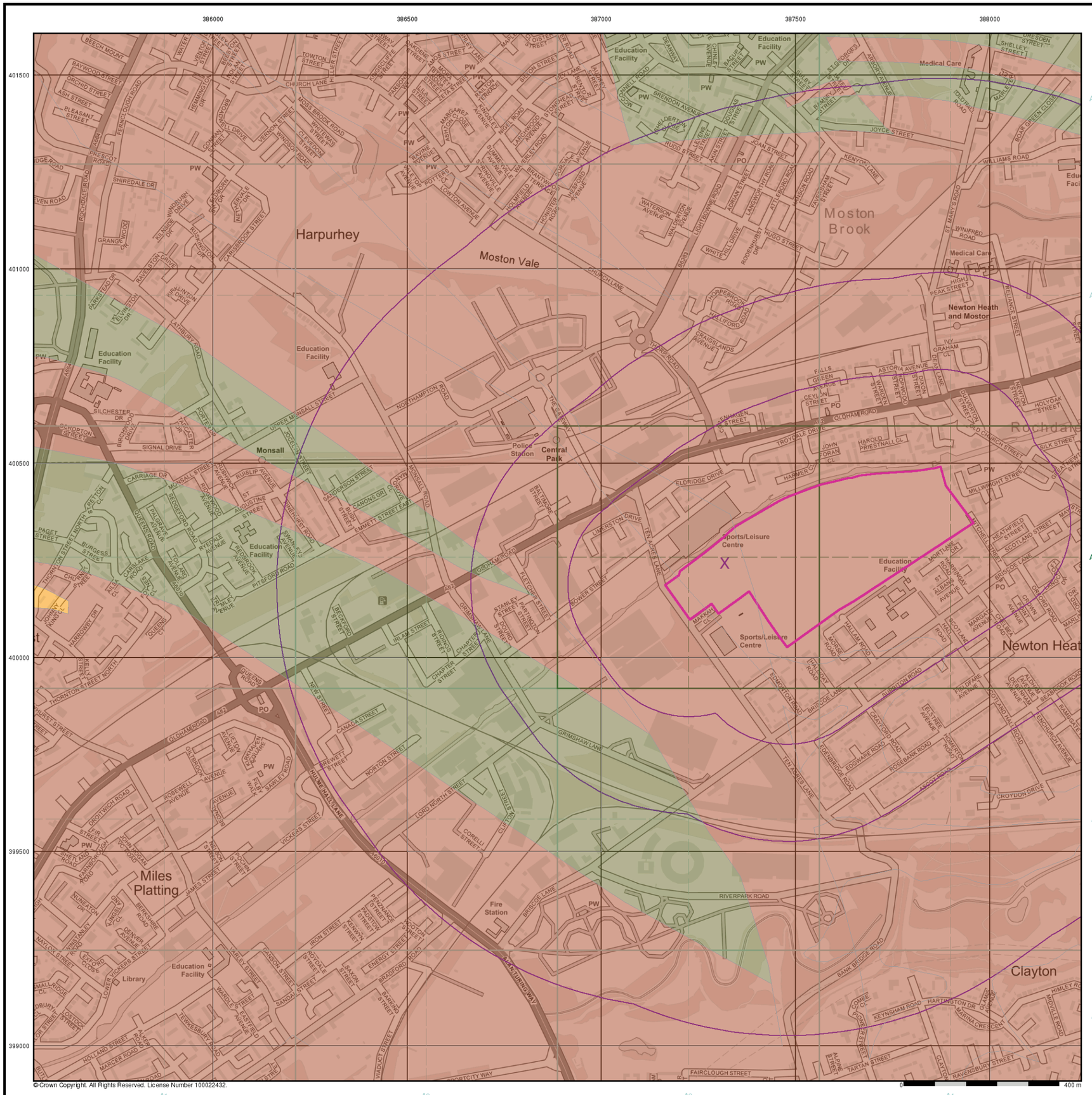

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General

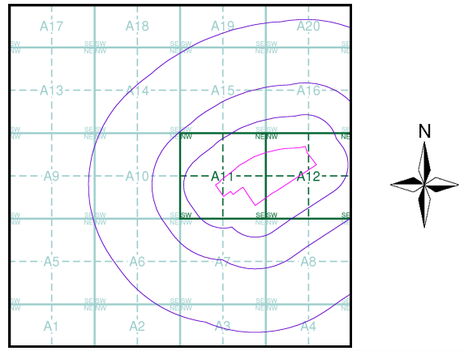
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

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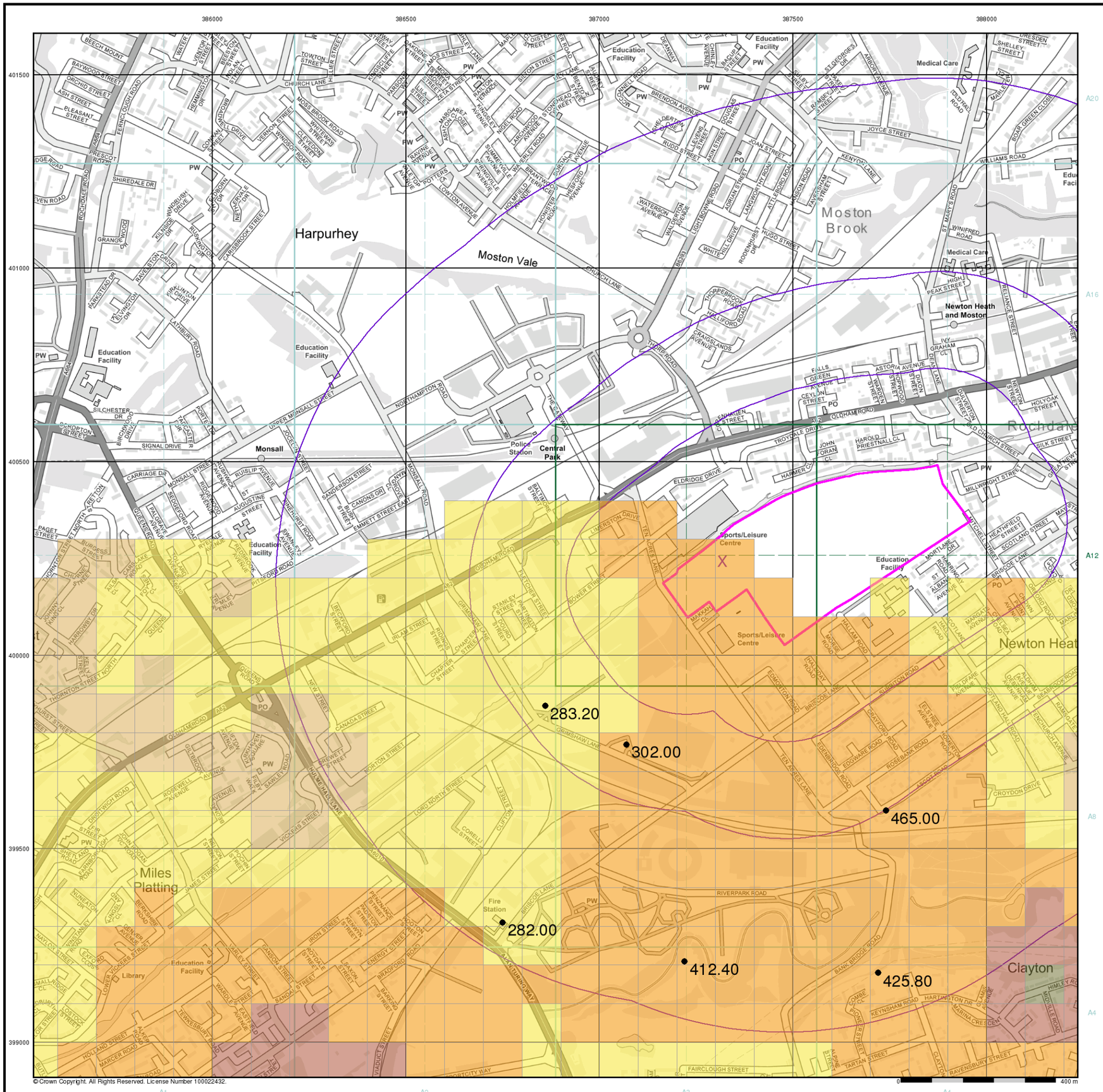
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

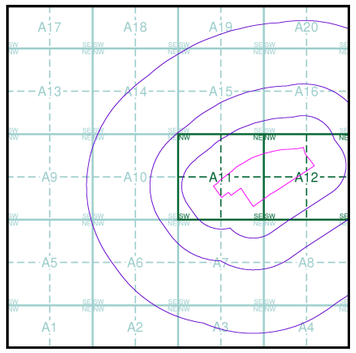
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

< 150
150 - 300
300 - 600
600 - 900
> 900

Urban Soil Chemistry Lead - Slice A



Order Details

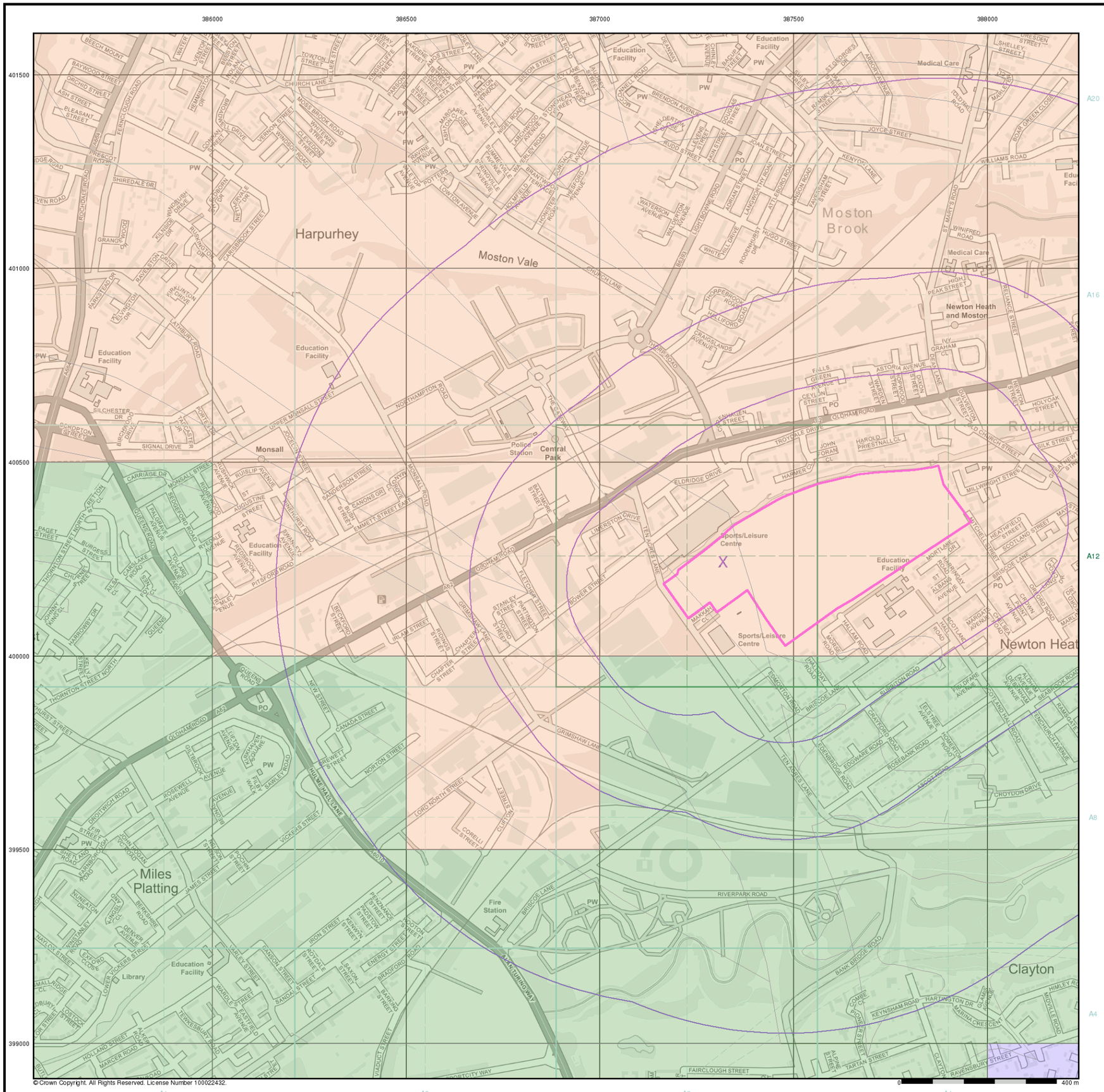
Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

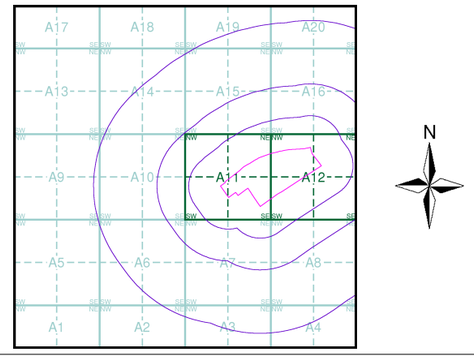
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



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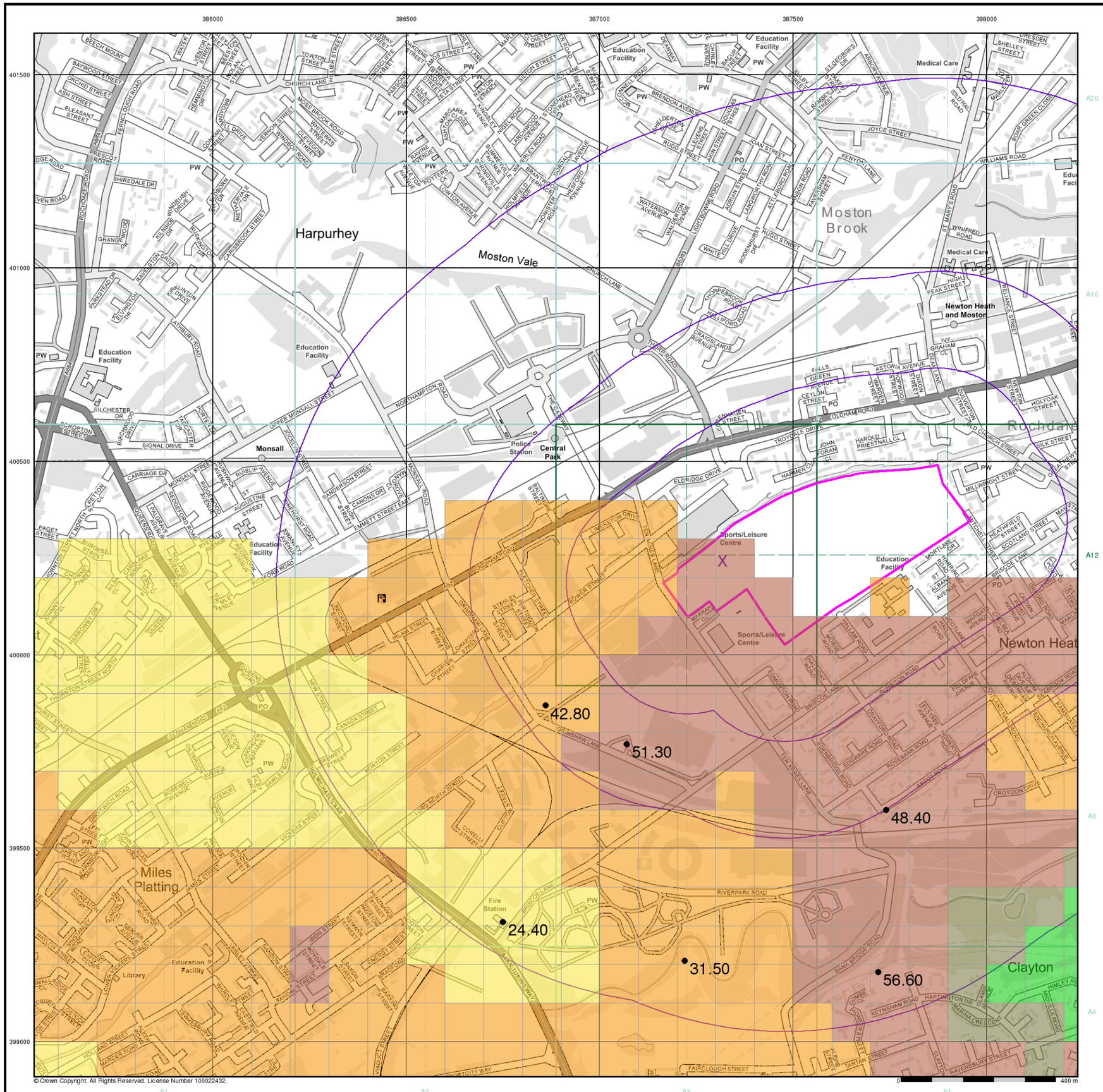

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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

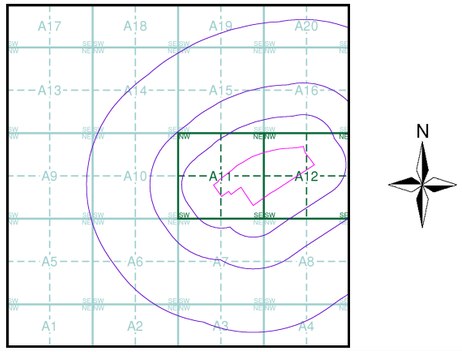
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

< 15
15 - 30
30 - 45
45 - 60
60 - 80
80 - 100
> 100

Urban Soil Chemistry Nickel - Slice A



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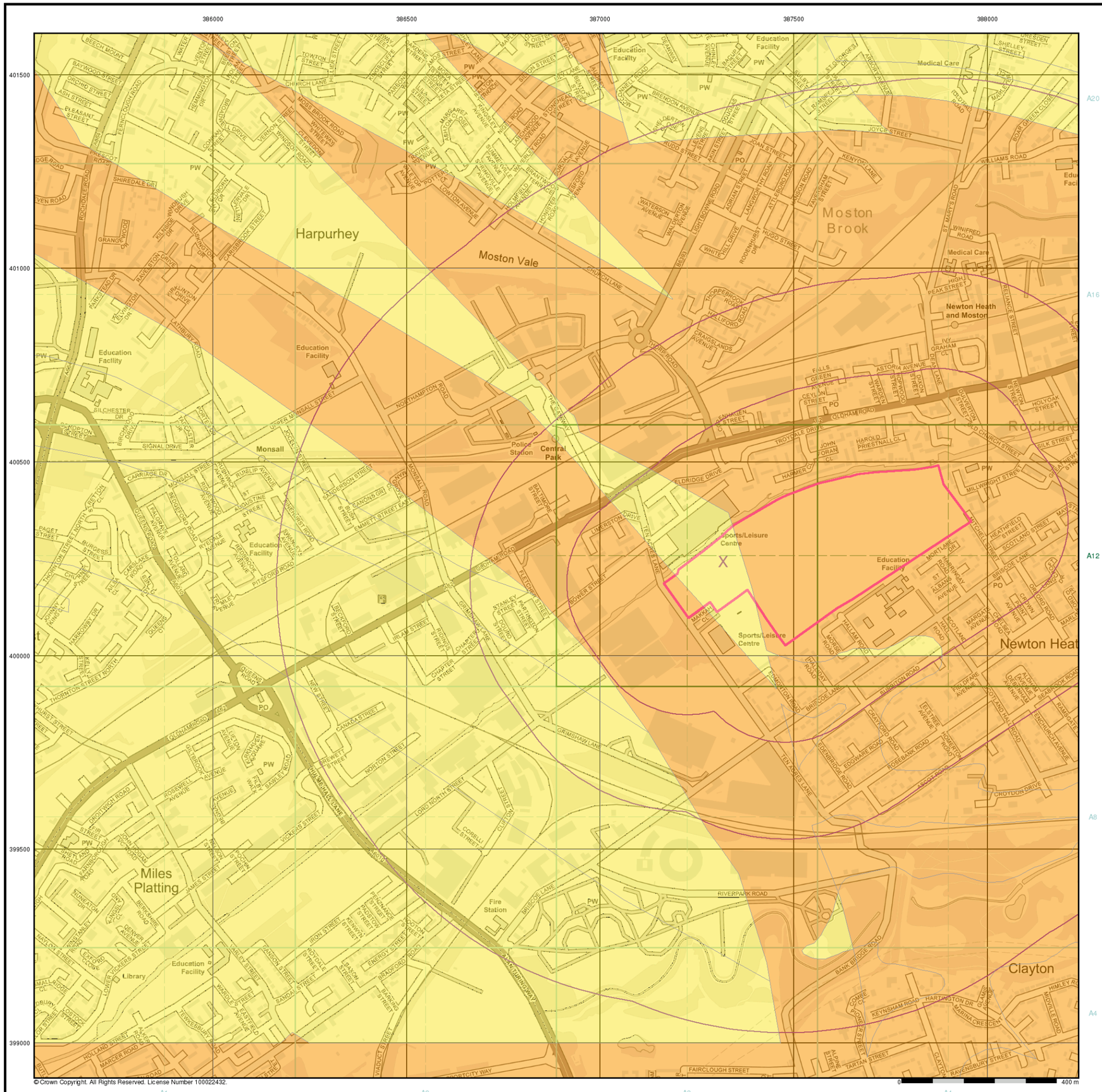

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General

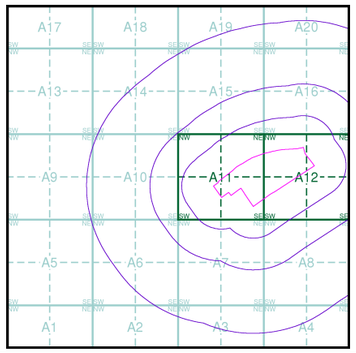
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



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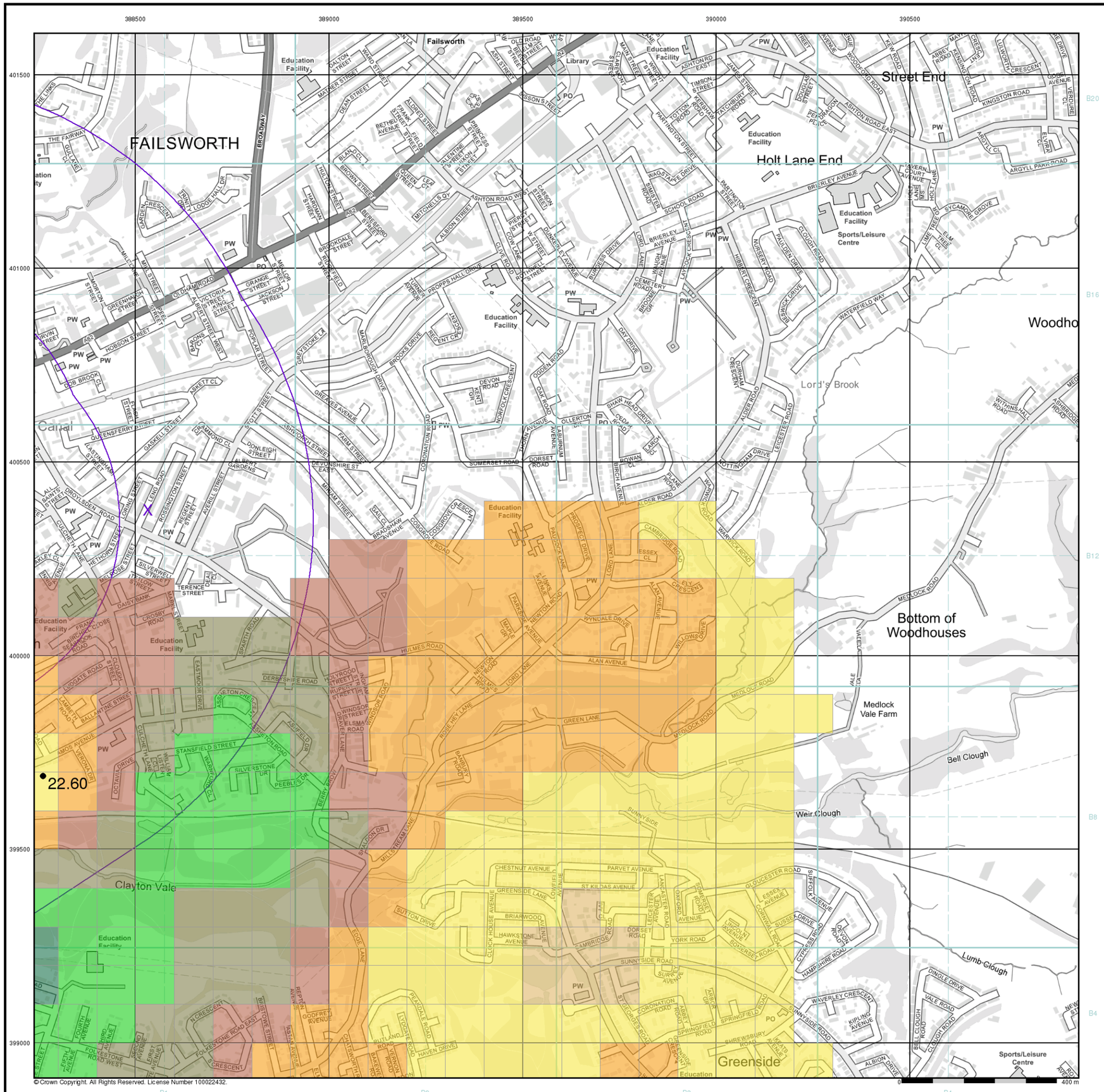
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B4
FAILSWORTH
Failsworth
Education Facility
Library
Street End
Holt Lane End
Sports/Leisure Centre
Woodho
Lord's Brook
Canal
Bottom of Woodhouses
Medlock Vale Farm
Bell Clough
Weir Clough
Lumb Clough
Clayton Vale
Greenside
22.60
BROADWAY
OLDHAM ROAD
HOLLINWOOD AVENUE
ASHTON ROAD EAST
ASHTON ROAD WEST
HULMES ROAD
MEDLOCK ROAD
GREEN LANE
DERBYSHIRE ROAD
ALAN AVENUE
WYNDALE DRIVE
WILLOWS DRIVE
SUNNYSIDE ROAD
SPRINGFIELD ROAD
SHREWSBURY ROAD
ALBION DRIVE
BELL CLOUGH ROAD
DINGLE DRIVE
VALE ROAD
WAVERLEY CRESCENT
KIPLING AVENUE
HAMPSHIRE ROAD
SUSSEX DRIVE
SUFFOLK AVENUE
GLOUCESTER ROAD
SOMERSET ROAD
YORK ROAD
CAMBRIDGE ROAD
DORSET ROAD
SOMERSET ROAD
PARVET AVENUE
ST KILDAS AVENUE
CHESTNUT AVENUE
GREENSIDE LANE
BRIARWOOD AVENUE
HAWKSTONE AVENUE
CLOCK HOUSE AVENUE
SUTTON DRIVE
EDGE LANE
STANSFIELD STREET
SILVERSTONE DR
PEEBLES DR
ASHFIELD DR
ASSHETON CRESCENT
ASSHETON ROAD
EASTMOOR DRIVE
LODGATE ROAD
ELSMA ROAD
WINDSOR STREET
ROSEHEY LANE
SUNNYSIDE LA
MILLSTREAM LANE
DALESIDE DR
PEARDALE ROAD
HAVEN DRIVE
FOLKESTONE ROAD WEST
FOLKESTONE ROAD EAST
BERESFORD STREET
BROOKDALE STREET
RICHFIELD STREET
HARRIMAN STREET
HILTON STREET
BROWN STREET
BLANCO CL
MITCHELS CV
ALBION STREET
CLIVE ROAD
COW LANE
ROTHWELL STREET
PROPPS HALL DRIVE
BROOKS DRIVE
MARLBOROUGH DRIVE
GREAVES AVENUE
GLEDSTONE LA
DEVON ROAD
NORFOLK CRESCENT
OGDEN ROAD
OAK ROAD
OLLERTON DR
SHAW HEAD DRIVE
CEDAR ROAD
LARCH CL
ROWAN CL
BIRCH AVENUE
ALDER ROAD
ALDER AVENUE
DURHAM CRESCENT
DAY DRIVE
WATERFIELD WAY
NURSERY ROAD
HILBERT CRESCENT
PALMERSTON DRIVE
CLOUGH ROAD
BRIERLEY AVENUE
LORD LANE
LANCASTER CRESCENT
CEMETERY ROAD
BROOME GR
SIMISTER ROAD
SCHOOL ROAD
WAGSTAFFE DRIVE
PASTURE STREET
PASTINGTON STREET
TOTTON ROAD
MERSHAM ROAD
TATCHBURY ROAD
JAMES STREET
TIMSON STREET
ASHTON RD EAST
MAIN STREET
WRIGHT STREET
CHURCH STREET
OLD ROAD
ASH STREET
ASSON STREET
WARD STREET
DALTON STREET
MATNER STREET
DEAN STREET
ALDRED STREET
FRANK STREET
FIELD STREET
BETHEL AVENUE
PRINCESS STREET
VALENTINE STREET
DIXON STREET
QUEEN STREET
LEA ST
CARSON STREET
DIANA ST
AVENUE
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VICTORIA STREET
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MILL STREET
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ASKETT CL
PEARL STREET
QUEENSFERRY STREET
GASKELL STREET
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ALL SAINTS STREET
DROYLSDEN ROAD
CULCHETH LANE
HETHORN STREET
SILVERWELL STREET
MELROSE STREET
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CROSBY ROAD
MABEL STREET
TERENCE STREET
DEAN CL
LORNE STREET
ENG ROAD
ROSSINGTON STREET
REGENT STREET
AVERILL STREET
DONLEIGH STREET
ALBERT GARDENS
DEVONSHIRE ST EAST
FARM STREET
MINTAM STREET
SILVERDALE STREET
STOTT STREET
CORONATION ROAD
COLSTON AVENUE
COLSTON CRESC
COLSTON ROAD
BRADSHAW AVENUE
CROMPTON ROAD
CROSBY CRESCENT
SPARTH ROAD
SPARTH AVENUE
FRANK BARNES CLOSE
SEAMBROOK ROAD
LOGATE ROAD
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BALLANTYNE STREET
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VERONA DR
OCTAVIA DRIVE
WILLIAM LISTER CL
CULCHETH CL
WARRINGTON CL
REPTON AVENUE
GODFREY AVENUE
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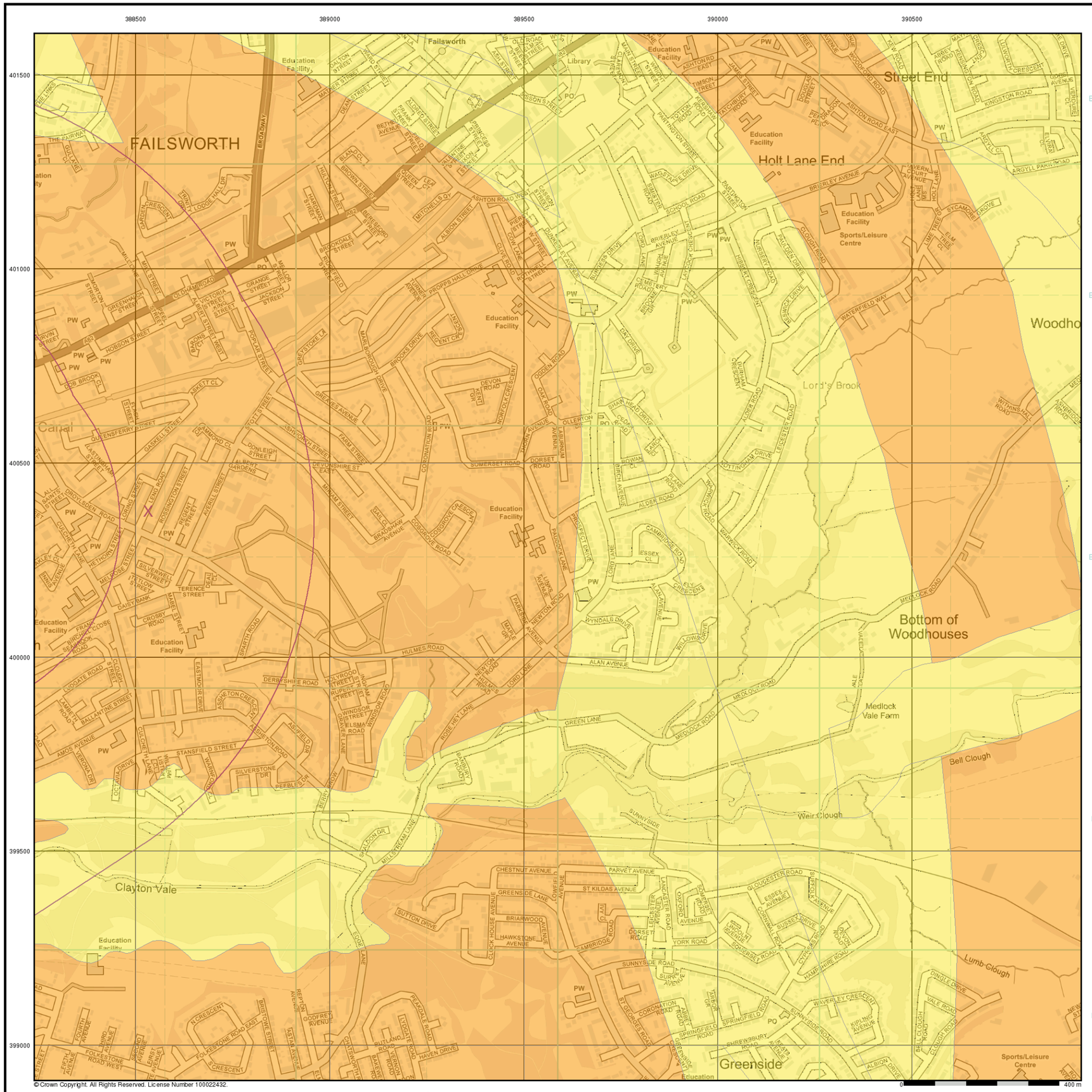

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General

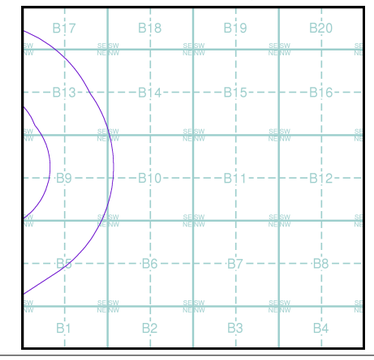
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice B



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

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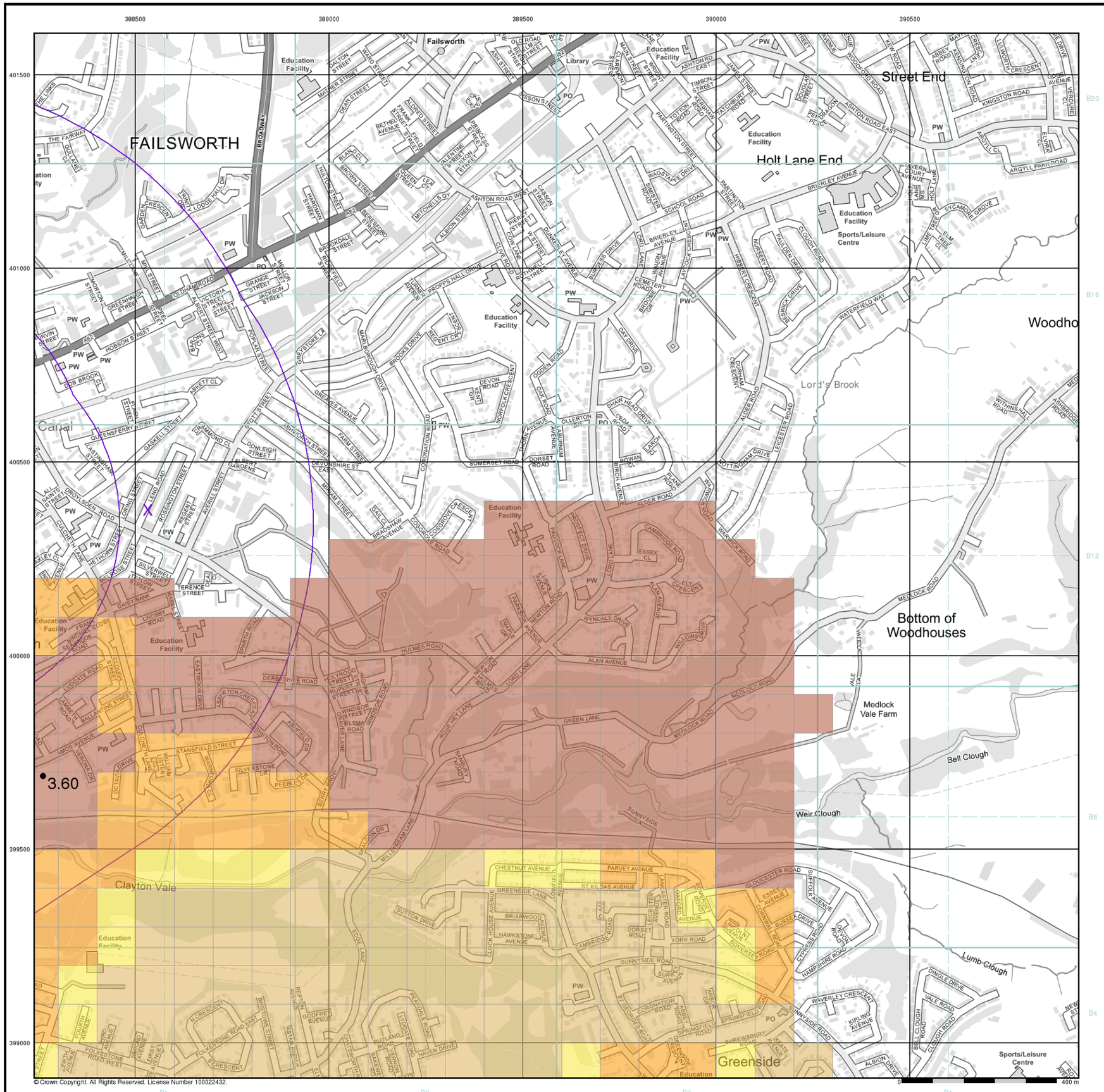

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General

Specified Site | Specified Buffer(s) | Bearing Reference Point

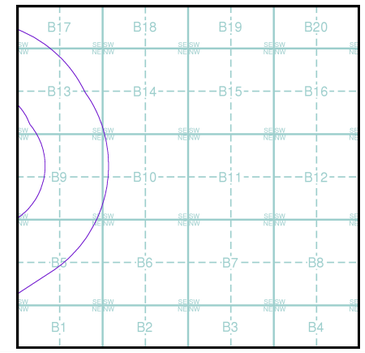
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Urban Soil Chemistry Cadmium - Slice B



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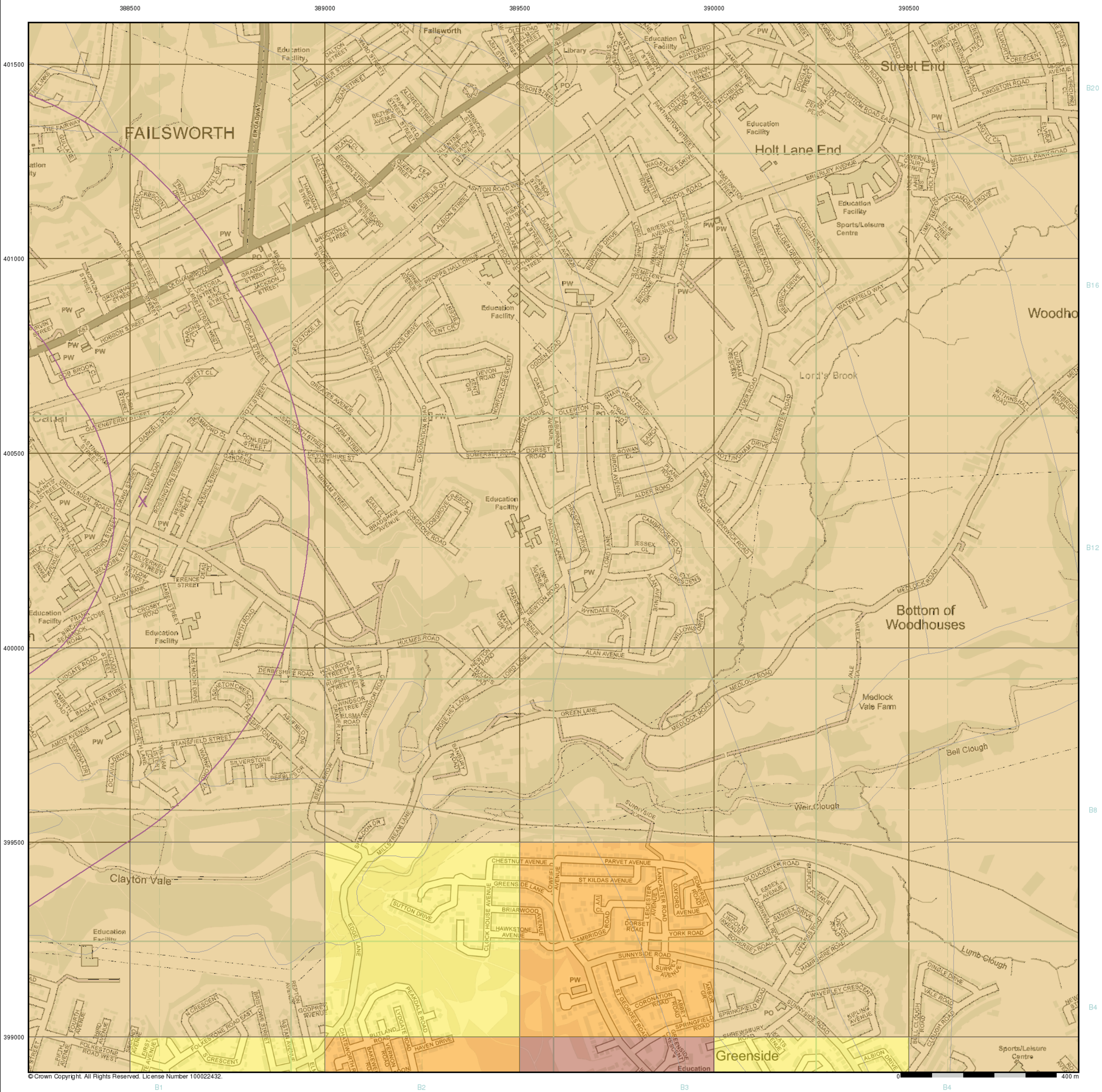

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General

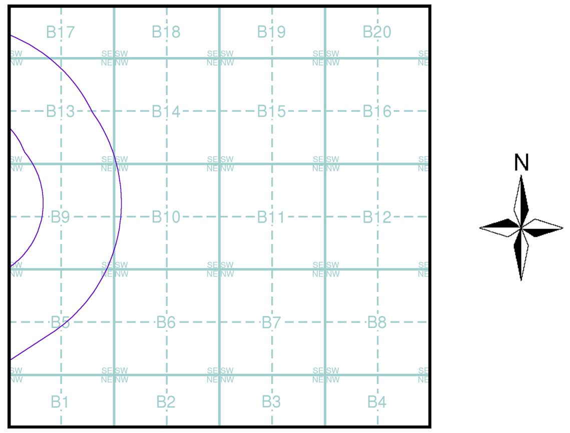
Specified Site   Specified Buffer(s)   X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice B



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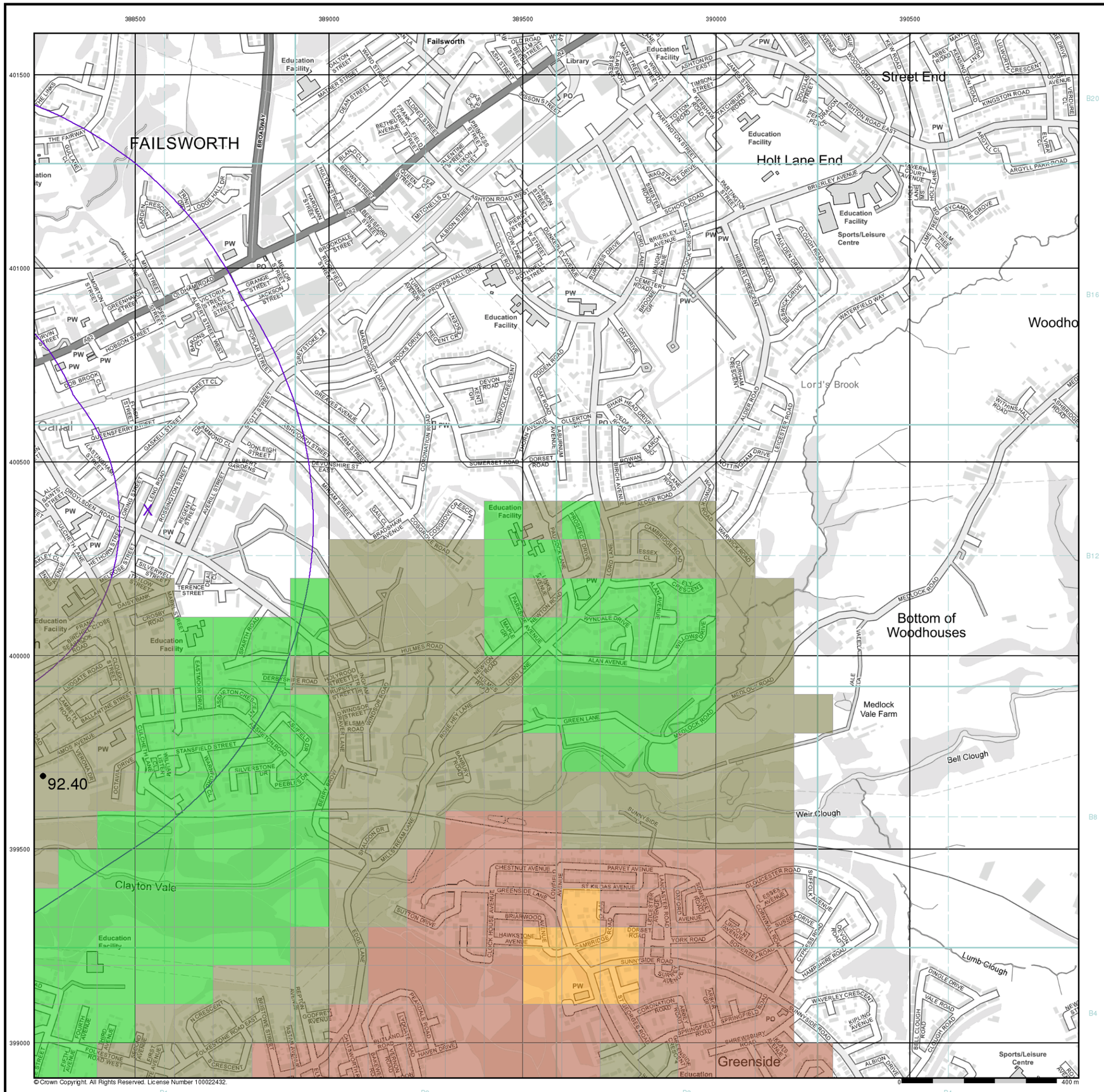

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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

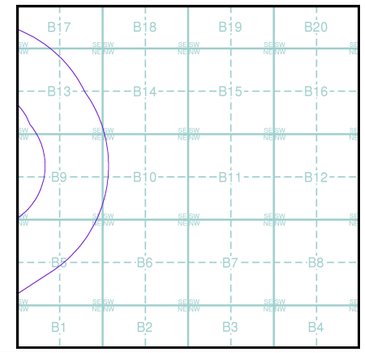
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

< 20
20 - 40
40 - 60
60 - 90
90 - 120
120 - 180
> 180

Urban Soil Chemistry Chromium - Slice B



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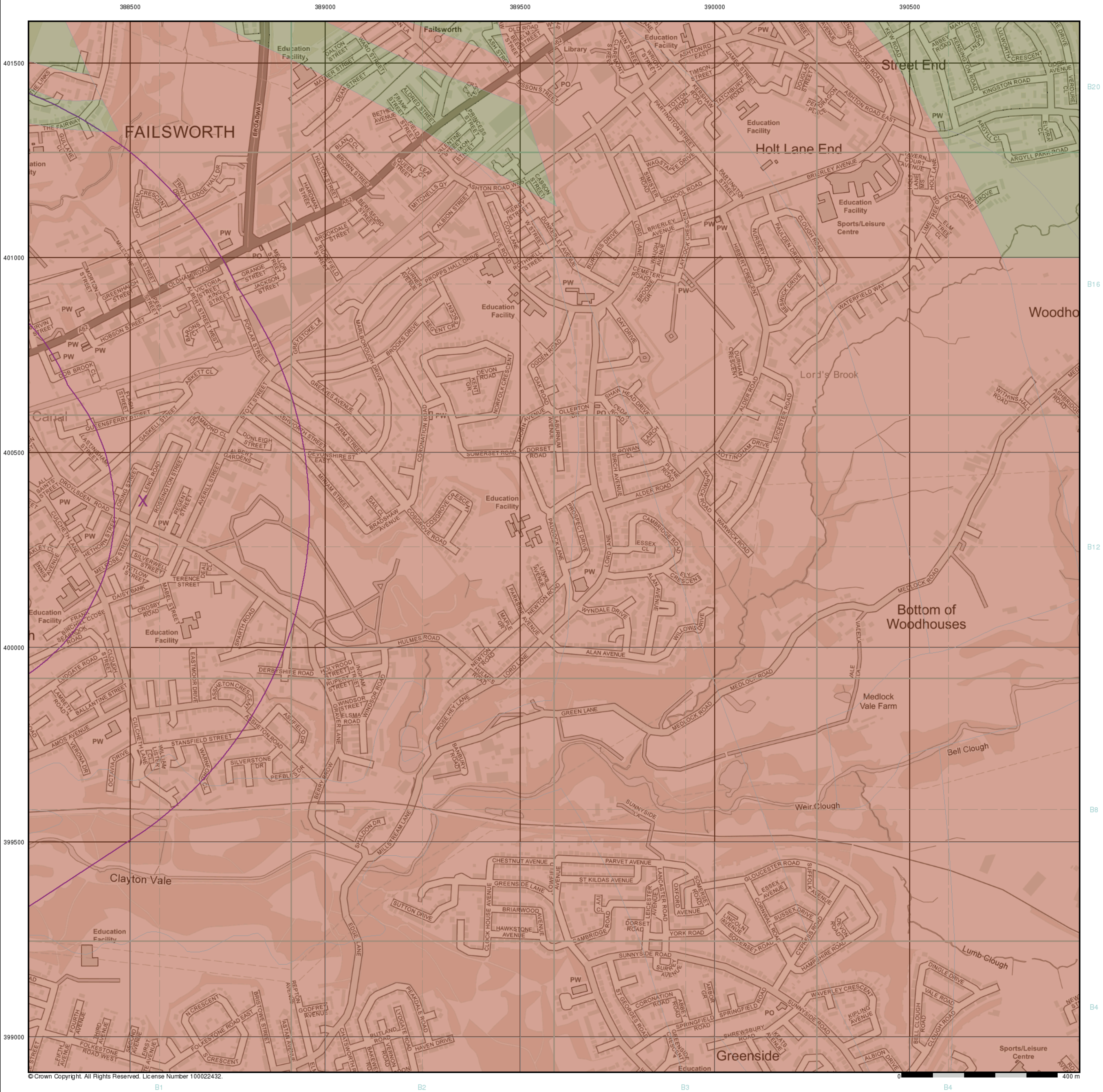

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General

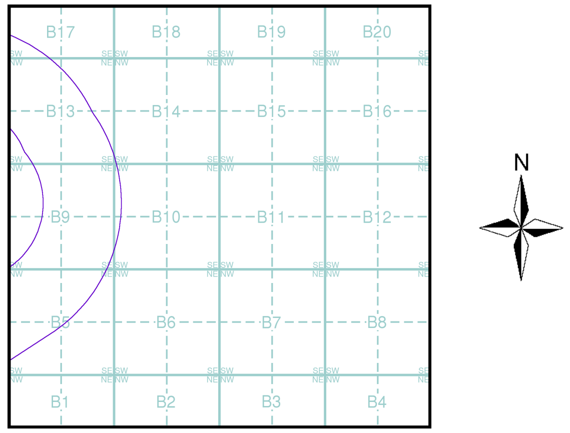
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice B



Order Details

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National Grid Reference: 388530, 400380
Slice: B
Site Area (Ha): 18.51
Search buffer (m): 1000

Site Details

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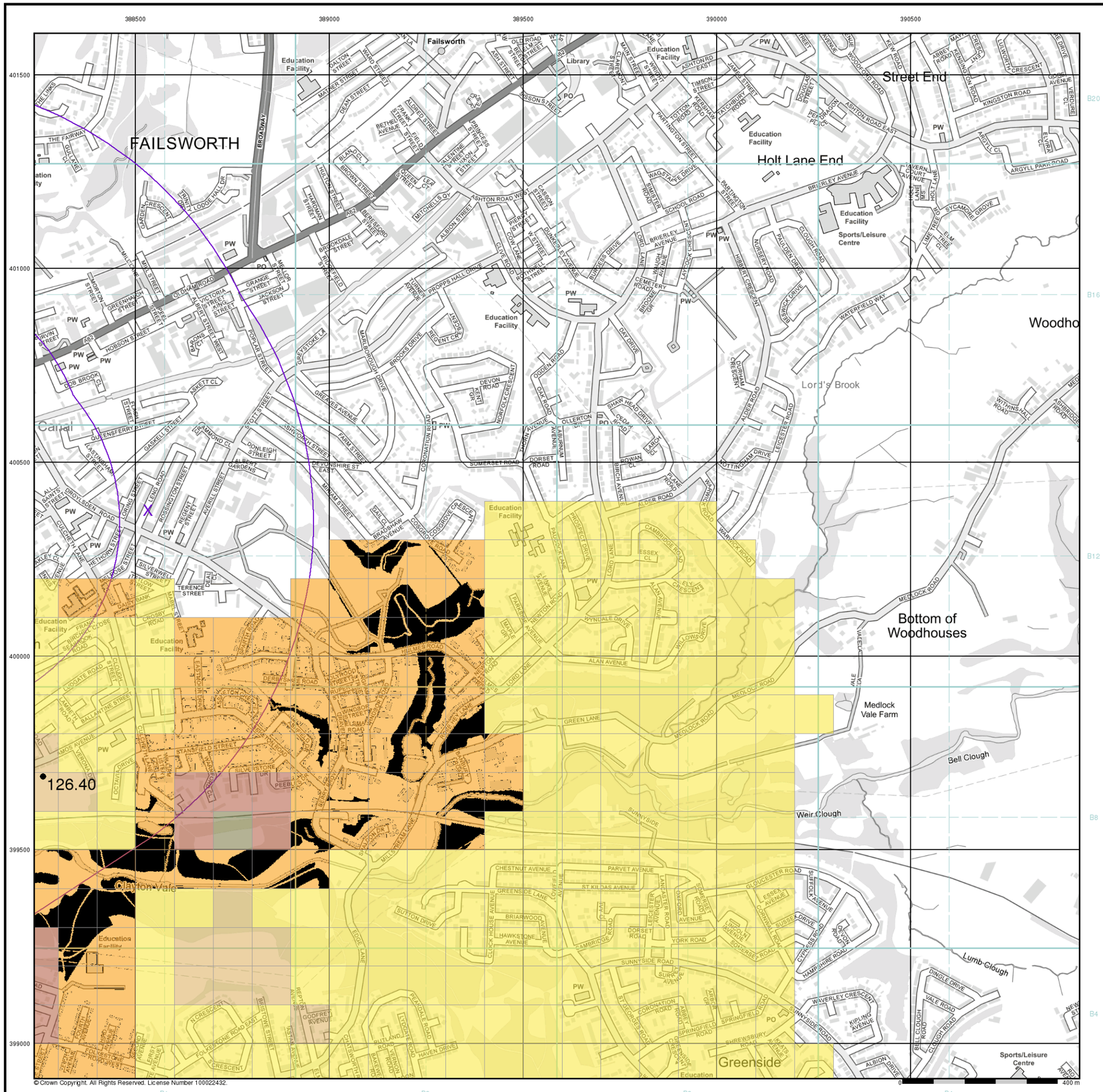

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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

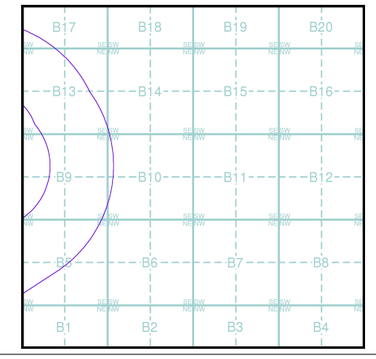
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Urban Soil Chemistry Lead - Slice B



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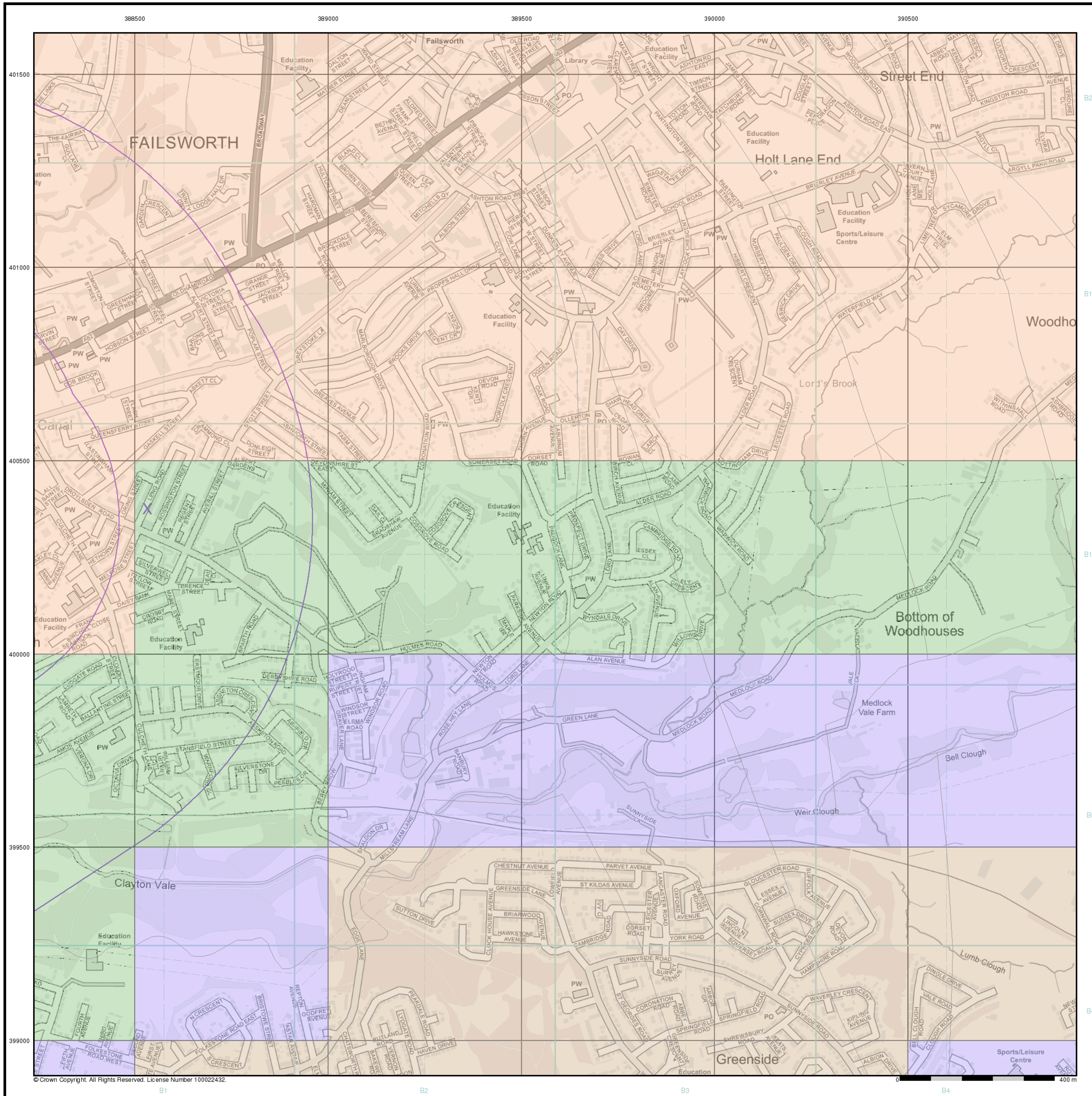

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General

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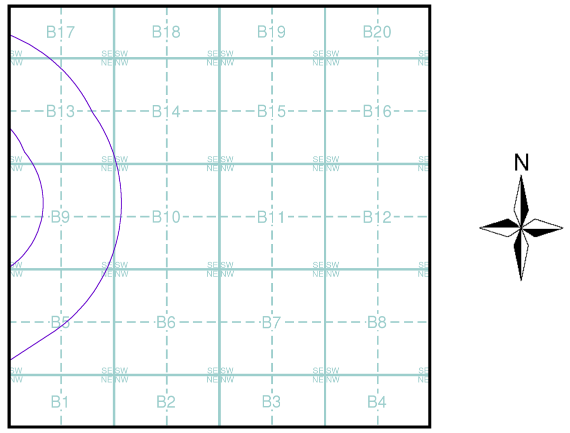
Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice B



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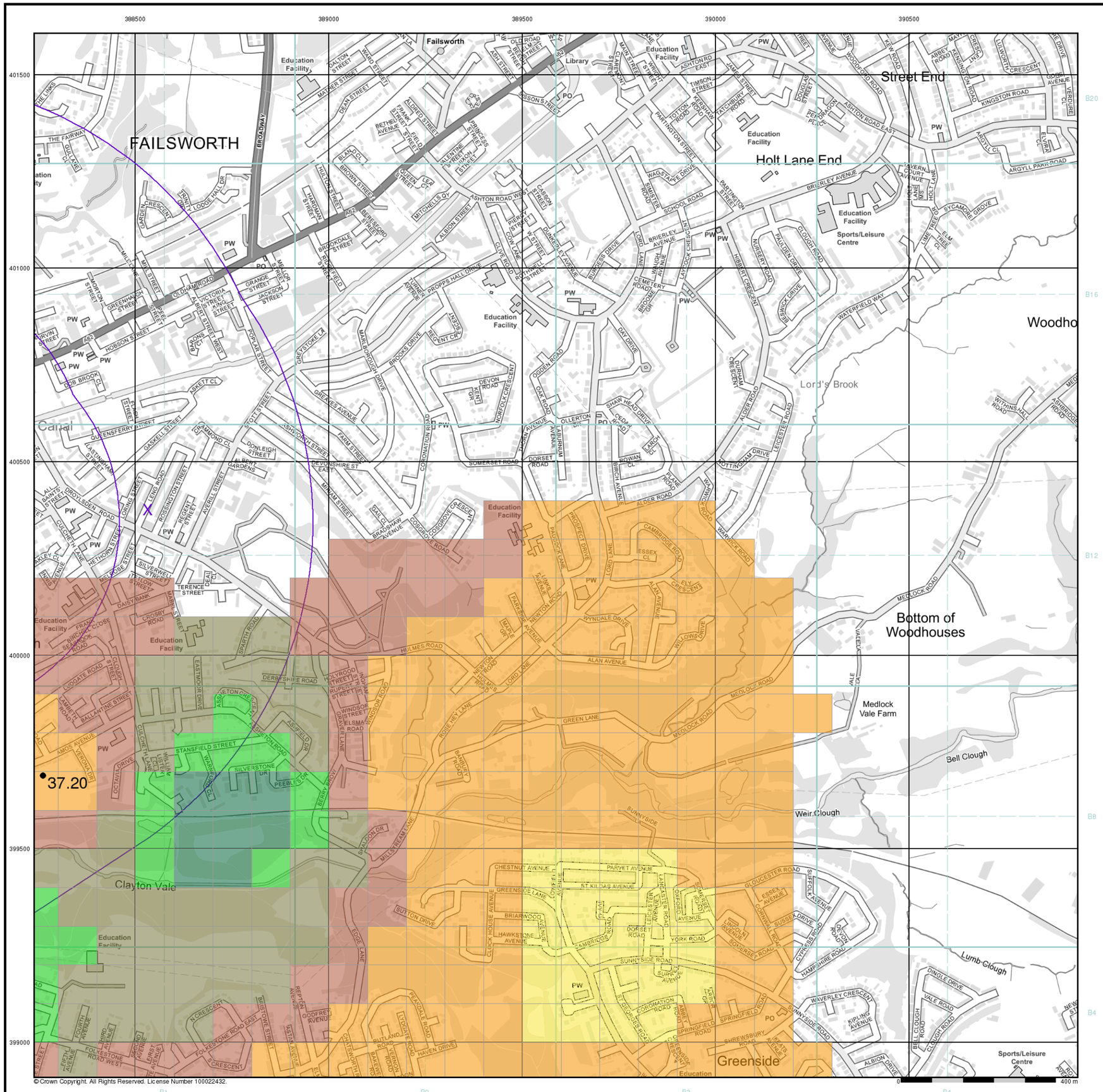
Slice: B
Site Area (Ha): 18.51
Search buffer (m): 1000

Site Details

Site at 387600, 400310



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General

Specified Site | Specified Buffer(s) | Bearing Reference Point

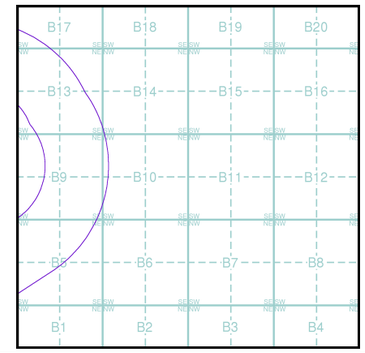
Urban Soil Chemistry Nickel

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice B



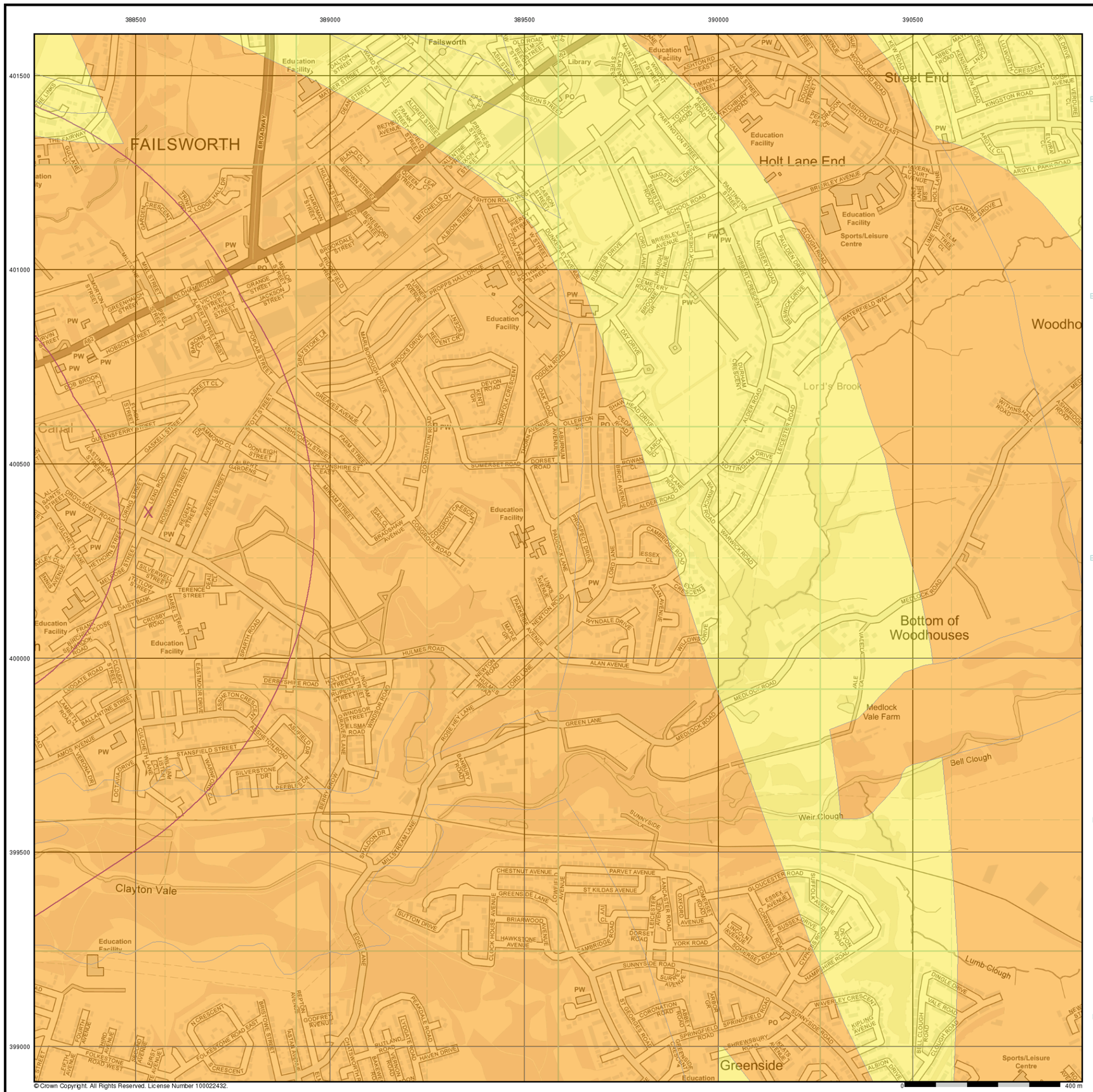
Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

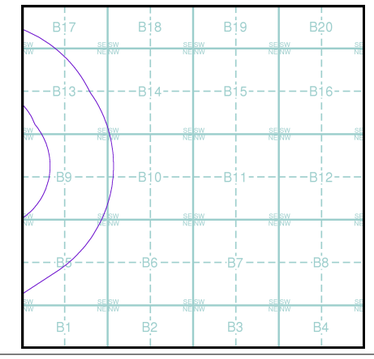
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice B



Order Details

Order Details:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
267713911_1_1

Customer Reference:
Ten Acres

National Grid Reference:
387320, 400240

Slice:
A

Site Area (Ha):
18.51

Search Buffer (m):
1000

Site Details:

Site at 387600, 400310

Client Details:

Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thorncliffe Park
Chapletown
Sheffield
S35 2PH

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	4
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	11
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	18
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
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The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

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Report Version v53.0

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Summary

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Mining and Natural Cavities Data					
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Man Made Mining Cavities					
Mining Instability	pg 2	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas	pg 2		1		4
Historical Land Use Information (1:2,500)					
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Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 5	6	10	n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 6	13	8	n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
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Subterranean Features (100m)				n/a	n/a
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Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 18	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Summary

Report Version v53.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Mitchell Street Brickworks Location: Newton Heath, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15091 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NW (E)	0	1	387725 400380
2	**BGS Recorded Mineral Sites** Site Name: Newton Brick Works Location: Newton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95120 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Manchester Marls Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A11SE (SW)	0	1	387280 400195
3	**BGS Recorded Mineral Sites** Site Name: Cheetham Fold Clay Pit Location: Cheetham Fold, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95124 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12SE (E)	454	1	388174 399945
4	**BGS Recorded Mineral Sites** Site Name: Philips Park Brick Works Location: Clayton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95126 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7SE (S)	565	1	387359 399474
5	**BGS Recorded Mineral Sites** Site Name: Philips Park Brick Works Location: Clayton, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95125 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	665	1	386930 399504
6	**BGS Recorded Mineral Sites** Site Name: Williams Road Sand Pit Location: Failsworth, Oldham, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15099 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	808	1	388230 401215

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**BGS Recorded Mineral Sites** Site Name: Moston Brickworks Location: Moston, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 15085 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A15NW (NW)	859	1	386960 401105
8	**BGS Recorded Mineral Sites** Site Name: Miles Platting Brick Works Location: Miles Platting, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 95121 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A6SE (SW)	933	1	386605 399404
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11SE (NW)	0	2	387318 400243
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11SE (NW)	0	3	387318 400243
	Non Coal Mining Areas of Great Britain No Hazard				
9	**Potential Mining Areas** Name: Bradford Ceased Operation: 1935 Commodity: Coal; Parket Reference: 11471 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A7NE (S)	215	4	387266 399883
10	**Potential Mining Areas** Name: Bradford and Clayton Ceased Operation: 1891 Commodity: Coal; Four Foot Reference: 2655 Alternate Name/Mine: Forge Custodian: Not Supplied	A6SE (SW)	716	4	386860 399484
11	**Potential Mining Areas** Name: Manchester Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A6SE (SW)	716	4	386860 399484
12	**Potential Mining Areas** Name: Gleden Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A6SW (SW)	983	4	386458 399488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Potential Mining Areas** Name: Moston Ceased Operation: 1915 Commodity: Coal; Foxholes Reference: 6592 Alternate Name/Mine: Nos. 3, 4 Custodian: Not Supplied	A20SW (N)	995	4	387682 401488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Extractive Industries or Potential Excavations from 1855-1909** Use: Rochdale Canal First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387469 400412
15	**Extractive Industries or Potential Excavations from 1855-1909** Use: Brick Works First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11SE (SW)	0	-	387282 400201
16	**Extractive Industries or Potential Excavations from 1855-1909** Use: Reservoir First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387491 400391
17	**Extractive Industries or Potential Excavations from 1855-1909** Use: Rochdale Canal First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (N)	1	-	387342 400337
18	**Extractive Industries or Potential Excavations from 1855-1909** Use: Rochdale Canal First Map Published Date: 1893 Last Map Published Date: Not Applicable	A12NW (NE)	1	-	387685 400476
19	**Extractive Industries or Potential Excavations from 1855-1909** Use: Rochdale Canal First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (NW)	3	-	387285 400287
20	**Extractive Industries or Potential Excavations from 1855-1909** Use: Lock First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (NE)	4	-	387447 400402
21	**Extractive Industries or Potential Excavations from 1855-1909** Use: Lock First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11NE (N)	4	-	387322 400322
22	**Extractive Industries or Potential Excavations from 1855-1909** Use: Lock First Map Published Date: 1893 Last Map Published Date: Not Applicable	A12NW (NE)	5	-	387659 400471
23	**Extractive Industries or Potential Excavations from 1855-1909** Use: Lock First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11SW (W)	7	-	387212 400240
24	**Extractive Industries or Potential Excavations from 1855-1909** Use: Rochdale Canal First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11SW (W)	9	-	387190 400223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Extractive Industries or Potential Excavations from 1855-1909** Use: Lock First Map Published Date: 1893 Last Map Published Date: Not Applicable	A11SW (SW)	84	-	387091 400146
26	**Extractive Industries or Potential Excavations from 1893-1915** Use: Unspecified Pit First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SE (NW)	0	-	387318 400243
27	**Extractive Industries or Potential Excavations from 1893-1915** Use: Unspecified Pit First Map Published Date: 1908 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387680 400344
28	**Extractive Industries or Potential Excavations from 1893-1915** Use: Brick Works First Map Published Date: 1908 Last Map Published Date: Not Applicable	A12NW (NE)	0	-	387608 400397
29	**Extractive Industries or Potential Excavations from 1893-1915** Use: Reservoir First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387485 400380
30	**Extractive Industries or Potential Excavations from 1893-1915** Use: Brick Works First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SE (NW)	0	-	387318 400243
31	**Extractive Industries or Potential Excavations from 1893-1915** Use: Rochdale Canal First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387470 400413
32	**Extractive Industries or Potential Excavations from 1893-1915** Use: Rochdale Canal First Map Published Date: 1908 Last Map Published Date: Not Applicable	A12NW (NE)	1	-	387686 400476
33	**Extractive Industries or Potential Excavations from 1893-1915** Use: Rochdale Canal First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (N)	1	-	387342 400337
34	**Extractive Industries or Potential Excavations from 1893-1915** Use: Rochdale Canal First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (NW)	2	-	387284 400287
35	**Extractive Industries or Potential Excavations from 1893-1915** Use: Lock First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (N)	3	-	387323 400322

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	**Extractive Industries or Potential Excavations from 1893-1915** Use: Lock First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11NE (NE)	4	-	387448 400403
37	**Extractive Industries or Potential Excavations from 1893-1915** Use: Lock First Map Published Date: 1908 Last Map Published Date: Not Applicable	A12NW (NE)	5	-	387659 400471
38	**Extractive Industries or Potential Excavations from 1893-1915** Use: Lock First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SW (W)	6	-	387213 400240
39	**Extractive Industries or Potential Excavations from 1893-1915** Use: Rochdale Canal First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SW (W)	9	-	387191 400220
40	**Extractive Industries or Potential Excavations from 1893-1915** Use: Unspecified Pit First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SE (SE)	28	-	387537 400035
41	**Extractive Industries or Potential Excavations from 1893-1915** Use: Lock First Map Published Date: 1908 Last Map Published Date: Not Applicable	A11SW (SW)	82	-	387093 400146
42	**Extractive Industries or Potential Excavations from 1906-1937** Use: Reservoir First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387485 400379
43	**Extractive Industries or Potential Excavations from 1906-1937** Use: Rochdale Canal First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (N)	0	-	387342 400335
44	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Deposited Material First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SE (S)	0	-	387307 400212
45	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Deposited Material First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387697 400286
46	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Deposited Material First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387655 400319

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Deposited Material First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387711 400385
48	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Pits First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387614 400266
49	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Pit First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SE (NW)	0	-	387318 400243
50	**Extractive Industries or Potential Excavations from 1906-1937** Use: Brick Works First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SE (NW)	0	-	387318 400243
51	**Extractive Industries or Potential Excavations from 1906-1937** Use: Unspecified Pit First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387570 400303
52	**Extractive Industries or Potential Excavations from 1906-1937** Use: Brick Works First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (E)	0	-	387597 400294
53	**Extractive Industries or Potential Excavations from 1906-1937** Use: Rochdale Canal First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (NE)	0	-	387685 400473
54	**Extractive Industries or Potential Excavations from 1906-1937** Use: Rochdale Canal First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (NE)	0	-	387470 400410
55	**Extractive Industries or Potential Excavations from 1906-1937** Use: Rochdale Canal First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (NW)	1	-	387285 400286
56	**Extractive Industries or Potential Excavations from 1906-1937** Use: Lock First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (N)	2	-	387322 400319
57	**Extractive Industries or Potential Excavations from 1906-1937** Use: Lock First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11NE (NE)	2	-	387447 400400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
58	**Extractive Industries or Potential Excavations from 1906-1937** Use: Lock First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NW (NE)	2	-	387658 400469
59	**Extractive Industries or Potential Excavations from 1906-1937** Use: Lock First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SW (W)	5	-	387212 400235
60	**Extractive Industries or Potential Excavations from 1906-1937** Use: Rochdale Canal First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SW (W)	8	-	387190 400222
61	**Extractive Industries or Potential Excavations from 1906-1937** Use: Railway Cutting First Map Published Date: 1922 Last Map Published Date: Not Applicable	A12NE (E)	28	-	387940 400301
62	**Extractive Industries or Potential Excavations from 1906-1937** Use: Lock First Map Published Date: 1922 Last Map Published Date: Not Applicable	A11SW (SW)	85	-	387091 400145
63	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387677 400385
64	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12SW (E)	0	-	387605 400209
65	**Extractive Industries or Potential Excavations from 1950-1980** Use: Refuse Heap First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387777 400286
66	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12SW (E)	0	-	387651 400243
67	**Extractive Industries or Potential Excavations from 1950-1980** Use: Brick Works First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387844 400392
68	**Extractive Industries or Potential Excavations from 1950-1980** Use: Reservoir (Disused) First Map Published Date: 1951 Last Map Published Date: 1951	A11NE (NE)	0	-	387490 400392

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**Extractive Industries or Potential Excavations from 1950-1980** Use: Reservoir First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387848 400331
70	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Pit First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387817 400309
71	**Extractive Industries or Potential Excavations from 1950-1980** Use: Reservoir First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387822 400310
72	**Extractive Industries or Potential Excavations from 1950-1980** Use: Refuse Heap First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387730 400359
73	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387663 400371
74	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387690 400265
75	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387630 400336
76	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (NE)	0	-	387577 400359
77	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (NE)	0	-	387637 400415
78	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387649 400304
79	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387694 400336

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1951 Last Map Published Date: 1951	A12SW (E)	0	-	387689 400208
81	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (E)	0	-	387636 400264
82	**Extractive Industries or Potential Excavations from 1950-1980** Use: Clay Pit First Map Published Date: 1951 Last Map Published Date: 1951	A11SE (E)	0	-	387524 400247
83	**Extractive Industries or Potential Excavations from 1950-1980** Use: Rochdale Canal First Map Published Date: 1949 Last Map Published Date: 1954	A11NE (NW)	3	-	387284 400288
84	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lock First Map Published Date: 1951 Last Map Published Date: 1951	A11NE (NE)	6	-	387447 400404
85	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lock First Map Published Date: 1951 Last Map Published Date: 1951	A11NE (N)	6	-	387324 400326
86	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lock First Map Published Date: 1951 Last Map Published Date: 1951	A11SW (W)	7	-	387212 400238
87	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lock First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (NE)	7	-	387659 400474
88	**Extractive Industries or Potential Excavations from 1950-1980** Use: Resr First Map Published Date: 1951 Last Map Published Date: 1951	A12NW (NE)	23	-	387774 400499
89	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lock First Map Published Date: 1951 Last Map Published Date: 1951	A11SW (SW)	87	-	387089 400144

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1923	A8SW (SE)	640	-	387852 399507
91	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	A8SW (SE)	680	-	387820 399438
92	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	A8NE (SE)	684	-	388114 399630
93	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	A16NE (NE)	721	-	388166 401150
94	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1923	A8SW (SE)	740	-	387807 399363
95	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	A8SE (SE)	772	-	388046 399482
96	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	A8SE (SE)	837	-	387974 399352
97	**Mineral Railway** Use: Not Supplied Date of Mapping: 1909 - 1923	A11SW (SW)	246	-	387045 399933
98	**Mineral Railway** Use: Not Supplied Date of Mapping: 1956	A11SW (SW)	262	-	387032 399924
99	**Mineral Railway** Use: Not Supplied Date of Mapping: 1909 - 1956	A7NW (SW)	408	-	387096 399711
100	**Mineral Railway** Use: Not Supplied Date of Mapping: 1909 - 1956	A7NW (SW)	410	-	387061 399724
101	**Mineral Railway** Use: Not Supplied Date of Mapping: 1909 - 1956	A7NW (SW)	417	-	387002 399747
102	**Mineral Railway** Use: Not Supplied Date of Mapping: 1909 - 1956	A8SW (SE)	615	-	387831 399523
103	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A11SW (SW)	235	-	387006 400004
104	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A12SE (E)	460	-	388175 399939
105	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A16SE (NE)	461	-	388065 400909
106	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1894	A7SW (S)	598	-	387223 399486
107	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1894	A8NE (SE)	644	-	388117 399681
108	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A8SW (SE)	678	-	387824 399444
109	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1894	A7SW (S)	690	-	387145 399413
110	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A8SW (SE)	734	-	387803 399368

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909 - 1923	A16NE (NE)	768	-	388181 401194
112	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909	A14SW (NW)	889	-	386404 400646
113	**Former Marshes** Use: Former Marsh Date of Mapping: 1848	A12SE (E)	419	-	388116 399949
114	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SE (NW)	0	-	387318 400243
115	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SE (E)	0	-	387524 400246
116	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A11SW (SW)	235	-	387006 400004
117	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	460	-	388175 399939
118	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A16SE (NE)	461	-	388065 400909
119	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (S)	503	-	387171 399577
120	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (SW)	598	-	386991 399549
121	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8NE (SE)	644	-	388117 399681
122	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SE)	678	-	387824 399444
123	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (SW)	705	-	386646 399700
124	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SE)	734	-	387803 399368
125	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A16NE (NE)	768	-	388181 401194
126	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6SE (SW)	778	-	386714 399514
127	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A14SW (NW)	889	-	386404 400646
128	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A19SW (N)	981	-	387202 401355
129	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11NE (NE)	0	-	387515 400407
130	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (E)	0	-	387629 400132
131	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11NE (E)	0	-	387521 400272

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (SE)	17	-	387405 400105
133	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A11SE (SE)	19	-	387467 400012
134	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (E)	42	-	387698 400120
135	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NW (NE)	56	-	387726 400530
136	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	64	-	387680 400088
137	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11SW (SW)	65	-	387154 400090
138	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	86	-	387673 400055
139	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15SE (N)	87	-	387441 400637
140	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (S)	159	-	387298 399954
141	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A11SE (S)	172	-	387298 399940
142	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (W)	189	-	387007 400290
143	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (W)	191	-	387037 400327
144	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (SE)	222	-	387721 399927
145	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	225	-	387671 399874
146	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	233	-	388045 400649
147	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A16SE (NE)	236	-	388082 400600
148	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	237	-	387662 399866
149	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NE (S)	240	-	387476 399787
150	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A12SW (SE)	241	-	387874 400004
151	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11SW (SW)	273	-	387014 399929
152	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NW (SW)	289	-	387011 399908

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A16SE (NE)	294	-	388138 400617
154	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NE (S)	299	-	387331 399767
155	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (S)	309	-	387201 399790
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	310	-	386855 400162
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	318	-	388034 400765
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A11SW (SW)	323	-	386892 400013
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	329	-	388015 400787
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (SW)	346	-	387088 399782
161	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A7NW (S)	348	-	387142 399760
162	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (SW)	349	-	386954 399883
163	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	350	-	387795 399822
164	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SW (NE)	352	-	387653 400821
165	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A8NW (SE)	370	-	387689 399723
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A12SE (E)	371	-	388214 400077
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A7NW (S)	372	-	387204 399727
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	375	-	388058 400817
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	387	-	386782 400238
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	388	-	387860 399819
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NE (S)	393	-	387313 399669
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	411	-	388133 400809
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	414	-	387584 399626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7NE (S)	426	-	387492 399601
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NW (NW)	428	-	386980 400589
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6NE (SW)	449	-	386829 399884
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7SE (S)	454	-	387412 399577
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	456	-	387928 399782
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16SE (NE)	459	-	388143 400862
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A16SE (NE)	459	-	388057 400911
181	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	469	-	386722 400032
182	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (S)	493	-	387174 399607
183	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NW (SE)	504	-	387732 399591
184	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	508	-	387017 399635
185	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15SW (N)	559	-	387188 400892
186	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SE (W)	563	-	386611 400088
187	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A8SW (SE)	567	-	387671 399493
188	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A8NE (SE)	569	-	387907 399626
189	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A7SW (S)	582	-	387040 399547
190	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A15NE (N)	584	-	387269 400966
191	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	595	-	388110 399734
192	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8NE (SE)	627	-	388176 399740
193	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A8SW (SE)	633	-	387891 399544
194	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10SW (W)	636	-	386542 400057

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
195	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NE (N)	645	-	387362 401056
196	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A15NW (N)	648	-	387154 400974
197	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NE (SW)	653	-	386616 399831
198	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6NE (SW)	659	-	386658 399762
199	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A16NE (NE)	673	-	387973 401158
200	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6SE (SW)	675	-	386814 399565
201	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A15NW (N)	676	-	387101 400976
202	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NW (NE)	682	-	387752 401162
203	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7SW (S)	686	-	387005 399449
204	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A8SW (SE)	704	-	387765 399384
205	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A16NE (NE)	704	-	388038 401195
206	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NW (N)	711	-	387109 401021
207	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A15NW (NW)	721	-	386990 400968
208	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NE (NE)	722	-	388176 401146
209	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A6SE (SW)	732	-	386848 399472
210	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NW (N)	735	-	387209 401095
211	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NE (SW)	748	-	386570 399733
212	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A16NE (NE)	757	-	388203 401172
213	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	772	-	386412 400362
214	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A15NW (NW)	777	-	386910 400979
215	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NW (SW)	794	-	386440 399863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
216	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	794	-	386392 400368
217	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A20SE (NE)	797	-	387909 401287
218	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A3NE (S)	803	-	387408 399227
219	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A15NE (N)	815	-	387328 401223
220	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A3NE (S)	819	-	387382 399213
221	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A6SE (SW)	820	-	386786 399408
222	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A3NE (S)	822	-	387456 399204
223	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A4NW (S)	835	-	387627 399205
224	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A6NW (SW)	865	-	386389 399804
225	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A3NE (S)	894	-	387403 399136
226	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A14NE (NW)	899	-	386768 401025
227	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A19SW (N)	922	-	387166 401279
228	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A8SE (SE)	937	-	388220 399383
229	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A10NW (W)	952	-	386263 400492
230	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A4NW (S)	955	-	387667 399089
231	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A4NW (SE)	981	-	387847 399117
232	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	A14SW (W)	983	-	386304 400661
233	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A19SE (N)	989	-	387340 401407
234	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A19SW (N)	991	-	387054 401309

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
235	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
236	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
237	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
238	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	0	1	387331 400251
239	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	42	1	387318 400000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NW)	0	1	387293 400280
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387301 400000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
240	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
241	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
242	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
243	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000
244	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	387318 400243
245	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	27	1	387318 400000

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Lancashire And Furness	104_04	1893
Lancashire And Furness	104_04	1893
Lancashire And Furness	104_04	1908
Lancashire And Furness	104_04	1908
Lancashire And Furness	104_04	1931
Lancashire And Furness	104_04	1931
Ordnance Survey Plan	SD8700	1951
Ordnance Survey Plan	SD8700	1951

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Lancashire And Furness	096_00	1848
Lancashire And Furness	104_00	1848
Cheshire	003A_00	1882
Lancashire And Furness	096_SE	1894
Lancashire And Furness	104_NE	1894
Cheshire	003A_SE	1899
Lancashire And Furness	104_NE	1909
Lancashire And Furness	096_SE	1910
Cheshire	003A_SE	1911
Lancashire And Furness	104_NE	1923
Cheshire	003A_SE	1938
Lancashire And Furness	096_SE	1938
Ordnance Survey Plan	SD80SE	1956
Ordnance Survey Plan	SJ89NE	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SD80SE	1990
Ordnance Survey Plan	SJ89NE	1993

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	October 2020	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Stantec UK Ltd	October 2020	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	February 2020	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	January 2015	Annual Rolling Update

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey, NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong, your earth our world
Johnson Poole & Bloomer	JPB

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
3	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
4	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9960 Fax: 0844 844 9951 Email: customerservice@promap.co.uk Website: www.landmarkinfo.co.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
267713911_1_1

Customer Reference:
Ten Acres

National Grid Reference:
388530, 400380

Slice:
B

Site Area (Ha):
18.51

Search Buffer (m):
1000

Site Details:

Site at 387600, 400310

Client Details:

Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thorncliffe Park
Chapletown
Sheffield
S35 2PH

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	-
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	2
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	5
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	6
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Report Version v53.0

wardell armstrong

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites					
Coal Mining Affected Areas	pg 1	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
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Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents	pg 2				7
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 2			1	3
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 2			1	3
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Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Summary

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Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	B9NW (NW)	0	1	388532 400376
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	B9NW (NW)	0	2	388532 400376
	Non Coal Mining Areas of Great Britain No Hazard				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B5NW (S)	684	-	388260 399689
2	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B13NW (N)	721	-	388349 401154
3	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B5SW (S)	772	-	388536 399573
4	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B13NW (N)	835	-	388373 401159
5	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B5SW (S)	837	-	388358 399416
6	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B13SE (N)	869	-	388692 400813
7	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1956	B13NW (N)	991	-	388550 401214
8	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1894 - 1909	B13NW (N)	461	-	388309 400969
9	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1894	B5NW (S)	644	-	388336 399723
10	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1909 - 1923	B13NW (N)	768	-	388348 401182
11	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1956	B5NE (S)	986	-	388662 399648
12	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	B13NW (N)	461	-	388309 400969
13	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B5NW (S)	644	-	388336 399723
14	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	B13NW (N)	768	-	388348 401182
15	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B5NE (S)	986	-	388662 399648
16	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	454	-	388318 400069
17	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	464	-	388344 400089
18	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B13SW (NW)	474	-	388346 400620
19	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B9SW (SW)	540	-	388348 399973
20	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9SW (S)	574	-	388393 399972
21	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13SW (N)	631	-	388377 400891

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NW (SW)	652	-	388238 399750
23	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5NW (SW)	653	-	388282 399779
24	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B13NW (N)	673	-	388308 401119
25	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B9SE (SE)	716	-	388658 400195
26	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B13NW (N)	722	-	388376 401156
27	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B5NW (S)	731	-	388482 399836
28	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NW (S)	766	-	388386 399711
29	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B13NW (N)	835	-	388378 401156
30	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5NE (S)	845	-	388609 399788
31	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B13SE (N)	852	-	388686 400789
32	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9NE (E)	853	-	388808 400430
33	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5NE (S)	861	-	388656 399799
34	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B5SW (S)	879	-	388345 399533
35	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5SW (S)	881	-	388316 399522
36	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B5NE (S)	899	-	388609 399726
37	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13NW (N)	903	-	388451 401185
38	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13SE (NE)	903	-	388774 400733
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B9SE (SE)	920	-	388869 400192
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13NE (N)	933	-	388606 401069
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	B5SW (S)	937	-	388258 399424
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B9NE (E)	943	-	388902 400361

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	B5SW (S)	964	-	388348 399450
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13SE (NE)	974	-	388827 400790
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B13NW (N)	975	-	388496 401241
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	B5SW (S)	986	-	388536 399548
47	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	B10NW (E)	988	-	388934 400499
48	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1909	B13NE (N)	995	-	388695 401052

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
49	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
50	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000
51	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(W)	0	3	387949 400346
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000
52	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
53	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000
54	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
55	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000
56	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (NW)	0	3	388532 400376
57	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (S)	27	3	388532 400000

No Historical Land Use information available.

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Lancashire And Furness	096_00	1848
Lancashire And Furness	097_00	1848
Lancashire And Furness	104_00	1848
Lancashire And Furness	105_00	1848
Cheshire	003A_00	1882
Lancashire And Furness	096_SE	1894
Lancashire And Furness	097_SW	1894
Lancashire And Furness	104_NE	1894
Lancashire And Furness	105_NW	1895
Cheshire	003A_SE	1899
Lancashire And Furness	104_NE	1909
Lancashire And Furness	096_SE	1910
Lancashire And Furness	097_SW	1910
Lancashire And Furness	105_NW	1910
Cheshire	003A_SE	1911
Lancashire And Furness	105_NW	1922
Lancashire And Furness	104_NE	1923
Cheshire	003A_SE	1938
Lancashire And Furness	096_SE	1938
Lancashire And Furness	097_SW	1938
Ordnance Survey Plan	SJ99NW	1954
Ordnance Survey Plan	SD80SE	1956
Ordnance Survey Plan	SD90SW	1956
Ordnance Survey Plan	SJ89NE	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SD80SE	1990
Ordnance Survey Plan	SD90SW	1990
Ordnance Survey Plan	SJ99NW	1991
Ordnance Survey Plan	SJ89NE	1993

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	October 2020	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Stantec UK Ltd	October 2020	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	February 2020	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	January 2015	Annual Rolling Update

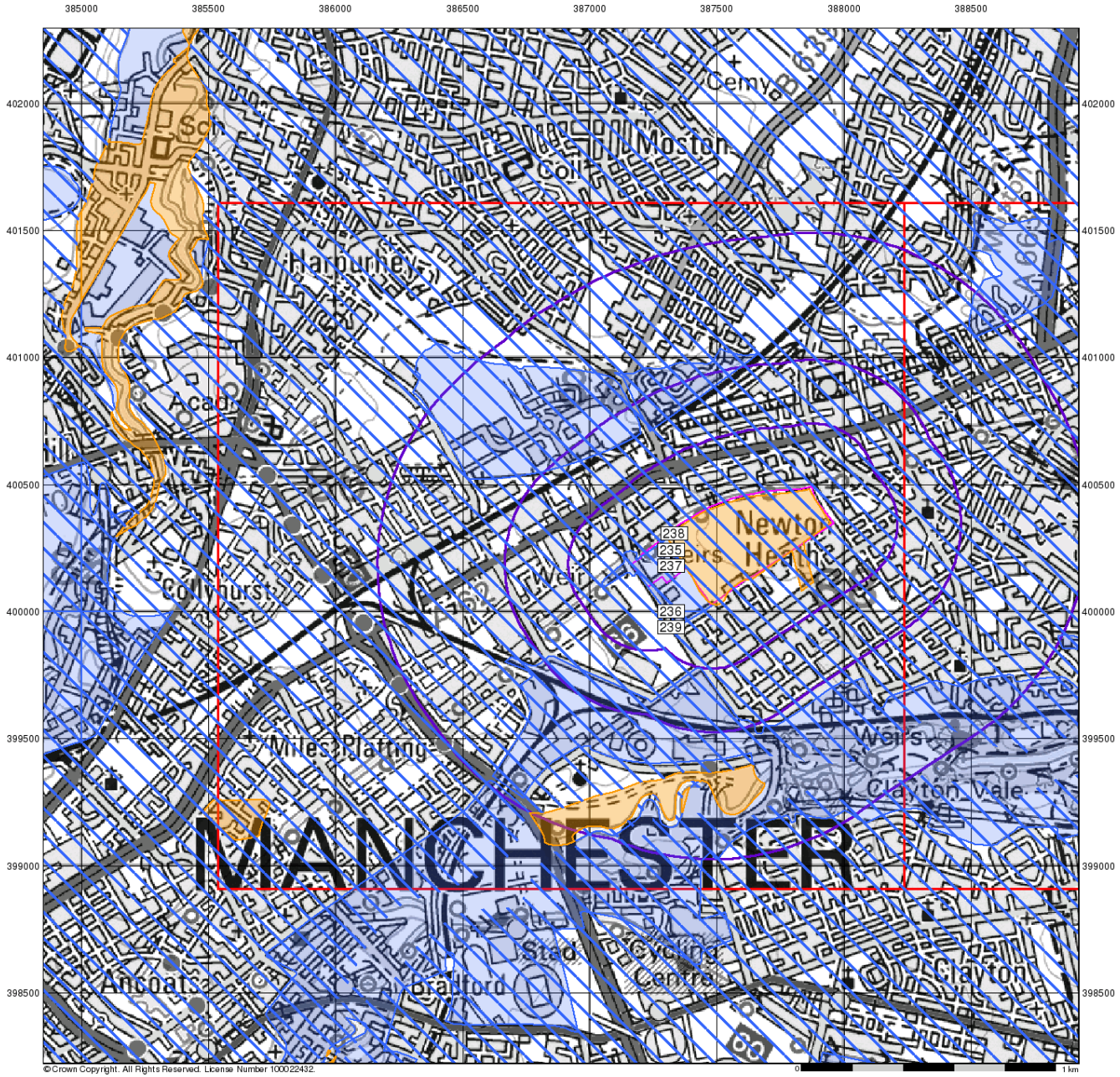
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

Useful Contacts

Contact	Name and Address	Contact Details
1	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
2	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
3	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

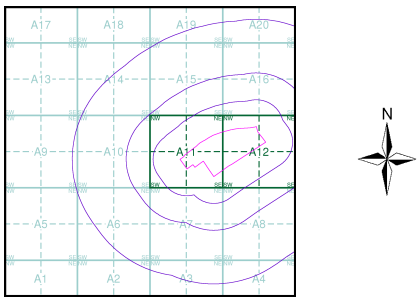
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark® INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

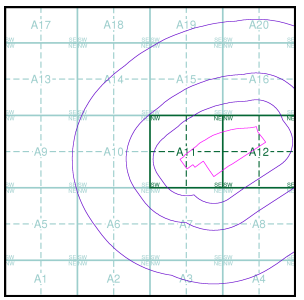
Potential for Landslide Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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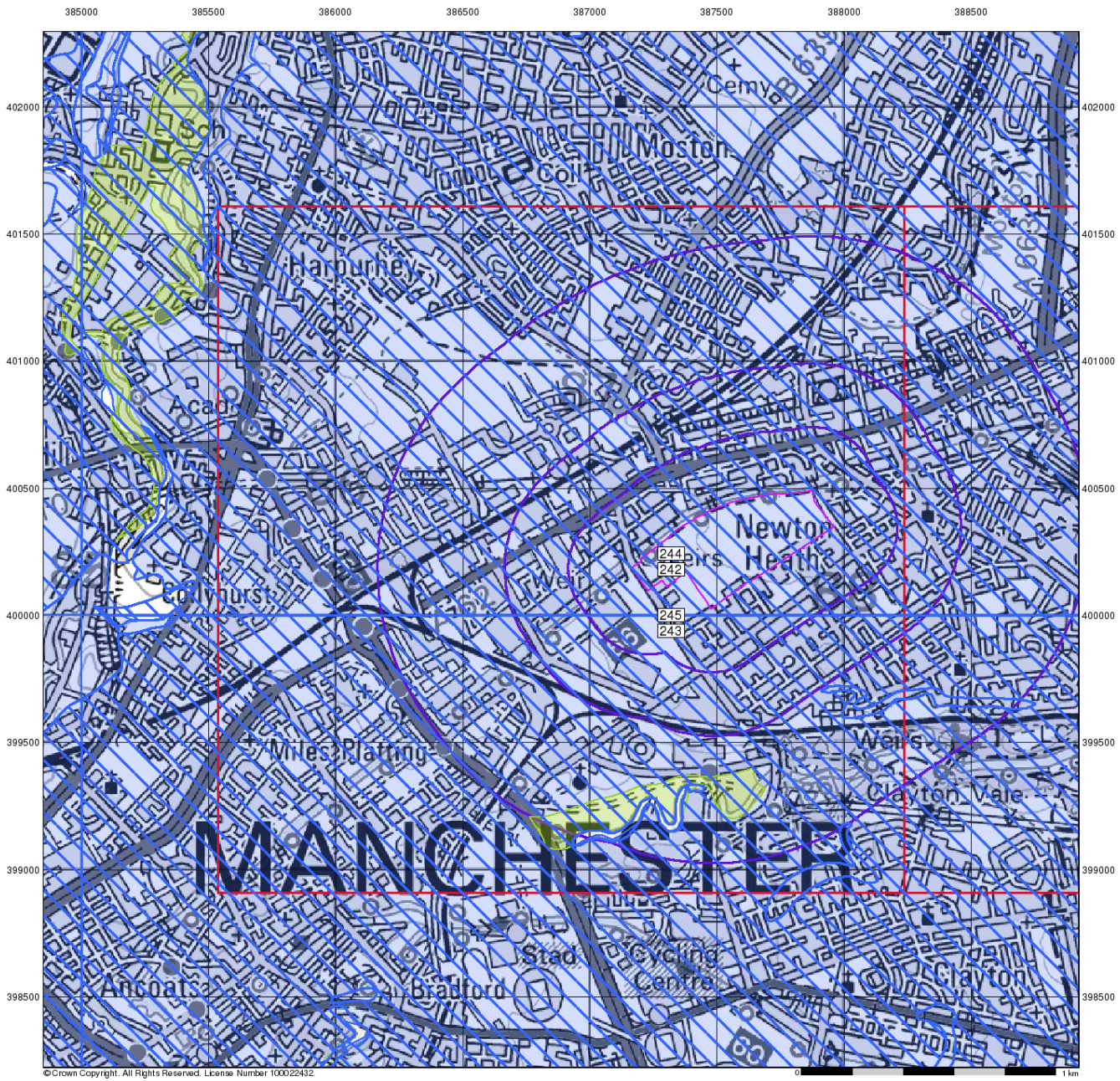
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

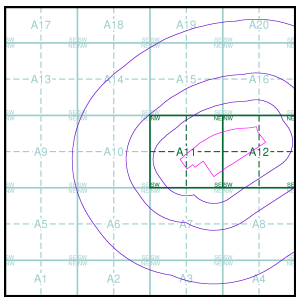
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



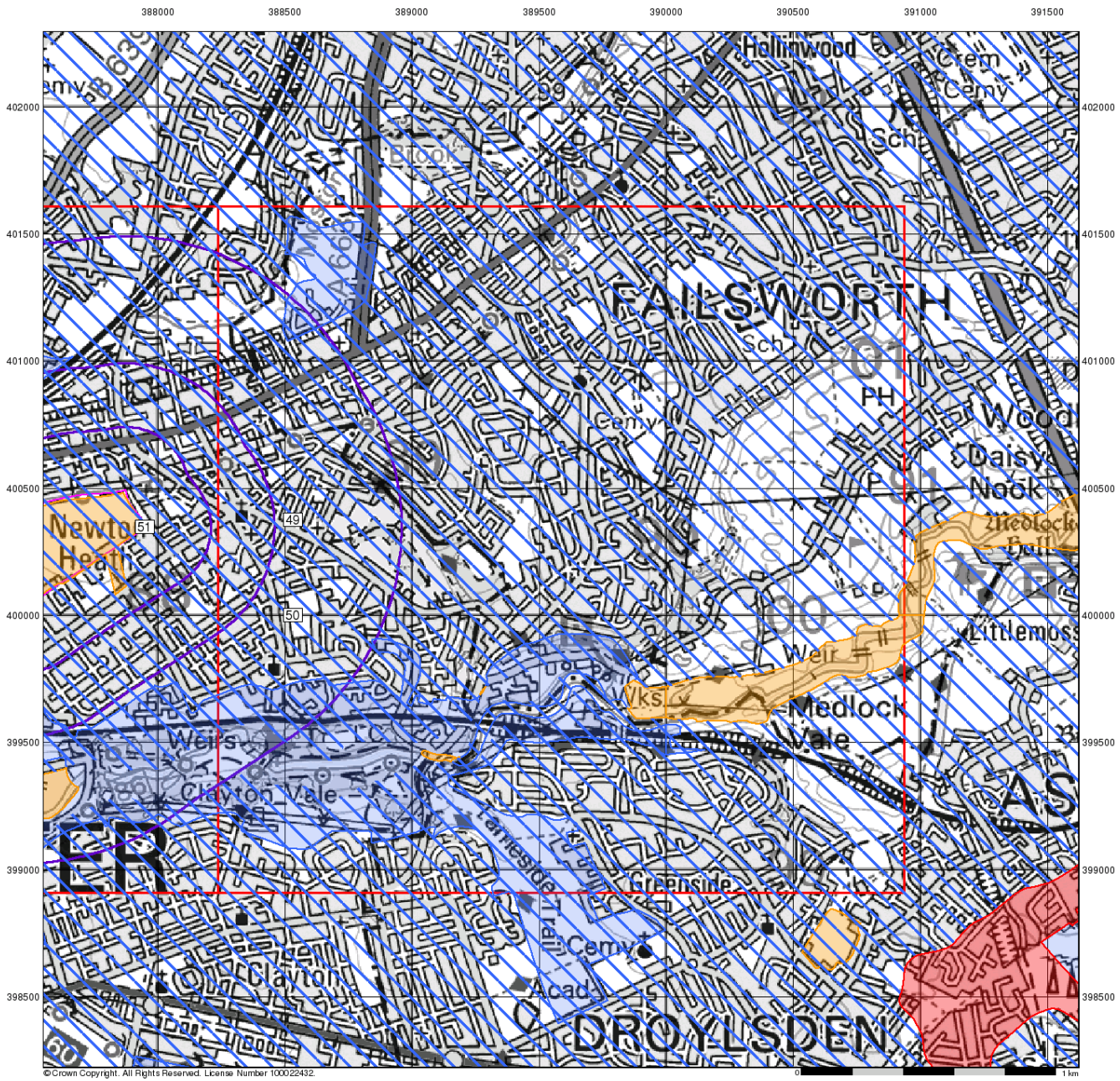
Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

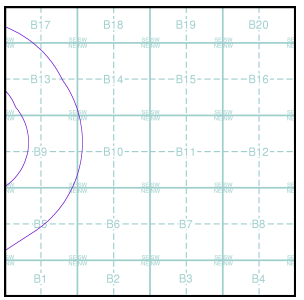
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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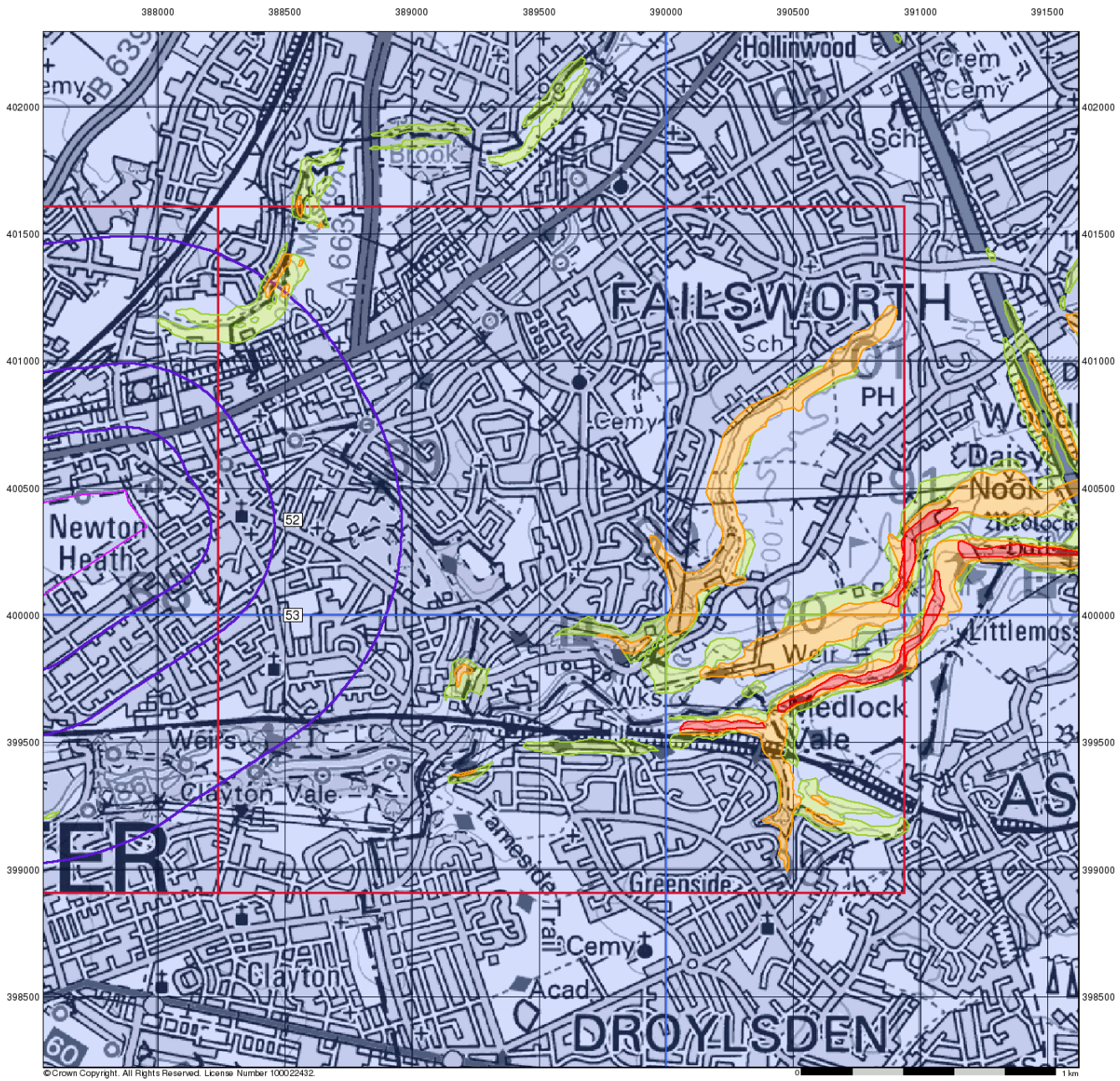
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

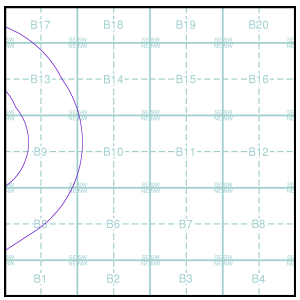
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice B



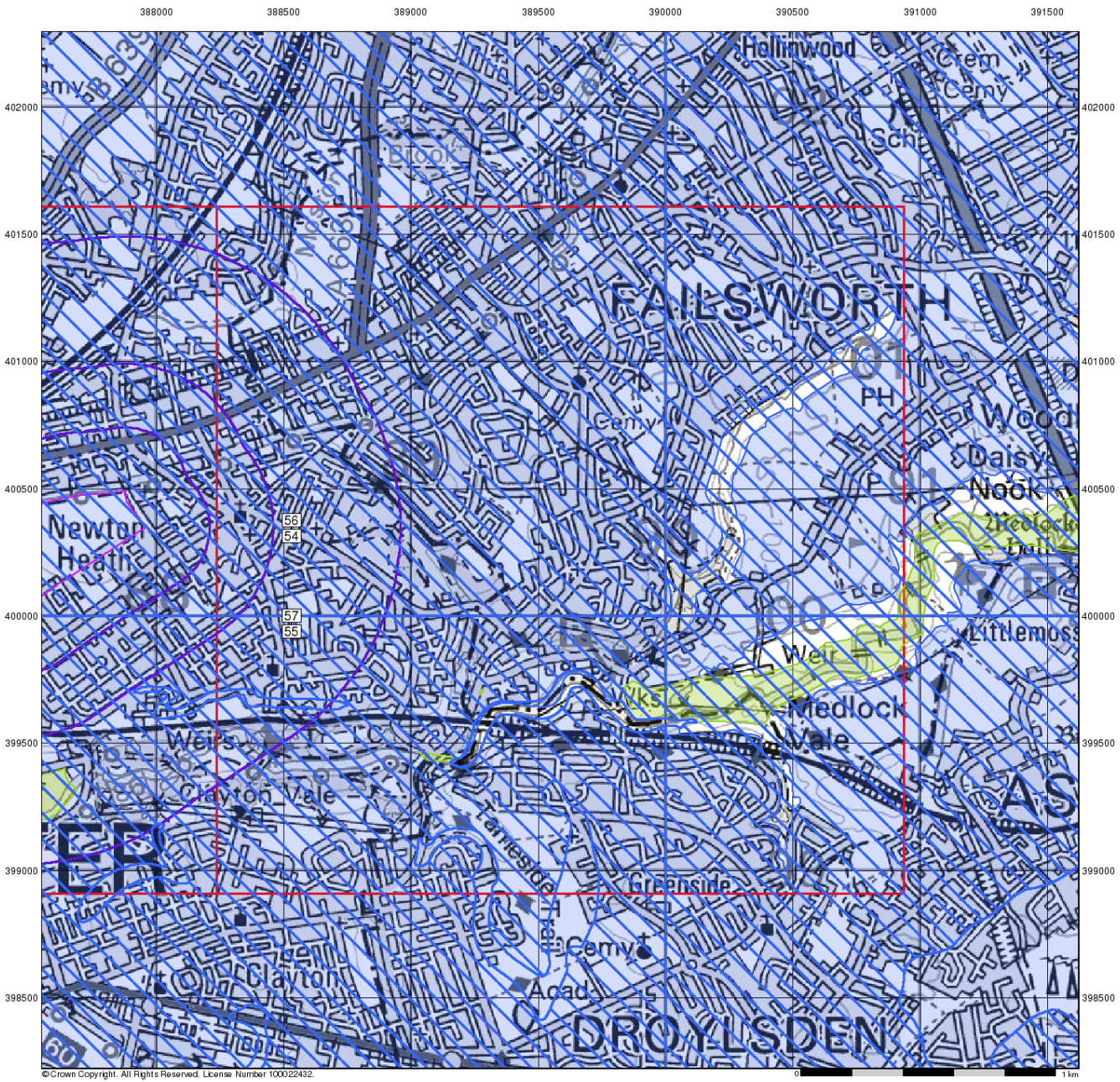
Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

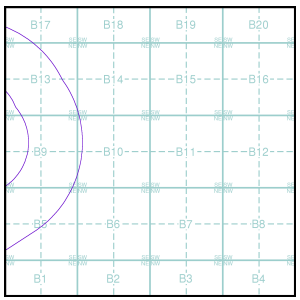
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice B



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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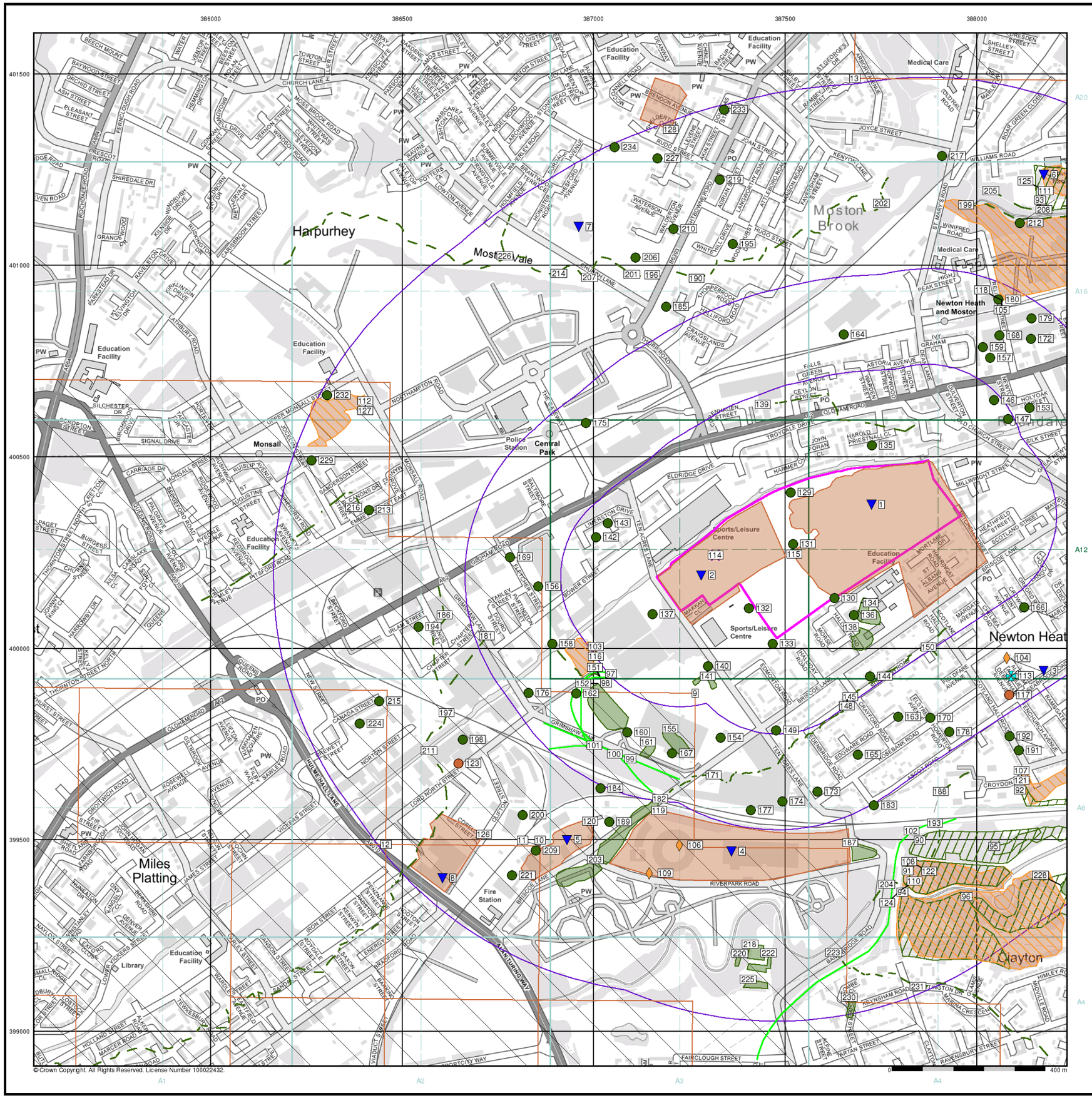

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Historical Land Use Information (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts	◆		
Disturbed Ground	◆		
General Quarrying	◆		
Heap, unknown constituents	◆		
Mineral Railway	◆		
Mining and Quarrying General	◆		
Mining of Coal & Lignite	◆		
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits	◆		

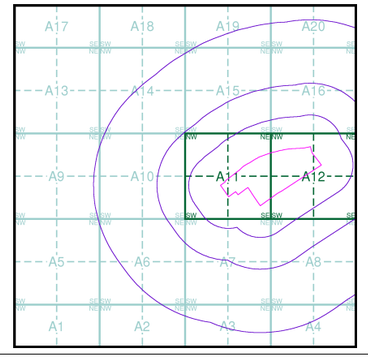
Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●		
Potentially Infilled Land (Water)	●		
Former Marsh	✠		

Mining Data

- Potential Mining Area
- BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

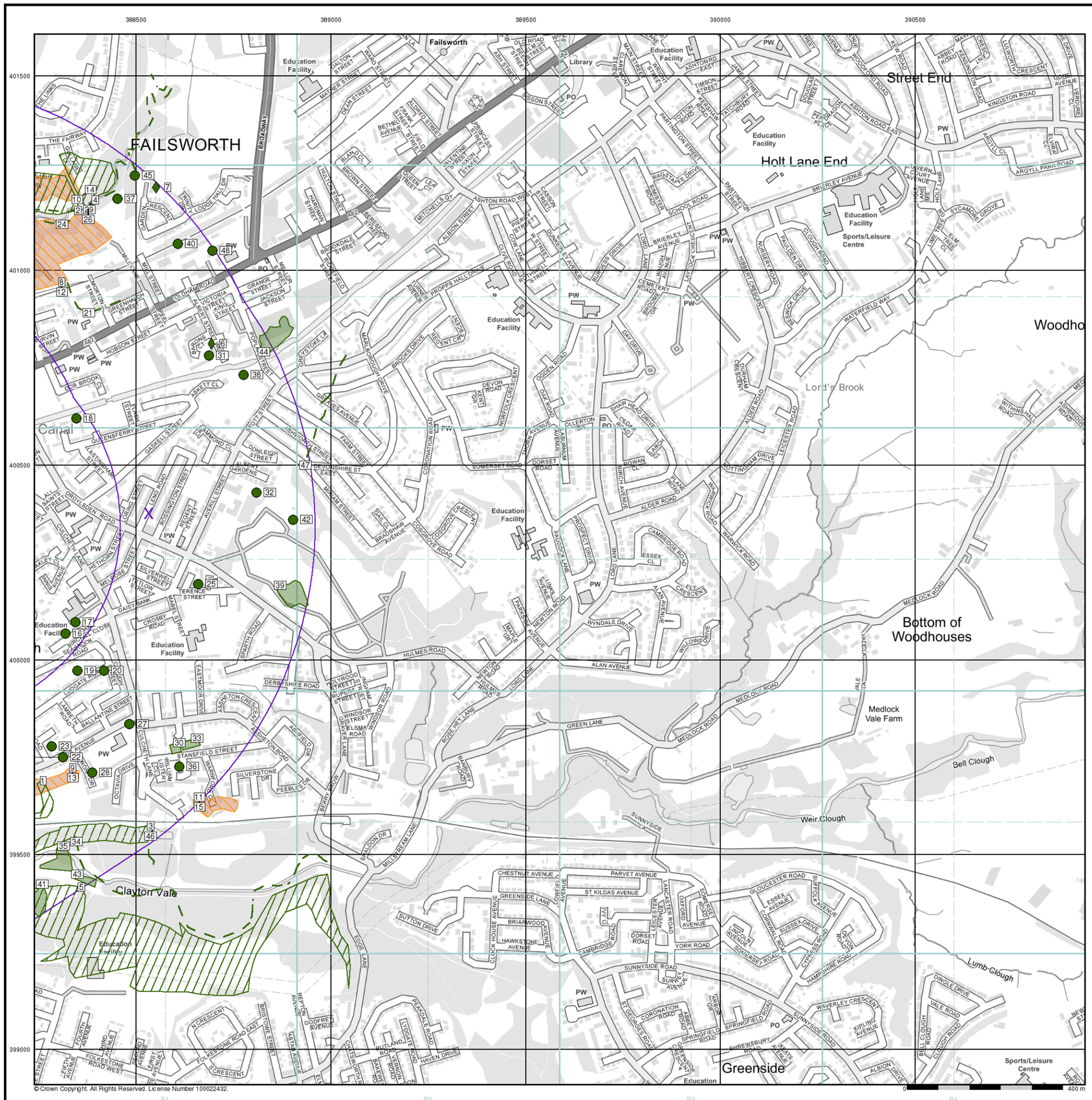
Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts	◆	─	▨
Disturbed Ground	◆	─	▨
General Quarrying	◆	─	▨
Heap, unknown constituents	◆	─	▨
Mineral Railway	◆	─	▨
Mining and Quarrying General	◆	─	▨
Mining of Coal & Lignite	◆	─	▨
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits	◆	─	▨

Historical Land Use

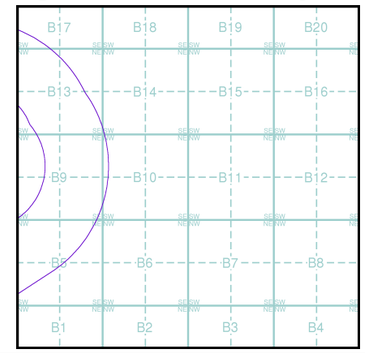
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●	- - -	■
Potentially Infilled Land (Water)	●	- - -	■
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice B



Order Details

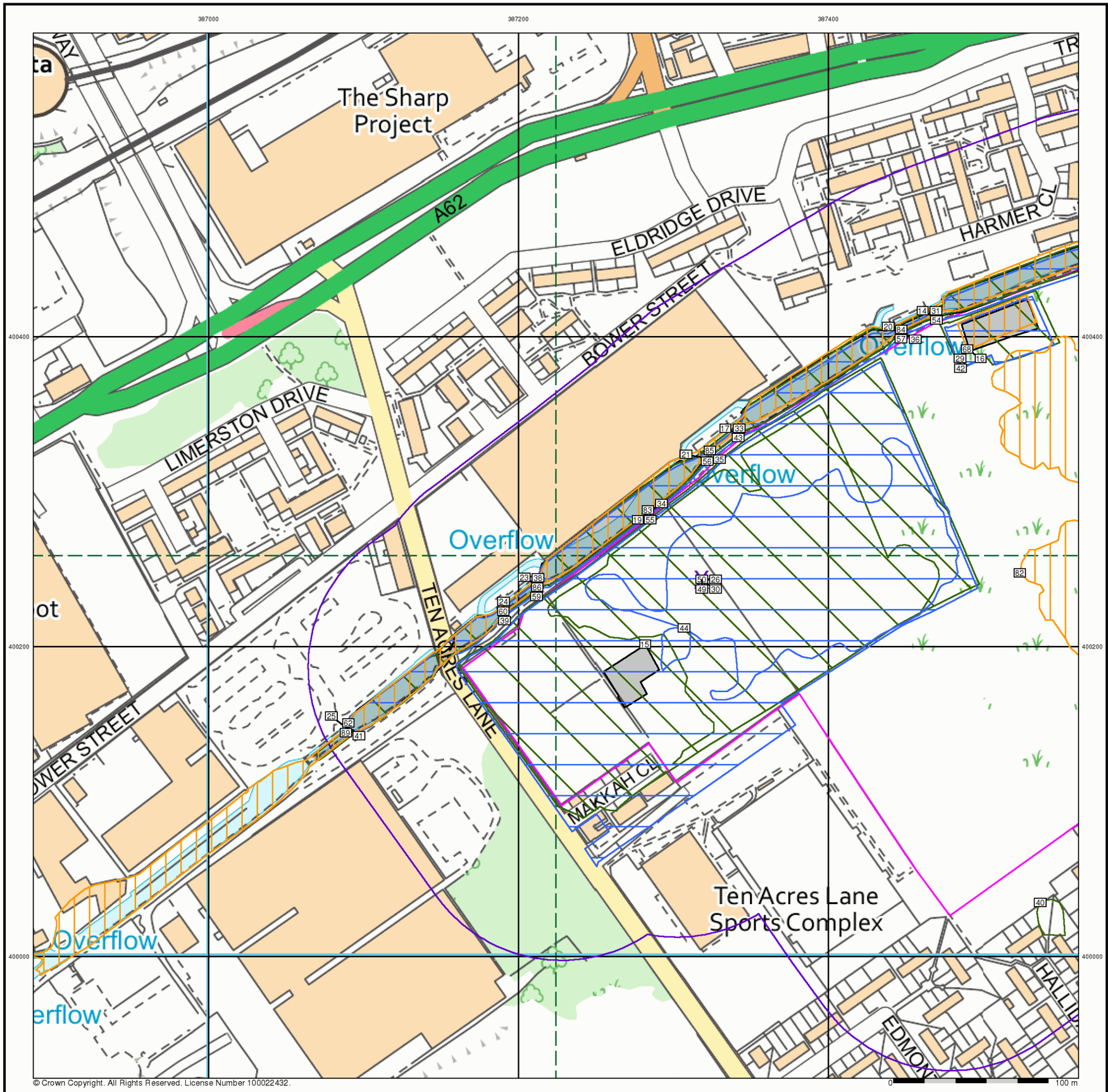
Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	388530, 400380
Slice:	B
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID | Several of Type at Location

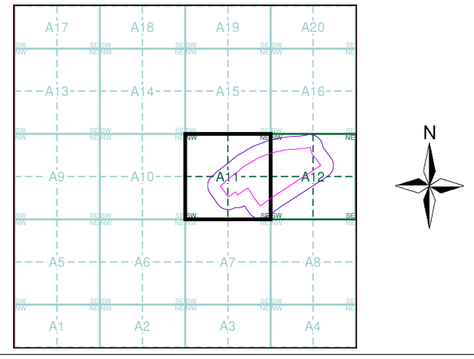
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▭
Extractive Industries Activity from 1906 - 1937	▲	—	▭
Extractive Industries Activity from 1924 - 1949	▲	—	▭
Extractive Industries Activity from 1950 - 1980	▲	—	▭

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A11



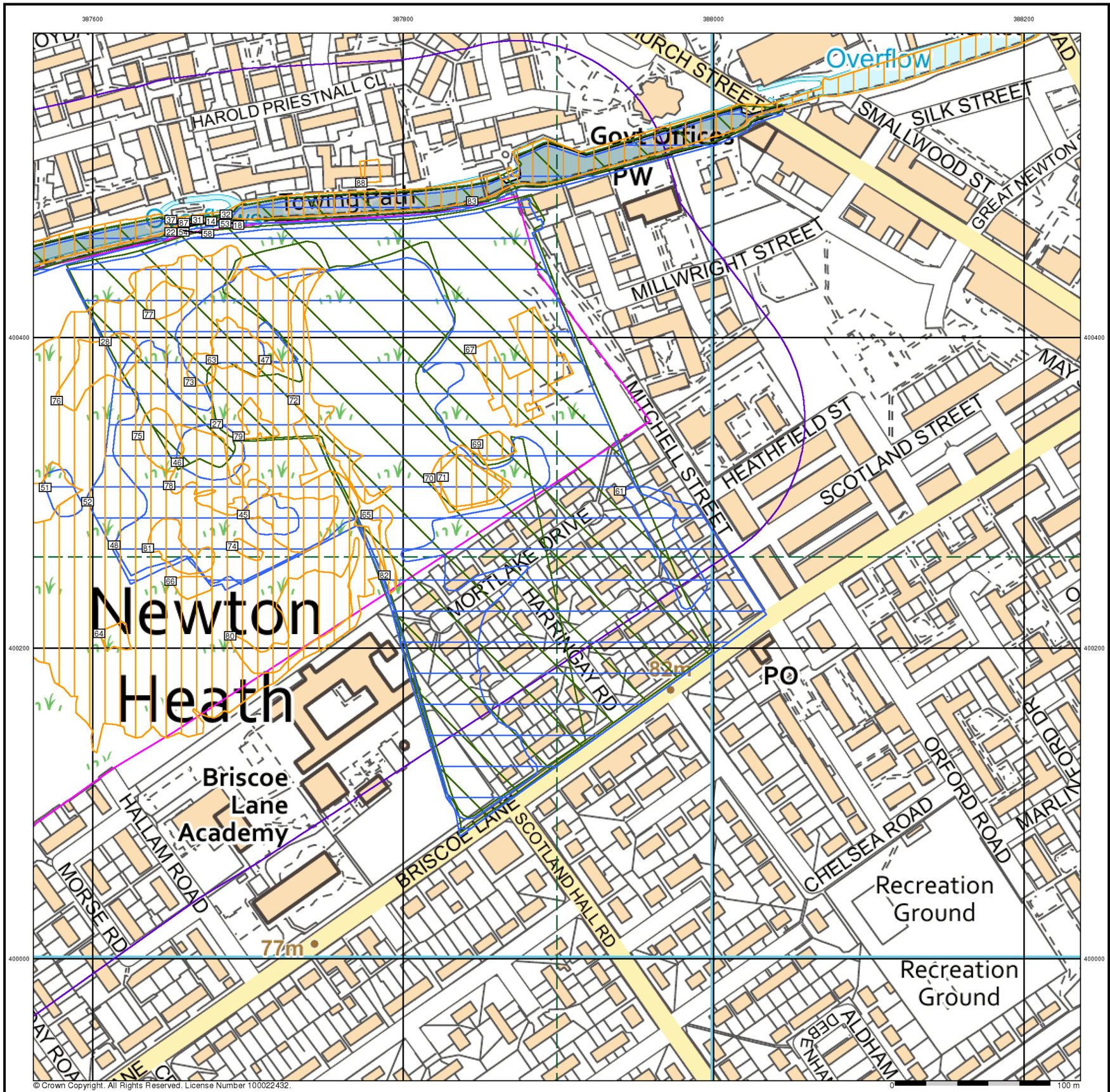
Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Plot Buffer (m):	100

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

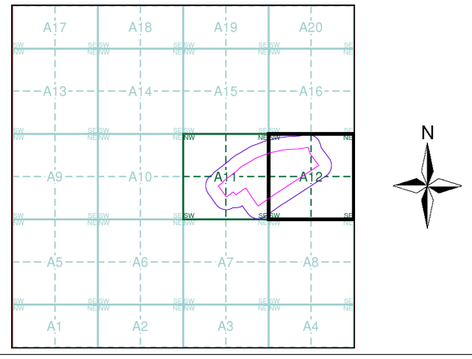
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▦
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A12



Order Details

Order Number:	267713911_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387320, 400240
Slice:	A
Site Area (Ha):	18.51
Plot Buffer (m):	100

Site Details

Site at 387600, 400310

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CHES	Chester Formation	Sandstone	Not Supplied - Olenekian
	MM	Manchester Marls Formation	Mudstone	Not Supplied - GUADALUPIAN
	CS	Collyhurst Sandstone Formation	Sandstone	Not Supplied - Cisuralian
	HTS	Holt Town Sandstone Bed	Sandstone	Not Supplied - Westphalian
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	GML	Great Mine Limestone	Limestone	Not Supplied - Westphalian
	NHSS	Newton Heath Sandstone	Sandstone	Not Supplied - Westphalian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	OPS	Openshaw Sandstone	Sandstone	Not Supplied - Westphalian
	WDR	Worsley Delf Rock	Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	ETM	Etruria Formation	Sandstone and Mudstone	Not Supplied - Westphalian
		Faults		
		Rock Segments		

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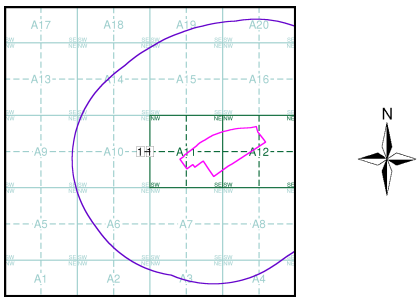
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID: 1
Map Sheet No: 085
Map Name: Manchester
Map Date: 2010
Bedrock Geology: Available
Superficial Geology: Not Available
Artificial Geology: Not Available
Faults: Not Supplied
Landslip: Not Available
Rock Segments: Not Supplied

Geology 1:50,000 Maps - Slice A



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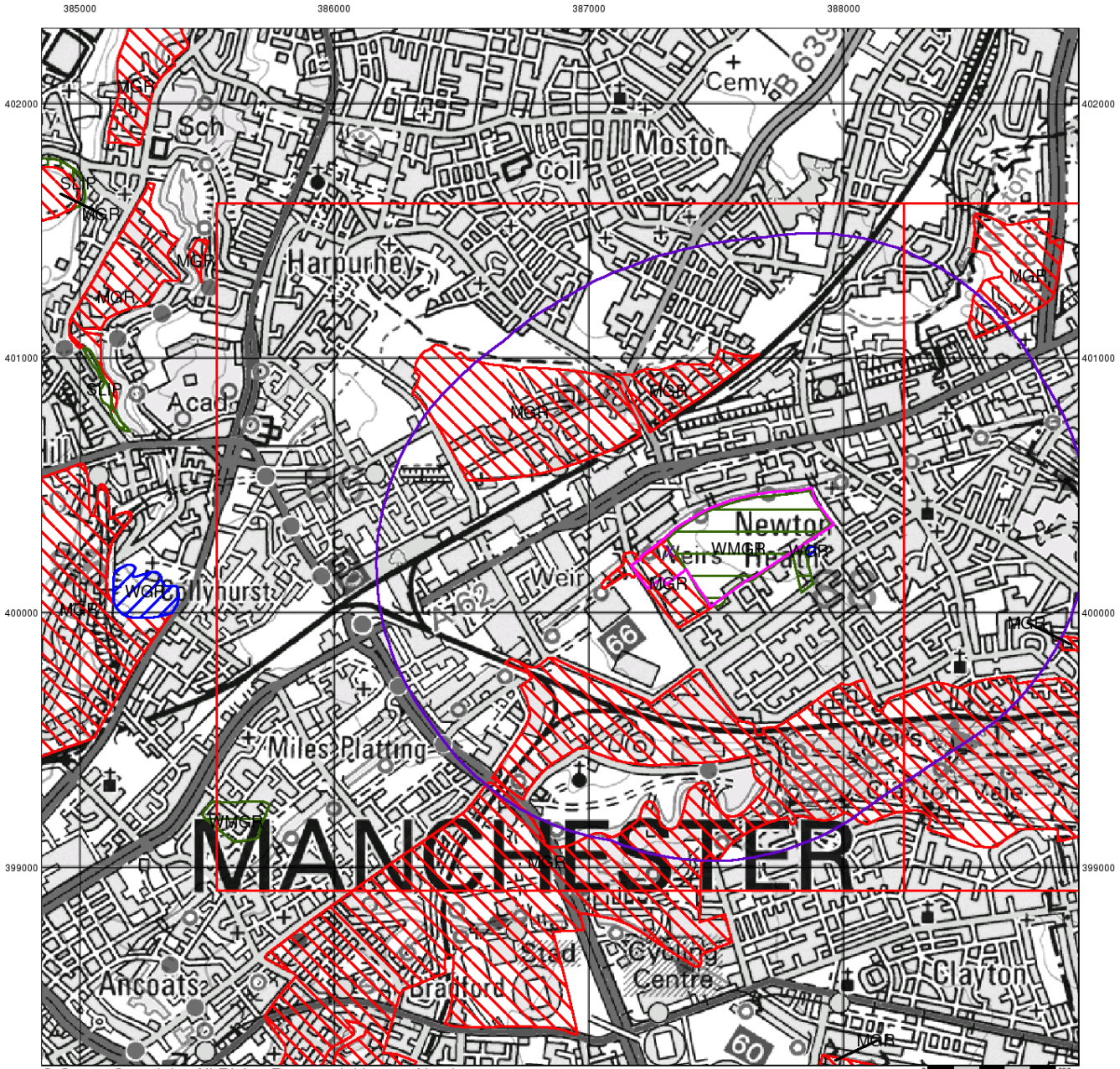
Site Area (Ha): 18.51
Search Buffer (m): 1000

Site Details:

Site at 387600, 400310



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Artificial Ground and Landslip

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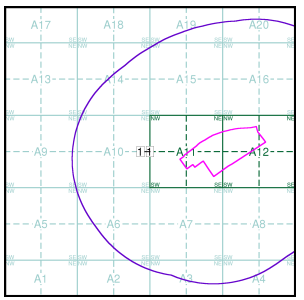
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



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Search Buffer (m):	1000

Site Details:

Site at 387600, 400310

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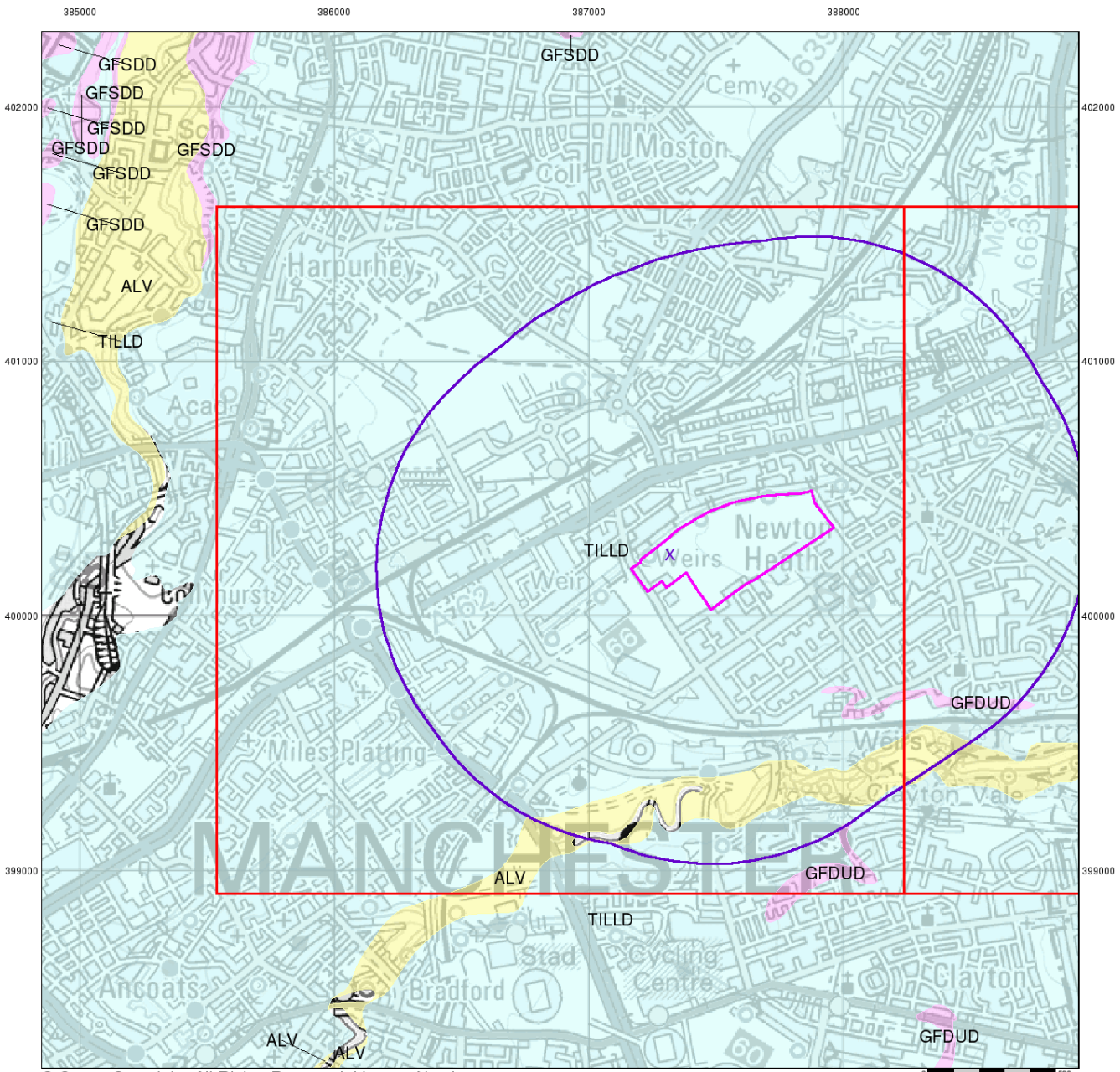
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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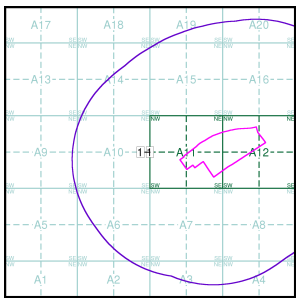
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



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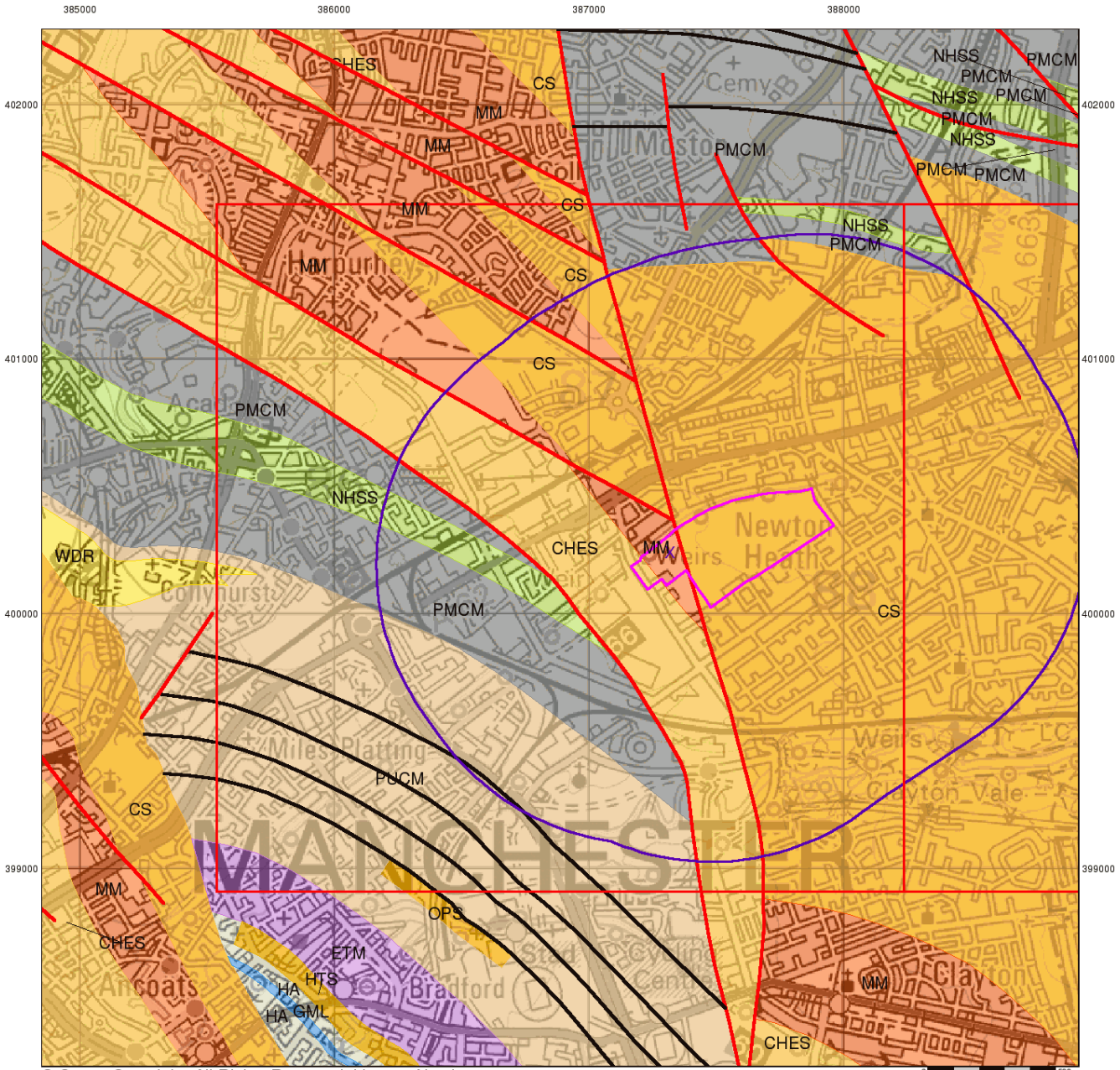

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Bedrock and Faults

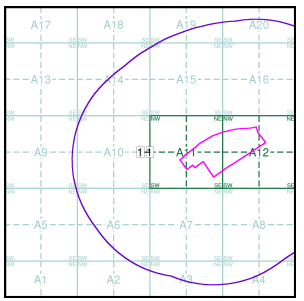
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



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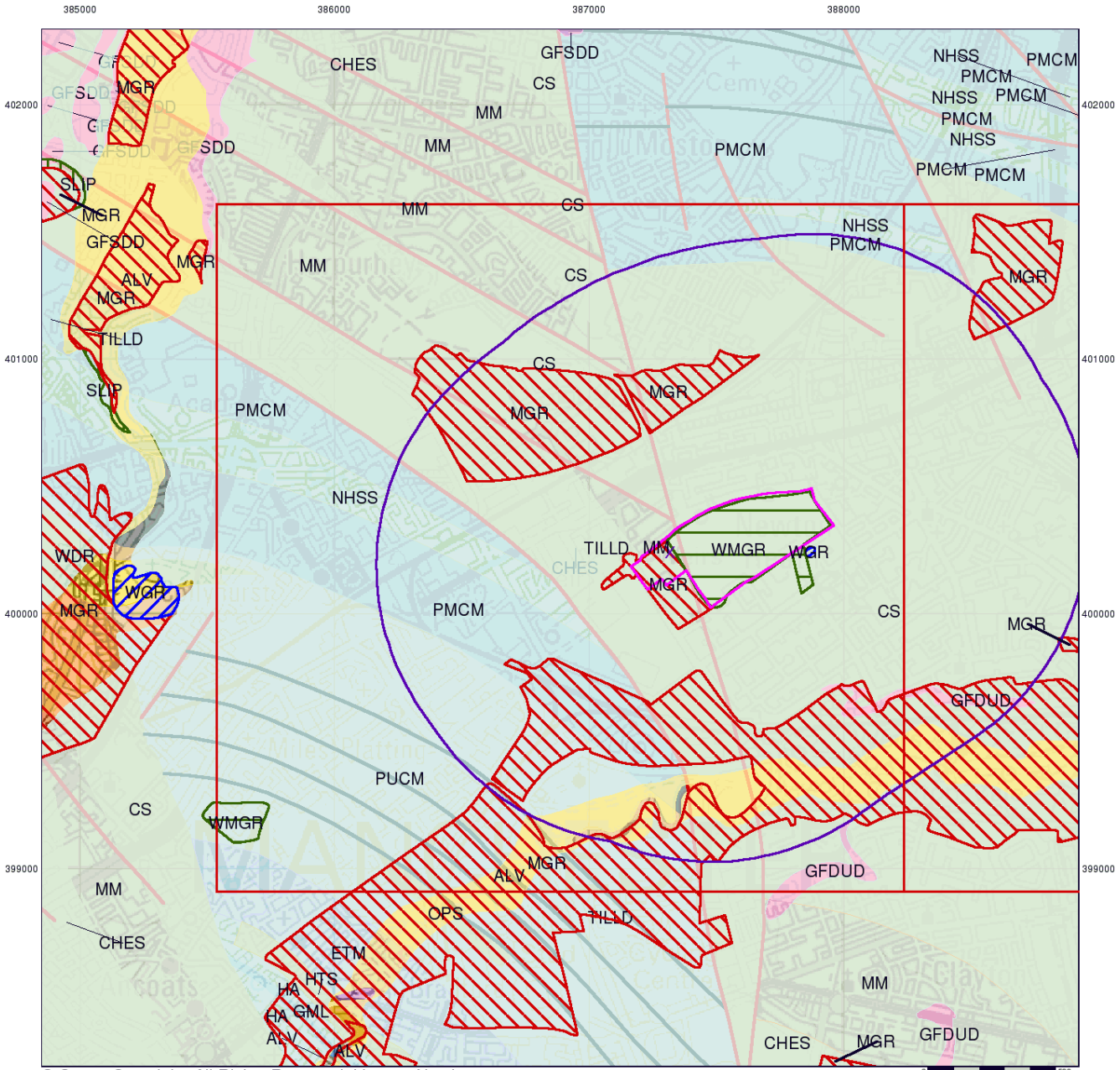

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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

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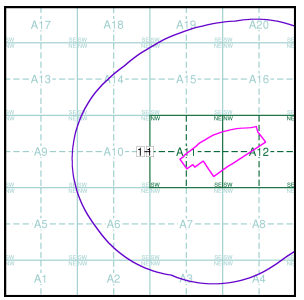
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



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National Grid Reference:	387320, 400240
Slice:	A
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Search Buffer (m):	1000

Site Details:

Site at 387600, 400310

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
		Faults		
		Rock Segments		

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	PEAT	Peat	Peat	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CHES	Chester Formation	Sandstone	Not Supplied - Olenekian
	MM	Manchester Marls Formation	Mudstone	Not Supplied - GUADALUPIAN
	CS	Collyhurst Sandstone Formation	Sandstone	Not Supplied - Cisuralian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	NHSS	Newton Heath Sandstone	Sandstone	Not Supplied - Westphalian
	WDR	Worsley Delf Rock	Sandstone	Not Supplied - Westphalian
	OPS	Openshaw Sandstone	Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	ETM	Etruria Formation	Sandstone and Mudstone	Not Supplied - Westphalian

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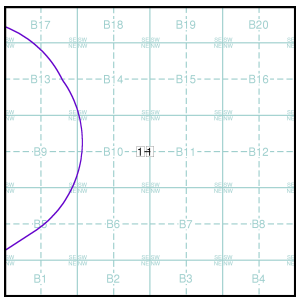
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID: 1
Map Sheet No: 085
Map Name: Manchester
Map Date: 2010
Bedrock Geology: Available
Superficial Geology: Not Available
Artificial Geology: Not Available
Faults: Not Supplied
Landslip: Not Available
Rock Segments: Not Supplied

Geology 1:50,000 Maps - Slice B



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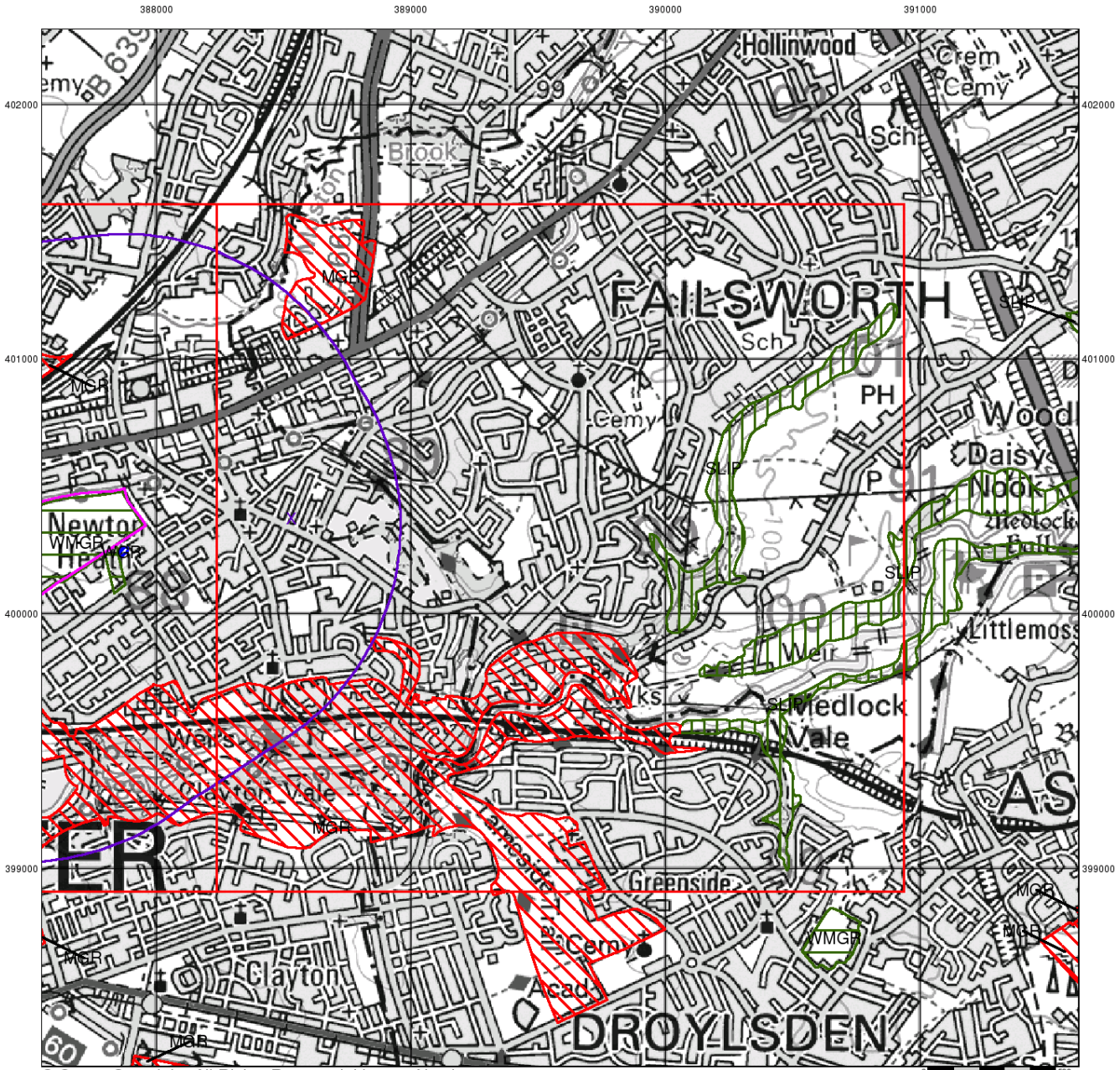
Search Buffer (m): 1000

Site Details:

Site at 387600, 400310



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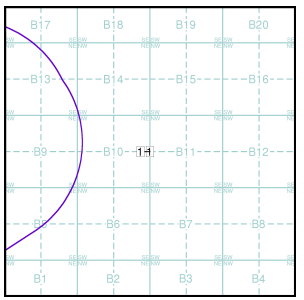

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Site Details:

Site at 387600, 400310

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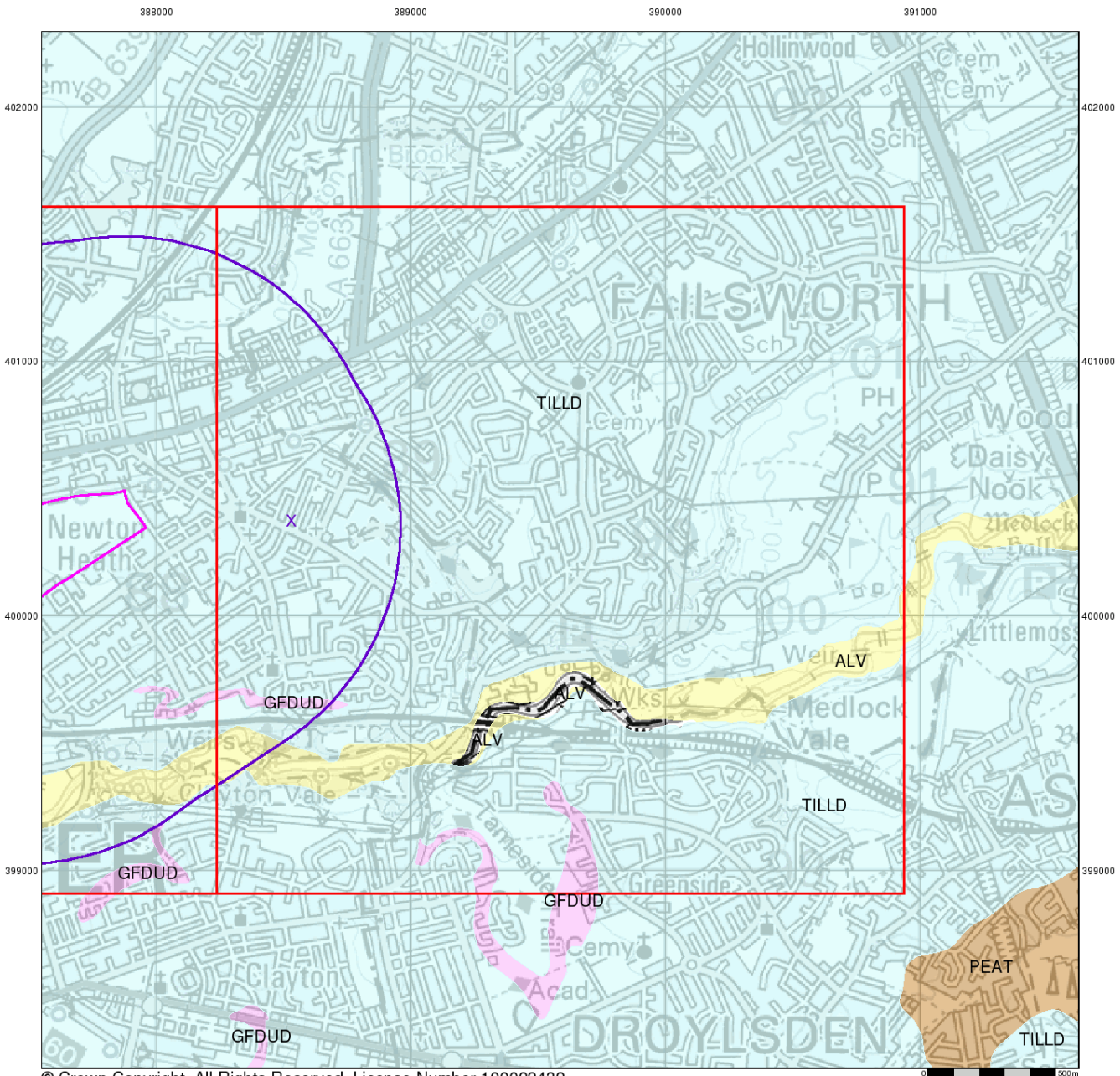
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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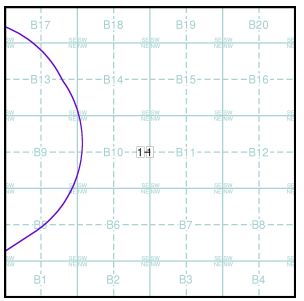

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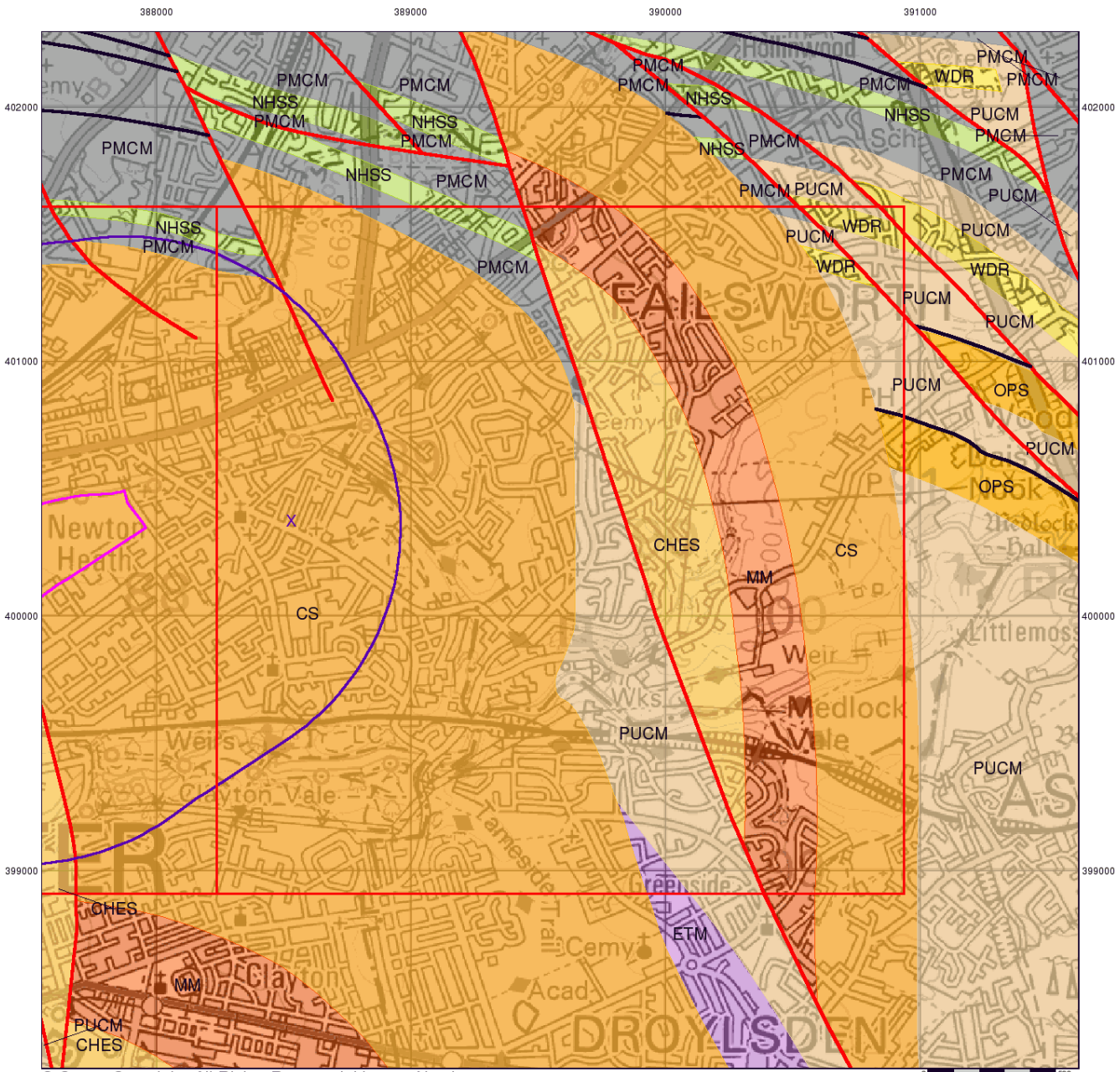

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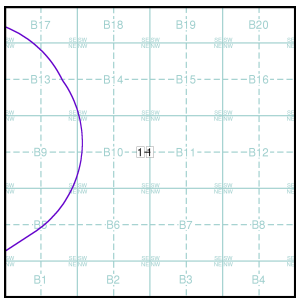

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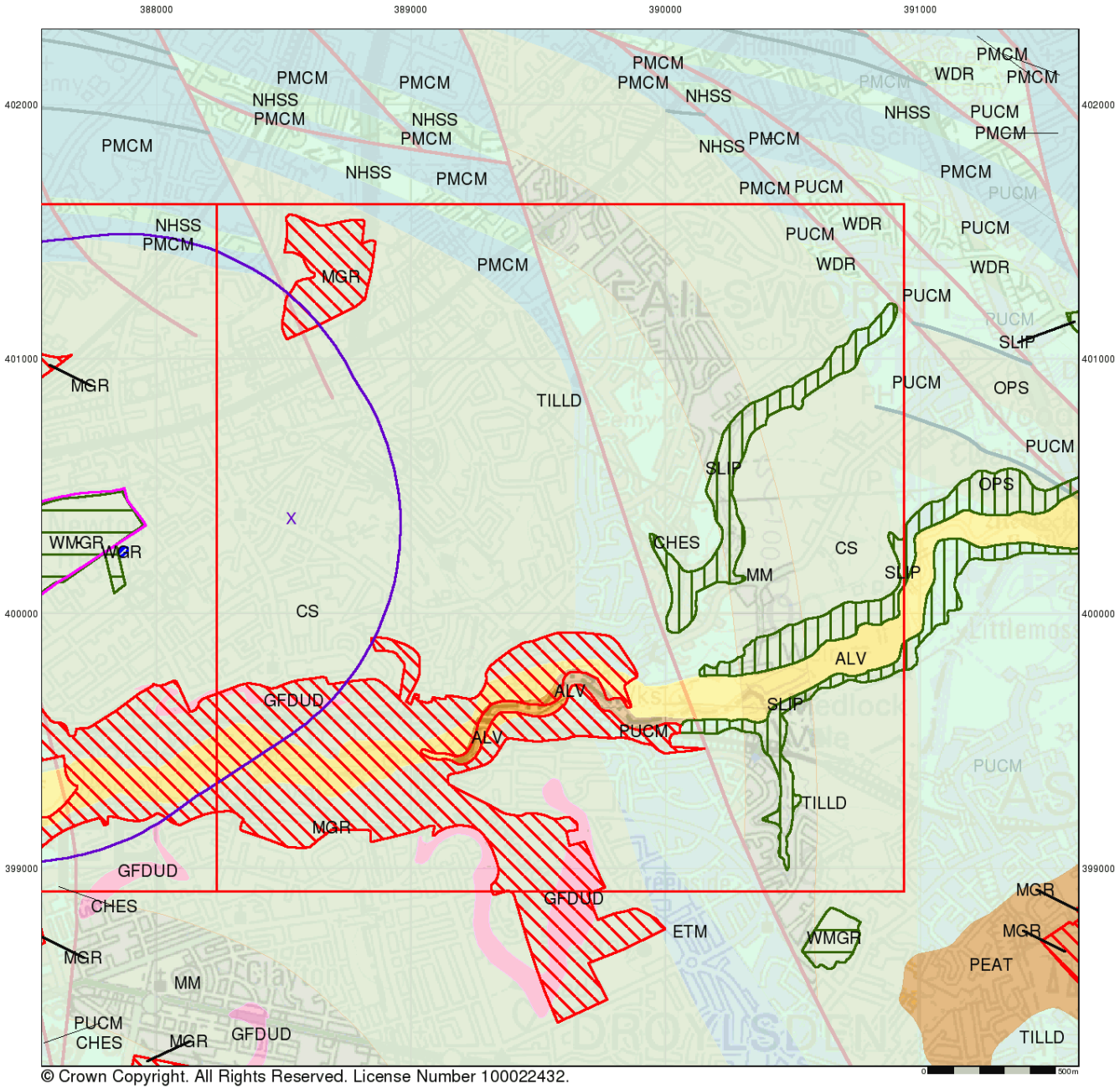

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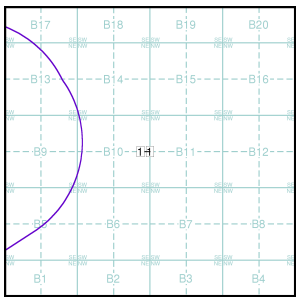
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice B



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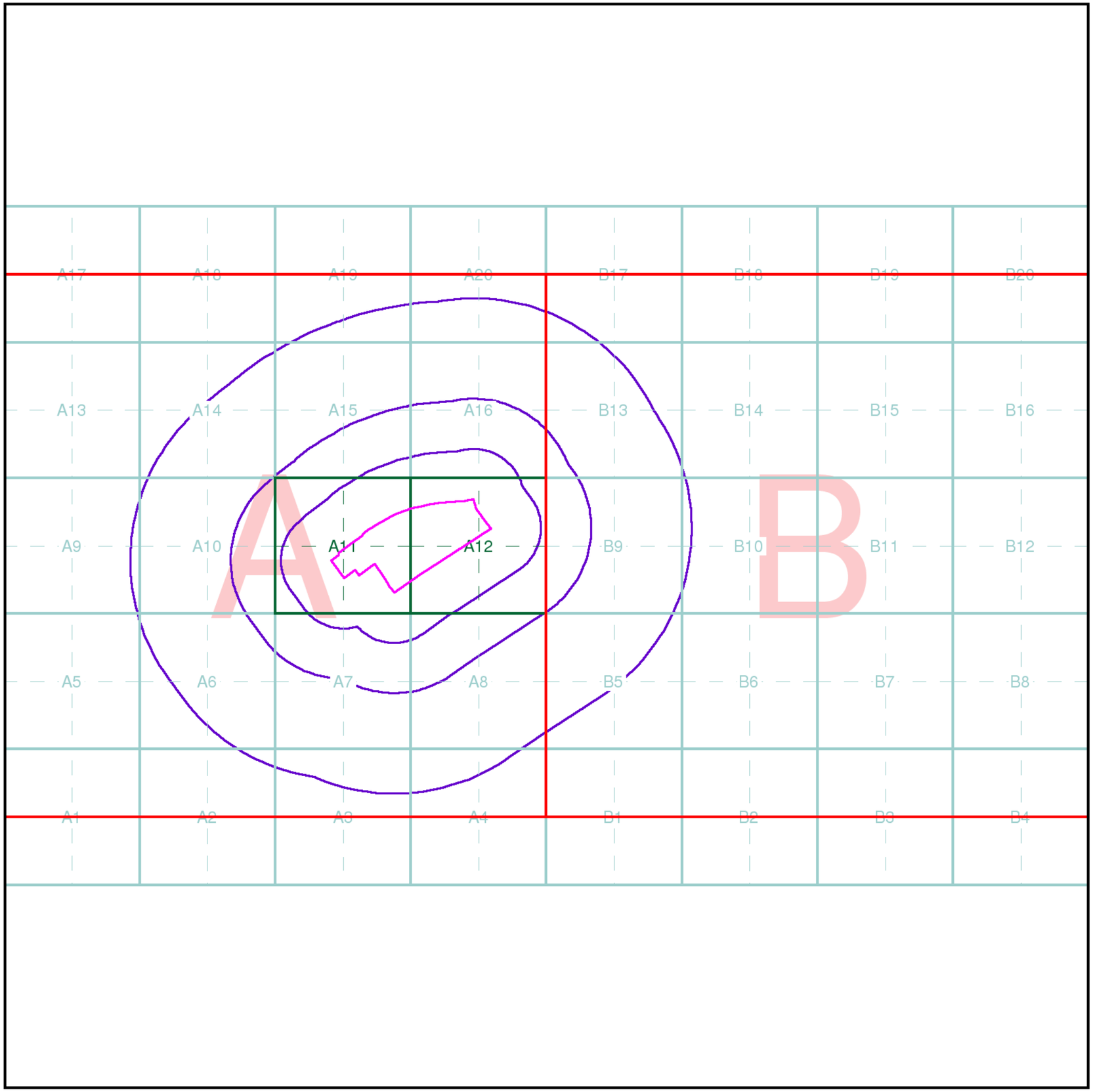
Site at 387600, 400310



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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr H Pars , Wardell Armstrong LLP, Unit 4, Newton Business Centre, Thorncliffe Park, Chapletown, Sheffield, S35 2PH

Order Details

Order Number:	298878396_1_1
Customer Ref:	Ten Acres
National Grid Reference:	387570, 400280
Site Area (Ha):	18.51
Search Buffer (m):	1000

Site Details

Site at 387600, 400310

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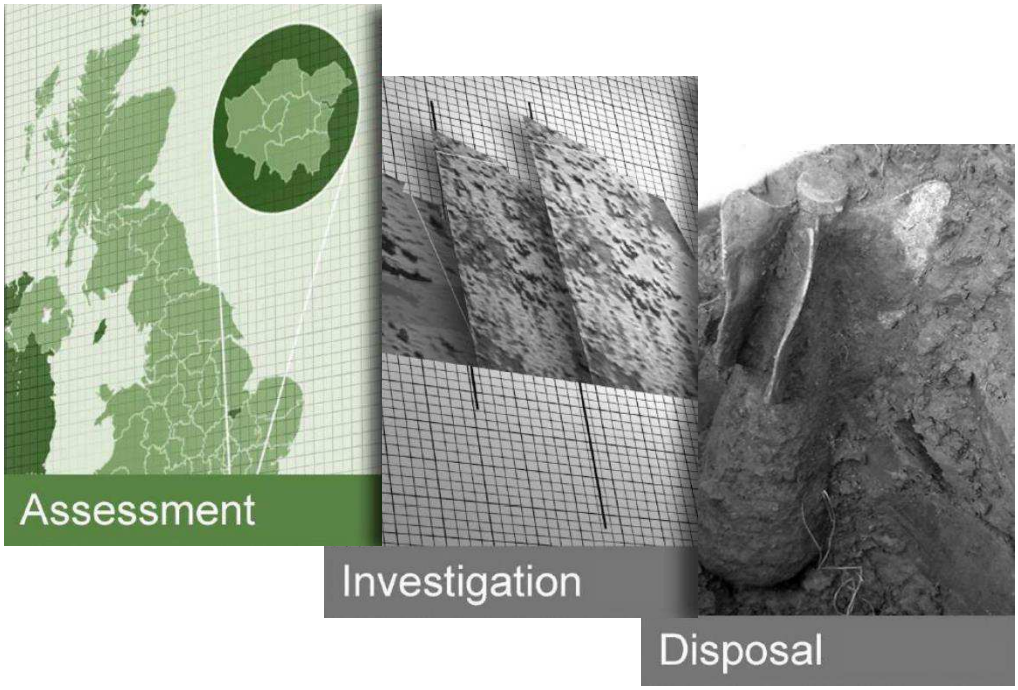
APPENDIX C

Zetica UXO Risk Map



Ten Acres Lane, Newton Heath - UXO Desk Study & Risk Assessment

Drafted by Joe Lingard
Checked by Sven Leman
Authorised by Stefan Lang

Document Title	**UXO Desk Study & Risk Assessment**
Document Ref.	**P10144-20-R1**
Revision	**A**
Project Location	**Ten Acres Lane, Newton Heath**
Client	**Wardell Armstrong**
Date	**8th October 2020**

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UXO DESK STUDY & RISK ASSESSMENT

EXECUTIVE SUMMARY

Key findings: No significant sources of Unexploded Ordnance (UXO) hazard have been identified.

Key actions: Proceed with works.

UXO Hazard Assessment

No records have been found indicating that the Site was bombed and no other significant sources of UXO hazard have been identified on the Site.

Given this, it is considered that the Site has a low UXO hazard level, as shown in the following Figure, reproduced as Figure 4 in the main report.

The UXO hazard zone plan of the Site is also given in the accompanying P10144-20-R1-MAP01-A.

Figure	UXO hazard zone plan of the Site

Source: OpenStreetMap *Not to Scale*

Legend	Very Low	Low	Moderate
	High	Very High	Site boundary

The main findings of the report are summarised below.

- No records of bombing or military activity on the Site during World War One (WWI) have been found.
- During World War Two (WWII) the main strategic targets in the vicinity of the Site including aircraft manufacturing works, transport infrastructure, public utilities, the Salford Docks and the Manchester Ship Canal.

- No records have been found indicating that the Site was bombed during WWII. Records indicate that the nearest High Explosive (HE) bomb fell approximately 0.2km north of the Site.
- No records of military activity on the Site post-WWII have been found.

Data Confidence Level

The findings of this report were based on good corroborative evidence of the military activity and bombing on the Site.

Proposed Works

It is understood that initial works on the Site will involve ground excavation including excavations and boreholes to depths of up to 30m below ground level (bgl).

Future works may include bulk excavation of parts of the Site.

Risk Assessment

The Table below, reproduced as Table 4 in the main report, provides a UXO risk assessment for the proposed works on the Site.

Further details on the methodology for the risk assessment are provided in Section 7.2 of the main report.

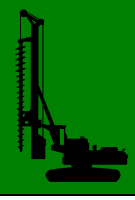
Table UXO risk assessment for the Site

Potential UXO Hazard	Anticipated Works	PE	PD	P = PE x PD	Likelihood	Severity	Risk Rating	UXO Risk
UXB	Shallow Excavations	1	1	1	1	5	5	**Low**
	Deep Excavations	1	1	1	1	5	5	**Low**
	Boreholes	1	1	1	1	4	4	**Low**
Other UXO	Shallow Excavations	1	1	1	1	4	4	**Low**
	Deep Excavations	1	1	1	1	4	4	**Low**
	Boreholes	1	1	1	1	3	3	**Low**
PE (Probability of Encounter), PD (Probability of Detonation), P (Overall Probability)								
Shallow Excavations defined as <1.0m below ground level (bgl.)								

Risk Mitigation Plan

The Table below, reproduced as Table 5 in the main report, summarises the UXO risk for proposed works on the Site and recommended actions.

Table	Summary of UXO risk and mitigation recommendations

Proposed Works	UXO Risk	Recommended Mitigation
Excavations		**Proceed with works** – if additional comfort is required to address the residual UXO hazard, a formal UXO awareness briefing can be provided.
Boreholes		**Proceed with works**

In summary, no additional measures are considered essential to reduce the UXO risk on the Site to As Low As is Reasonably Practicable (ALARP).

What Do I Do Next?

If you have any comments or require further assistance, contact us via phone (01993 886682) or email (uxo@zetica.com) and we can help.

If you have requirements to identify other buried hazards (such as mapping utilities or obstructions) we can provide these surveys.

If proposed works on the Site change, or additional works are planned, contact Zetica for a re-assessment of the UXO risk and the risk mitigation requirements.

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Accompanying GIS Data

P10144-20-R1-MAP01-A (UXO Desk Study)

ABBREVIATIONS

AA	Anti-Aircraft
AAP	Aircraft Acceptance Park
ALARP	As Low As Reasonably Practicable
ARP	Air Raid Precaution
AXO	Abandoned Explosive Ordnance
BD	Bomb Disposal
BDO	Bomb Disposal Officer
BDU	Bomb Disposal Unit
CMD	Conventional Munitions Disposal
DCLG	Department of Communities and Local Government
EO	Explosive Ordnance
EOC	Explosive Ordnance Clearance
EOR	Explosive Ordnance Reconnaissance
ERW	Explosive Remnants of War
ESA	Explosive Substances and Articles
FFE	Free From Explosives
HAA	Heavy Anti-Aircraft
HE	High Explosive
HSE	Health and Safety Executive
IB	Incendiary Bomb
IED	Improvised Explosive Device
IEDD	Improvised Explosive Device Disposal
JSEODOC	Joint Services EOD Operations Centre
LAA	Light Anti-Aircraft
MoD	Ministry of Defence
OB	Oil Bomb
PM	Parachute Mine
PUCA	Pick Up and Carry Away
RAF	Royal Air Force
TEP	Time Expired Pyrotechnics
UXAA	Unexploded Anti-Aircraft
UXB	Unexploded Bomb
UXO	Unexploded Ordnance
WWI	World War One
WWII	World War Two

UXO DESK STUDY & RISK ASSESSMENT

Please read: Zetica has colour coded each paragraph. Paragraphs with black text on a white background are paragraphs that provide site-specific information or information specifically researched as part of this project.

Boxed paragraphs in a dark green text with a green background are paragraphs providing general information and, where appropriate, links to online resources giving further detail. These are all available at www.zeticauxo.com. If you cannot gain access to these resources, Zetica can forward them on request.

1 INTRODUCTION

1.1 Project Outline

Zetica Ltd was commissioned by Wardell Armstrong to carry out a detailed Unexploded Ordnance (UXO) Desk Study and Risk Assessment for an area of approximately 18.8 hectares (ha) off Ten Acres Lane, Newton Heath, Manchester (the

1.2.3 Ministry of Defence and Government Records

Government departments and units within the Ministry of Defence (MoD) were approached for information of past and present military activity in the area. These included the Department of Communities and Local Government (DCLG) records of abandoned bombs.

1.2.4 Other Historical Records, Maps and Drawings

Numerous reference documents including historical maps, aerial photographs and drawings have been consulted from sources such as the National Archives, the US National Archives & Records Administration (NARA), the Imperial War Museum (IWM), Historic England and the Defence of Britain Project.

The British Geological Survey (BGS) was consulted for borehole information.

1.2.5 Local Authority Records

Information was obtained from Manchester City Council.

1.2.6 Local Record Offices and Libraries

The Greater Manchester County Record Office, Manchester Central Library Archive and Manchester University have been consulted for records.

1.2.7 Local Historical and Other Groups

Local history groups and archaeological bodies were consulted, including the Greater Manchester Historic Environmental Record (HER).

1.3 Data Confidence Level

In general, there is a high level of confidence in the researched information sources used for this report. Exceptions to this are specifically detailed in the text of the report.

It should be noted that it has not been possible to obtain detailed historical aerial photography for the Site, as the Historic England archive is shut due to the Covid-19 outbreak. Readily available aerial photography has been used where possible.

2 THE SITE

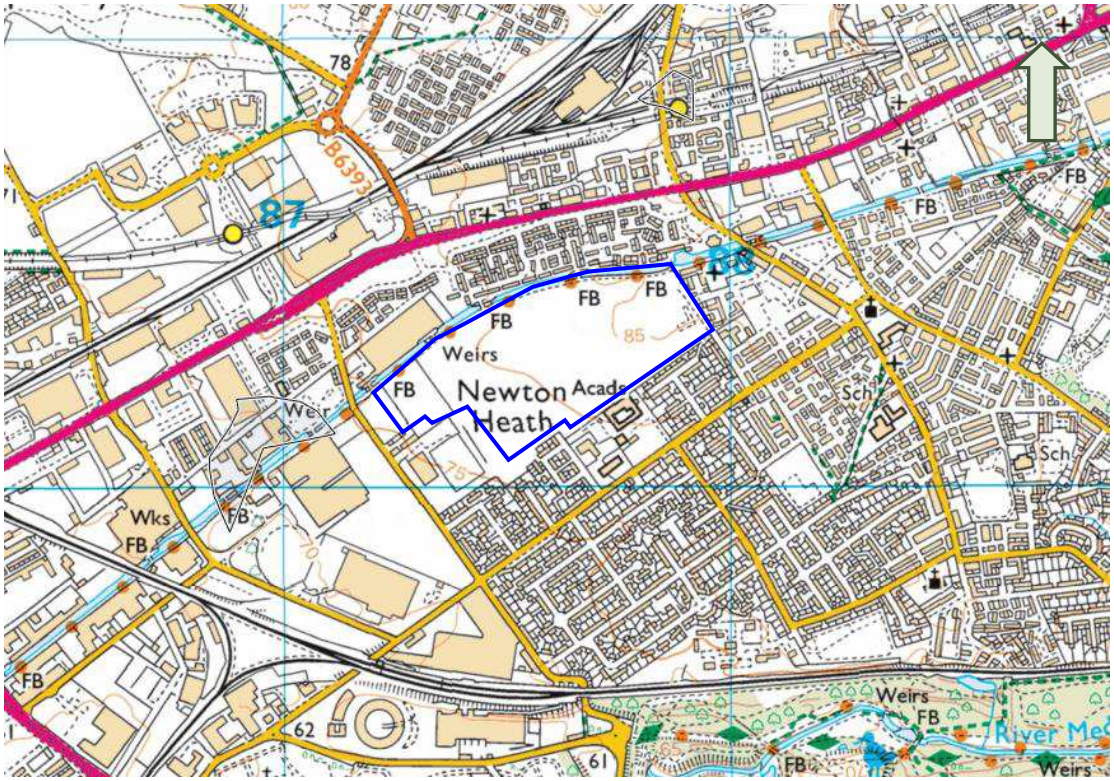
2.1 Site Location

The Site is centred on Ordnance Survey National Grid Reference (OSNGR) SD 876003. It is located approximately 3.6km northeast of central Manchester.

The Site comprises open land. It is bounded to the north by the Manchester Canal, to the east by Mitchell Street, to the south by residential buildings and to the east by Ten Acres Lane and sports facilities.

Figure 1 is a Site location map and Plate 1 is a recent aerial photograph of the Site.

Figure 1	Site location map



Source: © Crown Copyright 2020. Reproduced by permission of Ordnance Survey *Not to Scale*

Legend	Site boundary

Plate 1	Recent aerial photograph of the Site

Source: Google Earth *Not to Scale*

Legend	Site boundary

3 MILITARY ACTIVITY

The following sections outline the recorded military activity in the vicinity of the Site. The potential UXO hazard from WWI and WWII bombing is detailed in Section 4.

Each sub-section provides hyperlinks to further information on potential sources of UXO hazard. These are also available at www.zeticauxo.com. If you cannot gain access to these resources, Zetica can forward them on request.

3.1 Defences

For further information on military defences, and the potential UXO hazards associated with them, follow the links below:

- Anti-Aircraft Guns
- Anti-Invasion Defences
- Barrage Balloons
- Bombing Decoys
- Home Guard
- Mined Locations
- Mortar & Gun Emplacements
- Pillboxes

No military defences have been identified on the Site. The nearest are described below.

3.1.1 Anti-Aircraft Guns

During WWI there were 9No. Anti-Aircraft (AA) batteries within 10km of the Site. The nearest was located at Newton Heath (SJ 877996), approximately 0.6km south of the Site. It was armed with 1No. 18 pounder (pdr) gun.

During WWII there were 27No. Heavy AA (HAA) and ZAA batteries within 10km of the Site. The nearest was located at Brookdale (SD 890015), approximately 1.5km northeast of the Site.

The nearest recorded WWII AA shell incidents to the Site are described below.

14th March 1941

1No. AA shell fell on 83 Droylsden Road, approximately 0.4km east of the Site.

1No. AA shell fell on 96 Church Street, approximately 0.3km east of the Site.

Potential UXO Hazard

Given the number of HAA gun batteries in the surrounding area during WWII, the potential for a UXAA shell to have fallen on the Site unnoticed, whilst unlikely, cannot be totally discounted.

3.1.2 Bombing Decoys

The nearest recorded bombing decoy was located at Reddish (SJ 912939), approximately 7.1km south of the Site.

Bombing decoys are not considered to provide a source of UXO hazard to the Site.

3.2 Military Airfields

For further information on military airfields, and the potential UXO hazards associated with them, follow the links below:

- Military Airfields

No records of any military airfields on or in close proximity to the Site have been found.

The nearest recorded military airfield during WWI was Royal Air Force (RAF) Alexandra Park, approximately 6km southwest of the Site. This functioned as an Aircraft Acceptance Park (AAP), used for assembly, test flying, and delivery of aircraft from the nearby aircraft factories.

During WWII, the nearest military airfield was RAF Barton, approximately 13.1km west of the Site. Its primary function was to accept and repair damaged aircraft. Post-WWII, the airfield was used as a flight school.

Military airfields are not considered to provide a source of UXO hazard to the Site.

3.3 Aircraft Crashes

For further information on military aircraft crashes, and the potential UXO hazards associated with them, follow the links below:

- Aircraft Crashes

No records of any aircraft crashes on or in close proximity to the Site have been found.

3.4 Explosives Factories, Munitions Depots and Disposal Areas

For further information on explosives factories, munitions depots and disposal areas, and the potential UXO hazards associated with them, follow the links below:

- Explosives Factories
- Munitions Depots
- Munitions Disposal Areas

No records of any explosives factories, munitions depots or munitions disposal areas on the Site have been found.

3.4.1 Park Engineering Works

In 1900, the Mather & Platt works moved their Iron foundry operations to the Newton Heath Park Engineering Works, approximately 0.1km southwest of the Site. They were previously located at the Salford Iron Works, approximately 4.2km west of the Site.

The Site was occupied at this time by the Newton Heath Brick Works, which would remain operational on the Site until the 1950s.

During WWI, part of the Newton Heath Park Engineering Works was leased to Avro for the manufacture of aircraft and in 1915 the works were taken over by the government for the production of munitions.

During the 1920s, Avro remained at the factory producing the Avian, Cadet, Tutor and Anson aircraft and used the airfield at Alexandra Park (see section 3.2) for final assembly and test flights.

Avro left the factory in 1938 but Newton Heath Park Engineering Works were again used for aircraft production during WWII, specialising in the development and manufacturing of parts for the Lancaster Bomber (see Figure 2).

After the war the factory returned to engineering production and was finally closed in July 2013.

The Park Engineering works is not considered to provide a significant source of UXO hazard to the Site.

3.5 Firing Ranges and Military Training Areas

For further information on firing ranges and military training areas, and the potential UXO hazards associated with them, follow the links below:

- Artillery Ranges
- Bombing Ranges
- Military Training Areas
- Small Arms Ranges

No records of any firing ranges or military training areas on or in close proximity to the Site have been found.

3.6 Other Military Establishments

No other military establishments have been identified on or in close proximity to the Site.

4 BOMBING

4.1 WWI Bombing

For further information on WWI bombing in the UK, and the potential UXO hazard associated with it, see Appendix 2.1. Alternatively, use the following link.

- WWI Bombing

No records have been found indicating that the Site was bombed during WWI.

4.2 WWII Bombing

For further information on WWII bombing in the UK, and the potential UXO hazard associated with it, see Appendix 2.2. Alternatively, use the following link.

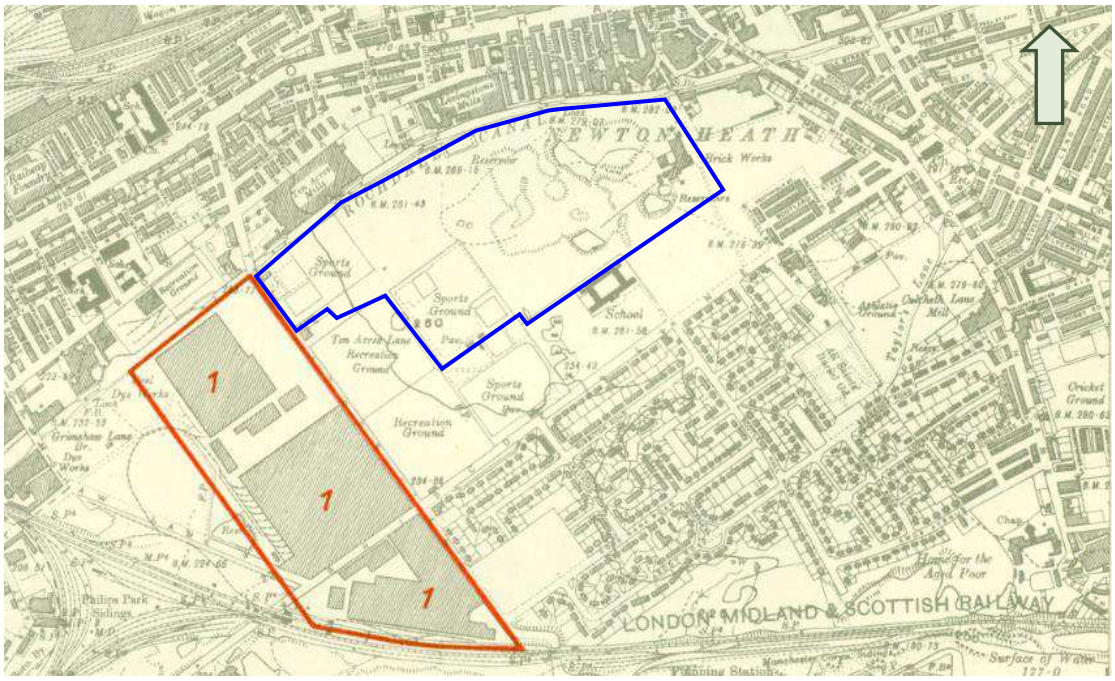
- WWII Bombing

No records have been found indicating that the Site was bombed during WWII. Details of WWII bombing in the vicinity of the Site are provided in the following sections.

4.2.1 Bombing in Manchester

Manchester

Figure 2	Luftwaffe target map of the Avro works, October 1940



Source: NARA *Not to Scale*

Legend	Site boundary

4.2.3 Bombing Densities and Incidents

Table 1 gives details of the overall bombing statistics recorded for the Local Authority Districts of the Site and surrounding districts. These were categorised as Rural Districts (RD), Urban Districts (UD), Municipal or Metropolitan Boroughs (MB) and County Boroughs (CB). WWII bomb density levels are defined below:

<5 bombs per 405ha is a Very Low regional bombing density.

5-15 bombs per 405ha is Low.

15-50 bombs per 405ha is Moderate.

50-250 bombs per 405ha is High.

>250 bombs per 405ha is Very High.

Table 1 Bombing statistics

Area	Bombs Recorded				
	High Explosive	Parachute Mines	Other	Total	Bombs per 405ha (1,000 acres)
Manchester CB	**712**	**18**	**7**	**737**	**27.0**
Stretford MB	456	64	0	520	147.3
Salford CB	406	29	16	451	86.7
Middleton MB	37	0	0	37	7.2
Chadderton UD	11	1	0	12	4.0
Failsworth UD	2	2	0	4	3.7

Note that Table 1 excludes the figures for Incendiary Bombs (IBs). Discrepancies between this list and other records, such as bomb clearance records, demonstrate that this data is likely to under-represent actual bombing.

Details of the nearest recorded bombing incidents to the Site are given in the following section.

1st June 1941

3No. HE bombs fell in a line from the allotment gardens on Ceylon Street to Vine Street, between 0.2km northwest and 0.3km north of the Site.

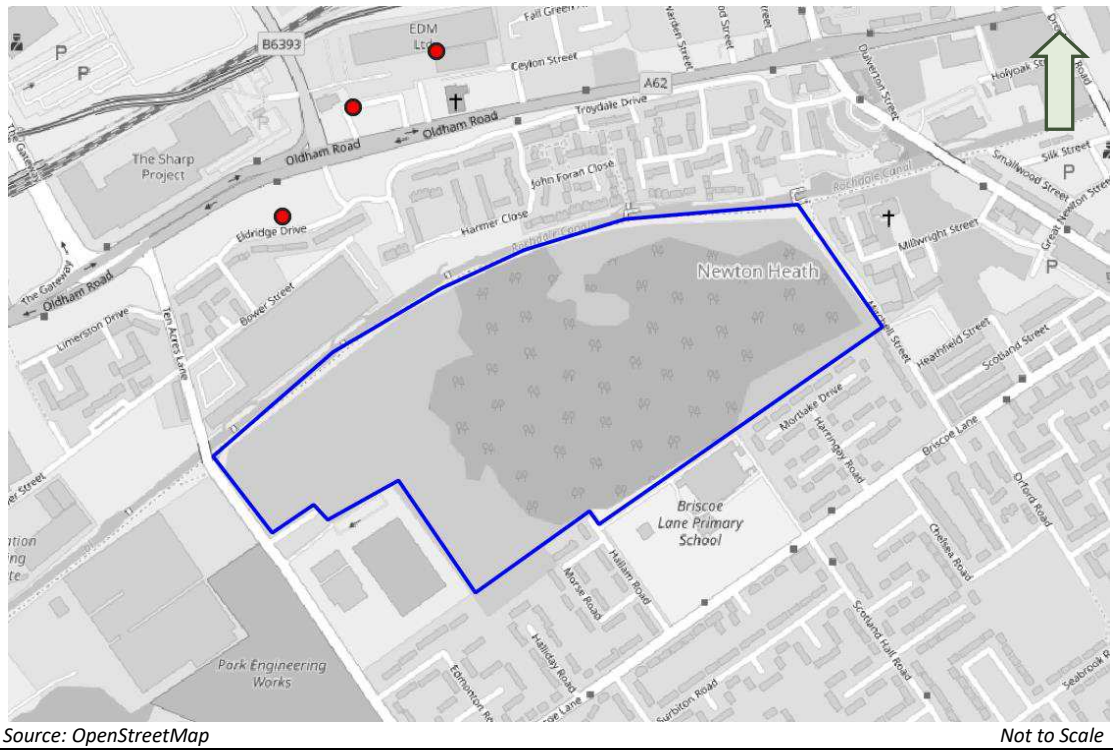
It should be noted that during WWII, many Unexploded Bombs (UXBs) were mapped and subsequently removed as and when conditions and demands on Bomb Disposal teams allowed. Their removal was not always accurately recorded and sometimes records were later destroyed. In practice, most UXB were probably removed and only a much smaller number were actually registered as officially abandoned bombs.

Figure 3 is a map showing the approximate location of recorded bomb impacts in the immediate vicinity of the Site. IBs shown are indicative of larger numbers of similar devices that fell within the given area.

The map has been compiled from a number of different sources, including air raid incident reports, historical aerial photographs and bomb census maps.

The bomb map is also given in the accompanying P10144-20-R1-MAP01-A.

Figure 3	Compiled bomb impact map for the vicinity of the Site



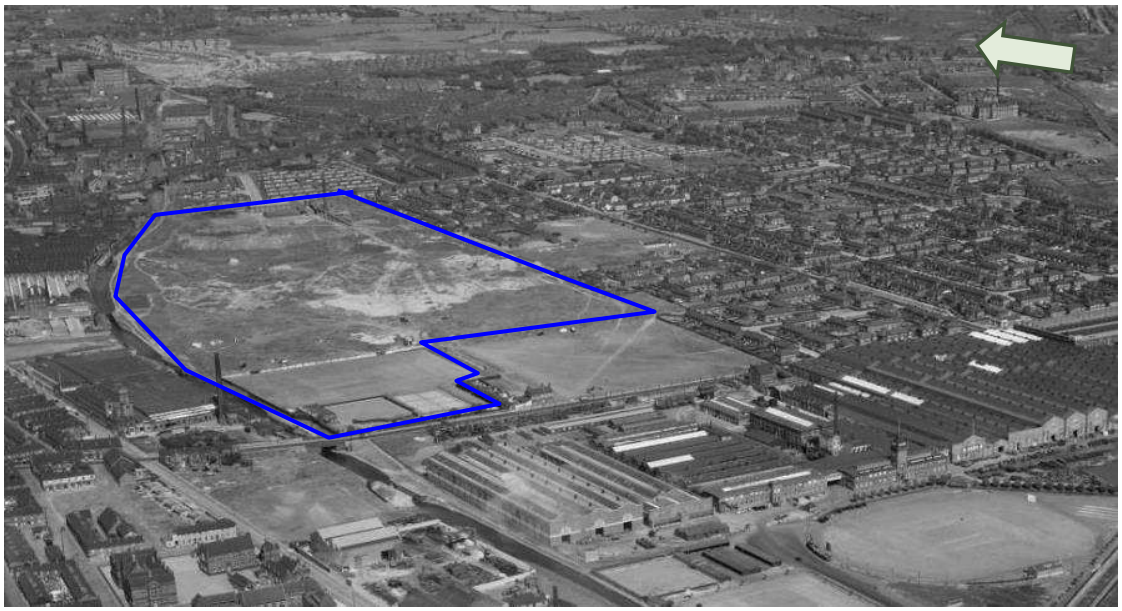
Source: OpenStreetMap *Not to Scale*

Legend	Site boundary	HE bomb

Plate 2 is an aerial photograph dated the 3rd July 1953. No bomb damage has been identified on the Site.

The Park Engineering works can be seen to the southwest of the Site.

Plate 2	Aerial photograph, 3rd July 1953



Source: BritainfromAbove *Not to Scale*

Legend	Site boundary

Potential UXO Hazard

No records have been found indicating that the Site was bombed and no bomb damage has been identified on the Site on historical aerial photography.

WWII bombing is not considered to provide a source of UXO hazard to the Site.

4.2.4 Geology and Bomb Penetration Depths

It is important to consider the geological materials present at the time that a bomb was dropped in order to establish its maximum penetration depth.

At the time of writing, no Site-specific ground investigation data was available.

British Geological Survey (BGS) 1:50,000 Sheet 85 Manchester (Solid & Drift) and BGS borehole records from nearby investigations have been consulted to get an indicative overview of the Site geology.

The geology of the Site is understood to consist of up to 15m of Made Ground and landfill materials dating from post-WWII, over glacial till overlying Permian bedrocks of the Collyhurst Sandstone Formation, faulted against the Manchester Marls Formation in the extreme west.

Table 2 provides an estimate of average maximum bomb penetration depths for the central and south-eastern part of the Site assuming WWII ground conditions of 5m of firm to stiff clay overlying loose sand and weathered sandstone at the top of the Permian bedrock.

Table 2	Estimated average maximum bomb penetration depths (central and southeast)	
Estimated average bomb penetration depths for anticipated geology		
Bomb Weight	50kg	5.0m
	250kg	6.5m
	500kg	8.5m

Table 3 provides an estimate of average maximum bomb penetration depths for the western part of the Site assuming WWII ground conditions of 10m of firm to stiff clay and 10m of stiff to very stiff clay overlying weathered sandstone and mudstone at the top of the Permian bedrock.

Table 3	Estimated average maximum bomb penetration depths (west)	
Estimated average bomb penetration depths for anticipated geology		
Bomb Weight	50kg	5.5m
	250kg	8.0m
	500kg	12.0m

These calculations can be refined on receipt of Site-specific information.

The estimated bomb penetration depths given in Table 2 are from the WWII ground level and are based on the following assumptions:

a) High level release of the bomb resulting in an impact velocity of 260m/s (>5,000m altitude).

b) A strike angle of 10 to 15 degrees to the vertical.

c) That the bomb is stable, both in flight and on penetration.

d) That no retarding units are fitted to the bomb.

e) That the soil type is homogenous.

A high altitude release of a bomb will result in ground entry at between 10° and 15° to the vertical with the bomb travelling on this trajectory until momentum is nearly lost. The bomb will then turn abruptly to the horizontal before coming to rest. The distance between the centre of the entry hole and the centre of the bomb at rest is known as

5 EXPLOSIVE ORDNANCE CLEARANCE ACTIVITIES

Official UK bombing statistics have been compiled from both British and German sources. There were differences in the way the figures were originally reported and collated which has led to discrepancies in the summary data.

Based on data from 1939 to 1945, War Office statistics indicate that 200,195No. HE bombs exploded within Great Britain. Additionally, 25,195No. HE bombs (representing 11%) were recorded as UXBs. However, records from the Royal Engineers who were responsible for bomb disposal at the time indicate that as of 27th February 1946 upwards of 45,000No. UXBs were disposed of.

On average 8.5% of UXBs later self-exploded. In some cases the bombs had delayed action fuzes or were never intended to explode, their purpose being to cause inconvenience and fear. Given the discrepancy in records and the fact that UXBs are still being found unexpectedly, it is clear that the original figures are understated and provide only an approximation of the number of potential UXBs in the UK.

War Office statistics also show that between October 1940 and May 1941 most of the UXBs (93%) were either 50kg or 250kg. It should be noted that details of the recovery and the size of the UXB were not always accurately reported.

The larger WWII UXBs are often difficult to recover due to both penetration depths and the presence of two or more fuzes, combined with more sensitive fillings of explosive mixtures including Amatol and Trialen.

5.1 Abandoned Bombs

For further information on abandoned bombs, and the potential UXO hazard associated with them, follow the link below:

- Abandoned Bombs

No records have been found indicating that any officially abandoned bombs are located on the Site.

5.2 EOC Tasks

Zetica holds the following record of post-WWII EOC tasks having taken place in the vicinity of the Site.

2nd October 2020

1No. inert shell was discovered by a magnet fisherman in the Rochdale Canal, off Grimshaw Lane, approximately 0.4km west of the Site. It was removed by a Bomb Disposal Unit (BDU).

6 UXO HAZARD ASSESSMENT

6.1 UXO Hazard Level

The definitions for the levels of UXO hazard are provided below.

Definitions of UXO Hazard Level for a Site	
Hazard Level	**Definition**
Very Low	There is positive evidence that UXO is not present, e.g. through physical constraints or removal.
Low	There is no positive evidence that UXO is present, but its occurrence cannot be totally discounted.
Moderate	There is positive evidence that ordnance was present or that other uncharted ordnance may be present as UXO.
High	There is positive evidence that UXO is present.
Very High	As high, but requires immediate or special attention due to the potential hazard.

No records have been found indicating that the Site was bombed and no other significant sources of UXO hazard have been identified on the Site.

Given this, it is considered that the Site has a low UXO hazard level, as shown in Figure 4.

The UXO hazard zone plan of the Site is also given in the accompanying P10144-20-R1-MAP01-A.

Figure 4 UXO hazard zone plan of the Site

Source: OpenStreetMap *Not to Scale*

Legend					
	Very Low		Low		Moderate
	High		Very High		Site boundary

7 UXO RISK ASSESSMENT

7.1 Proposed Works

It is understood that initial works on the Site will involve ground excavation including excavations and boreholes to depths of up to 30m bgl.

Future works may include bulk excavation of parts of the Site.

7.2 Risk Assessment Methodology

A UXO risk assessment has been undertaken for the proposed works, taking into consideration the identified UXO hazard.

Firstly, the probability of encountering UXO (PE) has been considered and rated for the different construction techniques, as detailed below.

Probability of Encounter (PE)	Rating
Frequent, highly likely, almost certain.	5
Probable, more likely to happen than not.	4
Occasional, increased chance or probability.	3
Remote, unlikely to happen but could.	2
Improbable, highly unlikely.	1
Impossible	0

Secondly, the probability of detonating a UXO (PD) has been considered and rated for the different construction techniques, as detailed below.

Probability of Detonation (PD)	Rating
Frequent, highly likely, almost certain.	5
Probable, more likely to happen than not.	4
Occasional, increased chance or probability.	3
Remote, unlikely to happen but could.	2
Improbable, highly unlikely.	1
Impossible	0

Next, the probability of encountering and detonating the UXO (PE x PD) have been used to generate an overall likelihood rating (P).

P = PE x PD	LIKELIHOOD of Encounter and Detonation	Rating
21 to 25	Frequent, highly likely, almost certain.	5
16 to 20	Probable, more likely to happen than not.	4
6 to 15	Occasional, increased chance or probability.	3
2 to 5	Remote, unlikely to happen but could.	2
1	Improbable, highly unlikely.	1
0	Impossible	0
P ranges from 25, a certainty of UXO being encountered and detonated on the Site by engineering activity, to 0, a certainty that UXO does not occur on the Site and will not be detonated by engineering activity.		

The likelihood of encountering and detonating UXO during site works is multiplied by the severity of such an event occurring (P x S), in order to provide a risk level using the following matrix.

Severity (S)	Rating
Multiple fatalities	5
Major injury, long term health issues, single fatality.	4
Minor injury, short term health issues, no fatalities.	3
First aid case but no lost time or ill health.	2
Minor injuries, no first aid.	1
No injuries.	0

UXO Risk Matrix							
	SEVERITY (S)						
LIKELIHOOD (P)		5	4	3	2	1	0
	5	25	20	15	10	5	0
	4	20	16	12	8	4	0
	3	15	12	9	6	3	0
	2	10	8	6	4	2	0
	1	5	4	3	2	1	0
	0	0	0	0	0	0	0

7.3 UXO Risk Level

The UXO risk assessment for proposed works on the Site is given in Table 4.

Table 4 UXO risk assessment for the Site

Potential UXO Hazard	Anticipated Works	PE	PD	P = PE x PD	Likelihood	Severity	Risk Rating	UXO Risk
UXB	Shallow Excavations	1	1	1	1	5	5	Low
	Deep Excavations	1	1	1	1	5	5	Low
	Boreholes	1	1	1	1	4	4	Low
Other UXO	Shallow Excavations	1	1	1	1	4	4	Low
	Deep Excavations	1	1	1	1	4	4	Low
	Boreholes	1	1	1	1	3	3	Low
PE (Probability of Encounter), PD (Probability of Detonation), P (Overall Probability)								
Shallow Excavations defined as <1.0m below ground level (bgl.)								

8 RISK MITIGATION PLAN

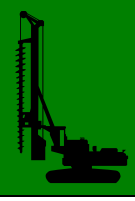
Key findings: No significant sources of UXO hazard have been identified.

Key actions: Proceed with works.

8.1 UXO Risk Summary

Table 5 summarises the UXO risk for proposed works on the Site and recommended actions.

Table 5 Summary of UXO risk and mitigation recommendations

Proposed Works	UXO Risk	Recommended Mitigation
Excavations		**Proceed with works** – if additional comfort is required to address the residual UXO hazard, a formal UXO awareness briefing can be provided.
Boreholes		**Proceed with works**

In summary, no additional measures are considered essential to reduce the UXO risk on the Site to As Low As is Reasonably Practicable (ALARP).

8.2 Risk Mitigation Techniques

Should you wish to provide staff involved in excavations with increased awareness regarding the potential (albeit low) for UXO encounter, this can be done through a formal briefing.

8.2.1 UXO Awareness Briefing

Typically ~1hour in duration, these briefings will be expected to provide site workers with:-

- Background to the potential UXO hazards that could be encountered.
- Awareness of how the UXO hazard could present a risk.
- Knowledge of what to do in the event that a suspect item is encountered.

The briefing is to be provided along with back-up materials such as UXO awareness posters, emergency contact numbers and other background information to assist site workers in becoming familiar with what potential UXO can look like.

The materials can also be used by key staff to pass on the relevant points of the induction to others who visit or work on the Site.

By providing the UXO awareness briefing, it ensures that in the unlikely event that UXO is encountered:-

- All site staff take appropriate action.
- A support mechanism and points of contact are established.
- The likelihood of harm to people or property is reduced.
- Significant delays to site work are prevented.

8.3 What Do I Do Next?

If you have any comments or require further assistance, contact us via phone (01993 886682) or email (uxo@zetica.com) and we can help.

If you have requirements to identify other buried hazards (such as mapping utilities or obstructions) we can provide these surveys.

If proposed works on the Site change, or additional works are planned, contact Zetica for a re-assessment of the UXO risk and the risk mitigation requirements.

APPENDICES

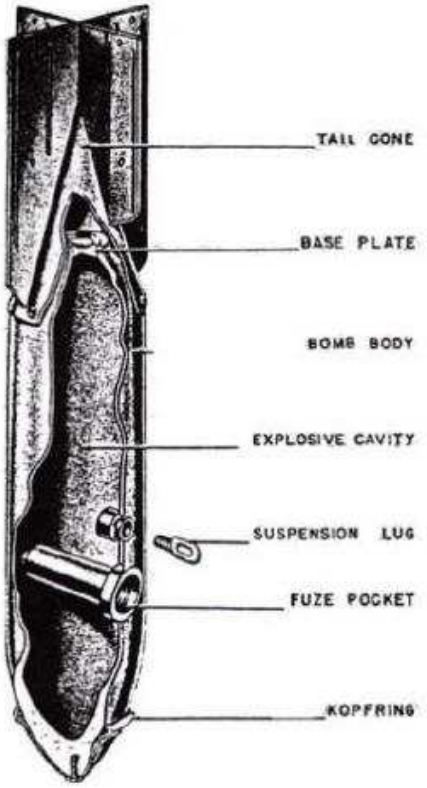
Appendix 1 Anticipated Ordnance Types

The probability of encountering UXO on the Site is considered to be low. As with any similar site in the UK, there is always a background risk of finding ordnance and potential types to be encountered are detailed below. For a more comprehensive set of ordnance data sheets, see http://zeticauxo.com/downloads-and-resources/ordnance-data-sheets/.

Information Data Sheet

Category Bomb (Luftwaffe)
Type Sprengbombe-Cylindrisch (SC) 50kg

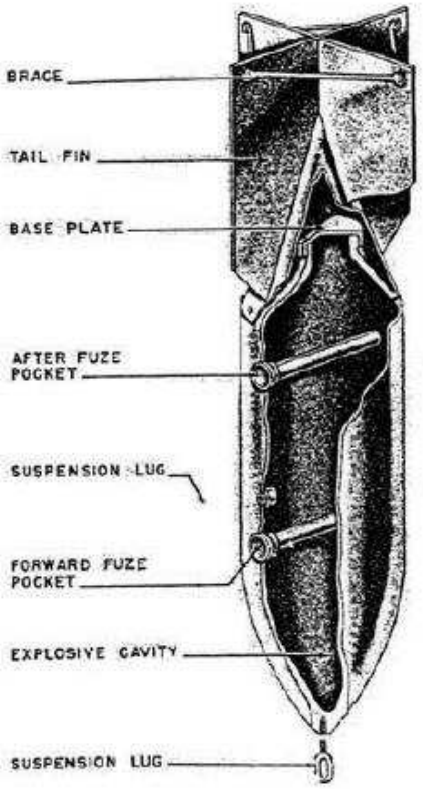
Variants	8
Body Dimensions	762 x 200mm (30" x 7.9")
Weight	55kg (122lbs)
Charge Weight	25kg (54lbs)
Fuze	Single electric impact fuze. Some have short time delay
Composition	Sheet steel
Description	Thick nose welded to a steel body. Nose may be attached to Kopfring (a triangular section steel ring) or spike. Suspension bolt in eye/body and sheet metal tail attached to body with rivets/screws. Originally painted green-grey with a yellow stripe on the tail. Cast TNT, Amatol or Trialen filling.
Function	Designed to maximise shock waves through air, water and earth and for general demolition. Used against easily damageable targets, including roads, aircraft hangars, rolling stock and small buildings. Spike bombs/ 'Stabo' (SC 50 with spikes attached to nose) were used against rail lines and country roads, with Kopfring used against naval targets.

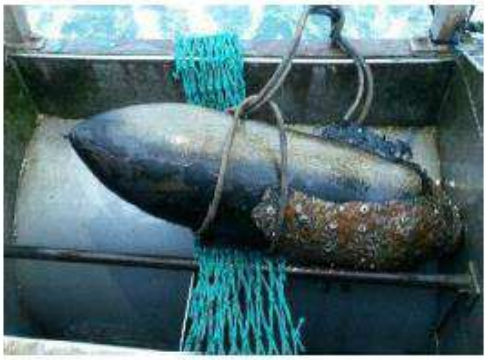


Information Data Sheet

Category Bomb
Type Sprengbombe-Cylindrisch (SC) 250kg

Variants	8
Body Dimensions	1194mm x 368mm (47" x 14.5")
Weight	249-264 kg (548-582lbs)
Charge Weight	130-145 kg (287-320lbs)
Fuze	Electric impact fuze/electric clockwork time fuse & electric anti-disturbance fuze
Composition	Sheet steel with stays
Description	Thick nose welded to steel body. Nose may be attached to Kopfring (triangular section steel ring) or spike. Sheet metal tail attached to body with rivets/ screws. Suspension eye bolt in the nose/body. Originally painted green-grey with a yellow stripe on the tail. TNT; amatol; TNT and aluminium powder, naphthalene, ammonium nitrate and wax/ wood meal filling.
Function	Designed to maximise shock waves through air, water and earth and general demolition. Used against railway installations, large buildings, ammunition depots and below-ground installations (to 8m). Spike bombs/ 'Stabo' (SC 50 with spikes attached to nose) used against rail lines and country roads.

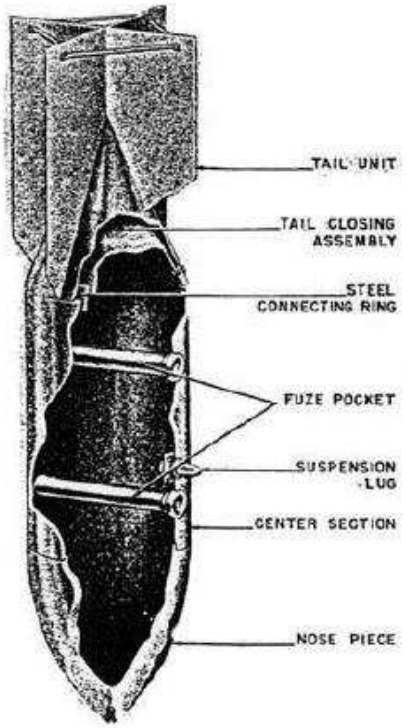




Information Data Sheet

Category Bomb
Type Sprengbombe-Cylindrisch (SC) 500kg

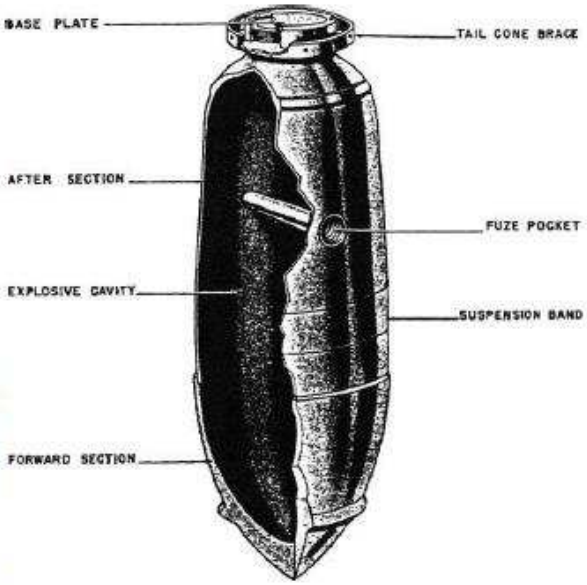
Variants	-
Body Dimensions	1414–1486mm x 470mm (55.7-58.5" x 18.5")
Weight	500kg (1,100lbs)
Charge Weight	220kg (484lbs)
Fuze	Electric impact fuze/electric clockwork time fuse & electric anti-disturbance fuze.
Composition	Sheet steel with stays or drum
Description	Thick nose welded to steel body. Nose may be attached to Kopfring (triangular section steel ring). Tail either steel sheet or drum-shaped. Suspension band. Originally painted green-grey/ buff (some later versions sky blue) with yellow stripe on tail. Filled with amatol, TNT or trialen.
Function	Designed to maximise shock waves through air, water and earth and for general demolition. Used against railway property, large buildings, shipping and below-ground installations.

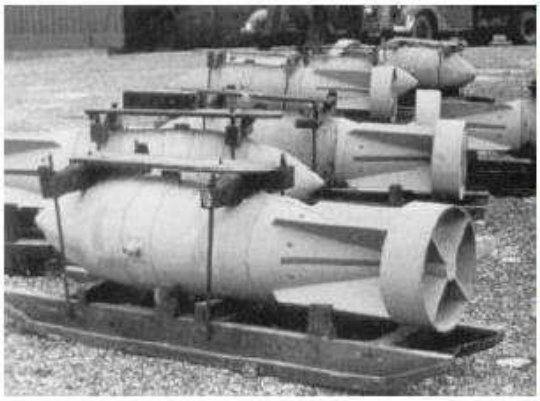


Information Data Sheet

Category Bomb
Type Sprengbombe-Cylindrisch (SC) 1,000kg (HERMANN)

Variants	3
Body Dimensions	1742-1905mm x 648–660mm (68.6-75" x 25.5-26")
Weight	1,000-1,088kg (2,204-2,398lbs)
Charge Weight	529-619kg (1,166-1,364lbs)
Fuze	Electric impact fuze/ electric clockwork time fuze & electric anti-disturbance fuze
Composition	Magnesium alloy with drum
Description	Thick nose welded to steel body. Nose attached to Kopfring (triangular section steel ring). Drum-shaped tail made of magnesium alloy. Suspension band. Originally painted sky-blue. Filled with amatol, TNT/aluminium/wood meal or trialen.
Function	Designed to maximise shock waves through air, water and earth and for general demolition.

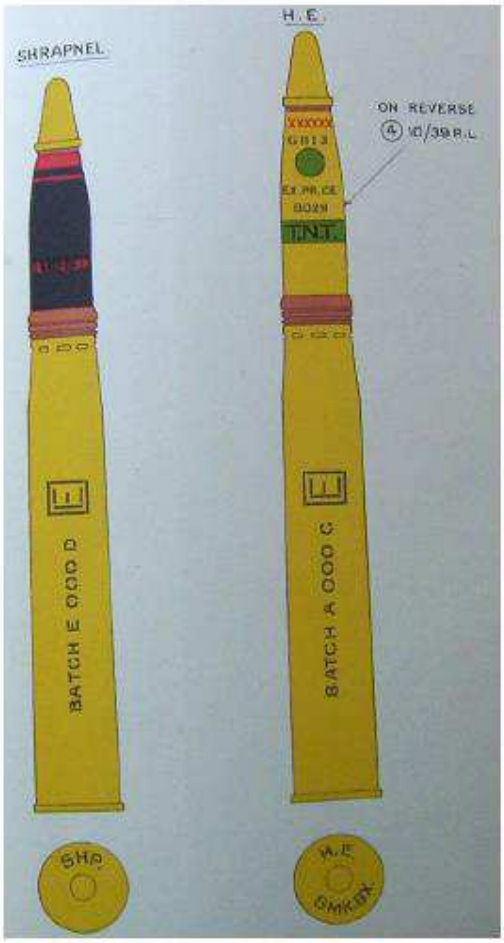




Information Data Sheet

Category Projectile
Type 3.7" Anti-Aircraft Shell

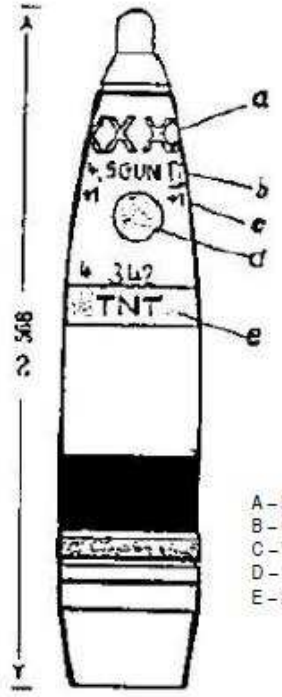
Variants	6
Body Dimensions	94mm x 360mm (3.7 x 14.7")
Weight	12.7kg (28lb)
Fuze	Mechanical time fuze
Composition	Cast steel
Description	Brass cartridge case. Square-based shell with tapered nose, filled with Amatol, TNT or RDX/TNT. MK6 had forward centring bands and a wider driving band.
Function	Used as a defence against enemy aircraft, fired from fixed batteries and mobile mountings. Could fire approximately 20 rounds per minute with a maximum ceiling of 41,000ft and horizontal range of 20,600 yards.



Information Data Sheet

Category Projectile
Type 4.5" Shell (Mark II – Anti-Aircraft)

Variants	-
Body Dimensions	114mm x 566mm (4.5" x 21.9")
Weight	24.9kg (55lb)
Fuze	Mechanical time fuze
Composition	Cast steel
Description	Square-based, tapered-nosed shell filled with TNT or Amatol. Steel casing, rotating band of either copper or gilding metal located 3.5" in front of the base end with single groove.
Function	Used as field artillery and adapted for use in anti-aircraft defence from fixed batteries. Rate of fire of 8 rounds per minute, maximum ceiling of 44,000ft and horizontal range of 22,800 yards.



A – Missile Identification
B – Gun and Bullet Type
C – Weight
D – Smoke pot
E – Explosives Ring

Appendix 2 Sources of UXO Hazard

The sections below provide background information on the potential sources of UXO hazard (albeit low) affecting the Site. For a more comprehensive set of UXO information sheets, see http://zeticauxo.com/downloads-and-resources/uxo-information-sheets/.

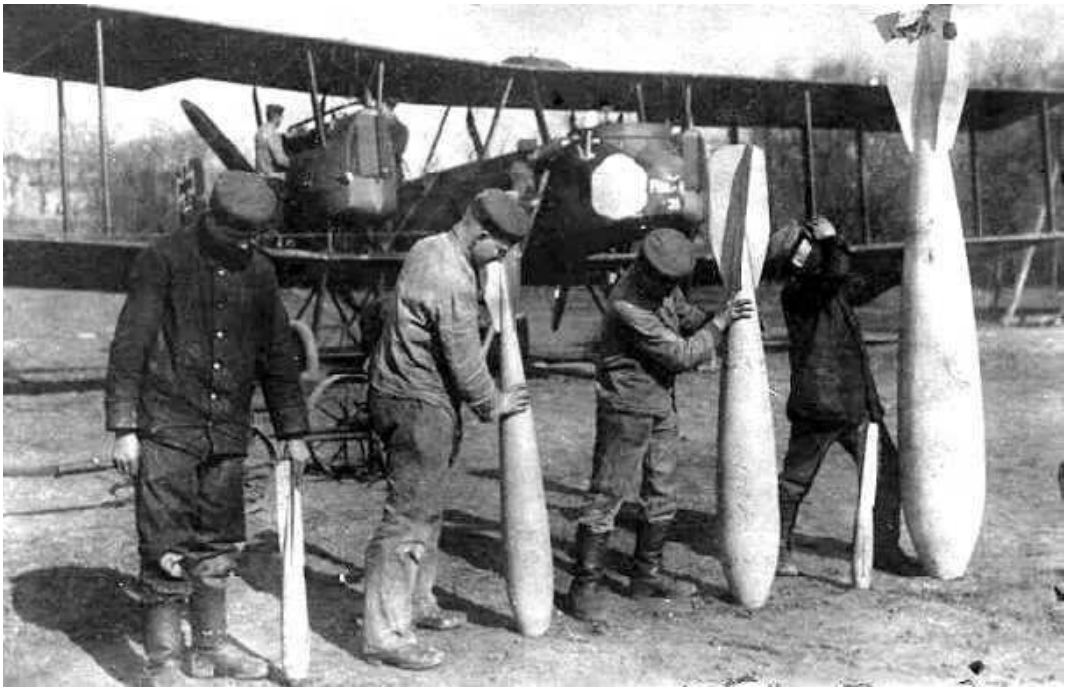
Appendix 2.1 WWI Bombing

It is not generally realised that during World War One (WWI) significant bombing took place across some areas of the UK. An estimated 9,000No. German bombs were dropped on Britain during the course of 51No. airship and 52No. aircraft raids. It was the first time that strategic aerial bombardment had been used. More than 1,400No. people were killed during these raids.

Most air raids were carried out on London and Southeast England. Areas along the East Coast were also targeted regularly due to their proximity to the European continent. Bombing raids further inland were rare and West England and Wales were out of reach for German aircraft of the time.

Aerial bombing during WWI initially relied on visual aiming, with bombsights not developed until later in the war. The inaccuracy inherent in this method meant that bombs often fell some way from their intended targets.

The first recorded raid against England occurred on the 21st December 1914 when 2No. high explosive bombs fell near the Admiralty Pier at Dover. Zeppelin raids intensified during 1915 and 1916, with aircraft raids becoming more frequent after 1917. The last raid of WWI took place on the 19th May 1918, when 38 Gotha and 3 Giant aircraft bombed London and surrounding districts, dropping a total of more than 2,500lbs of bombs.



The potential of coming across an Unexploded Bomb (UXB) from WWI is far less likely than a WWII UXB given the lower bombing densities during raids in the Great War.

Some areas which were subjected to sustained bombing raids, such as parts of London and coastal towns, recorded a higher number of UXB. In these areas, where there has been no significant development for the last century, the potential of a UXB remaining from WWI cannot be totally discounted.

Appendix 2.2 WWII Bombing

Bombing raids began in the summer of 1940 and continued until the end of WWII. Bombing densities generally increased towards major cities or strategic targets such as docks, harbours, industrial premises, power stations and airfields. In addition to London, industrial cities and ports, including Birmingham, Coventry, Southampton, Liverpool, Hull and Glasgow, were heavily targeted, as well as seaside towns such as Eastbourne and cathedral cities such as Canterbury.

The German bombing campaign saw the extensive use of both High Explosive (HE) bombs and Incendiary Bombs (IBs). The most common HE bombs were the 50kg and 250kg bombs, although 500kg were also used to a lesser extent. More rarely 1,000kg, 1,400kg and 1,800kg bombs were dropped.

The HE bombs tended to contain about half of their weight in explosives and were fitted with one or sometimes two fuzes. Not all HE bombs were intended to explode on impact. Some contained timing mechanisms where detonation could occur more than 70 hours after impact.

Incendiary devices ranged from small 1kg thermite filled, magnesium bodied Incendiary Bombs

Anti-shipping parachute mines were commonly dropped over navigable rivers, dockland areas and coastlines. The Royal Navy was responsible for ensuring that the bombs were made safe. Removal and disposal was still the responsibility of the Bomb Disposal Unit of the Royal Engineers.

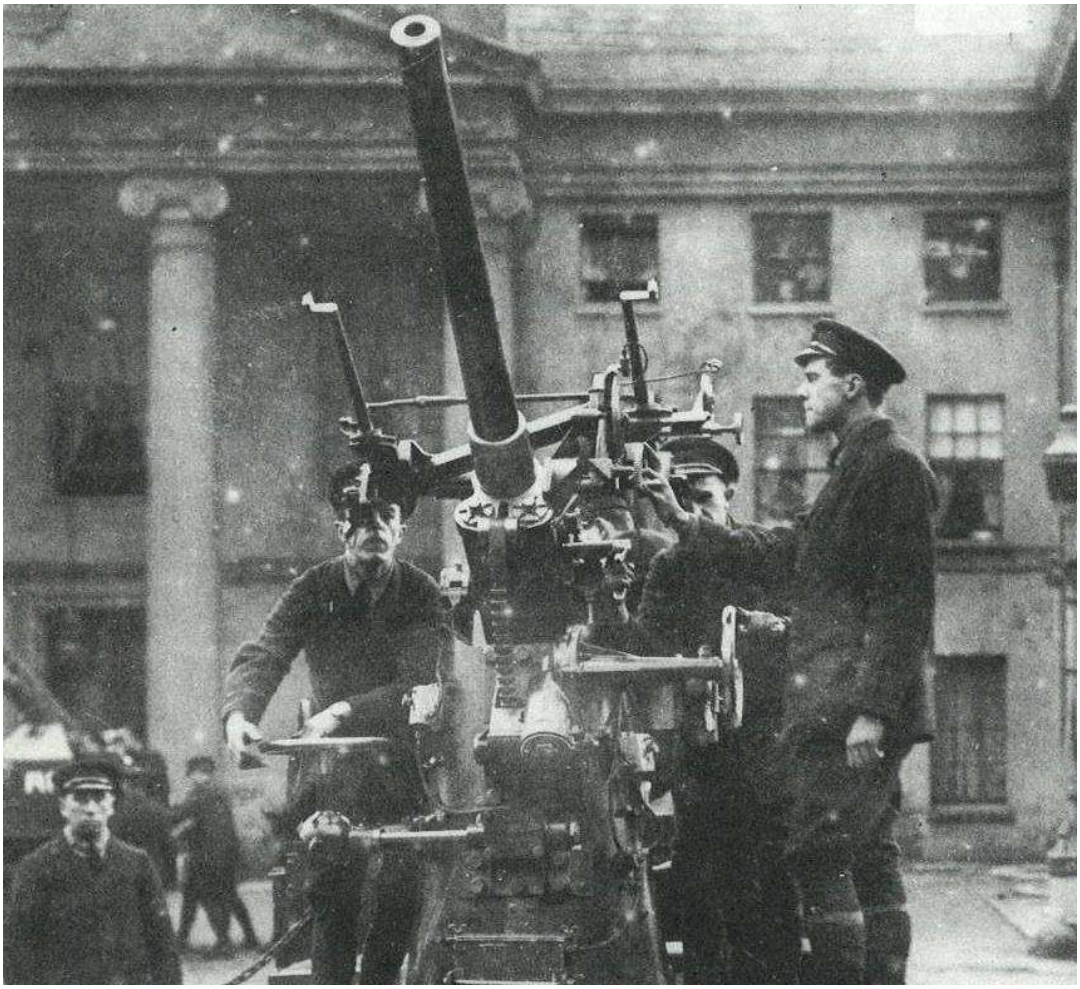
In 1944, the Germans

Appendix 2.3 Anti-Aircraft Guns

As aerial bombardment first began during WWI, Anti-Aircraft (AA) gun batteries were established were gradually established throughout much of England to counter German bombing raids. By June 1916, there were approximately 271No. AA guns and 258No. searchlight installations defending London alone.

Common AA defences during WWI included 3-inch, 75 millimetre, 6-pounder and 1-pounder guns. Many of these guns were mobile, being mounted on lorry chassis. They were driven about following the course of an airship and fired from any area of open land.

During WWI, Unexploded AA (UXAA) shells, could land up to 13km from the firing point, although more typically fell within 10km.



AA gun batteries were used extensively during WWII to counter the threat posed by enemy aircraft. In many instances, AA shells caused damage to Allied territory and in some areas caused significant numbers of civilian fatalities.

During WWII, AA shells could land up to 27km from the firing point, although more typically fell within 15km. These could be distributed over a wide area.

3No. types of AA batteries existed:

- **Heavy Anti-Aircraft (HAA)** batteries of large guns (typically 3.7”

Appendix 3 Recent UXO Finds

UXO finds in the UK are a regular occurrence, although they almost never result in an accidental detonation.

It is still important to note that explosives rarely lose effectiveness with age. In some instances, mechanisms such as fuzes and gaines can become more sensitive and more prone to detonation, regardless of whether the device has been submersed in water or embedded in silt, clay or similar materials.

The effects of an accidental UXO detonation are usually extremely fast, often catastrophic and invariably traumatic to any personnel involved. Such occurrences are largely restricted to current theatres of war and overseas minefields, with occasional events in mainland Europe.

The sections below provide a brief summary of recent significant UXO finds in the UK. To keep up to date with the latest UXO finds, visit http://zeticauxo.com/news/.

On the 4th September 2017, 1No. 50kg UXB was found in a ragstone quarry at Kings Hill near West Malling in Kent. It was destroyed in situ in a controlled explosion by an EOD team.

On the 11th February 2018, 1No. 500kg UXB was found in King George V Dock in London, resulting in the temporary closure of the adjacent London City Airport. The UXB was freed from a silt bed and towed along the River Thames to Shoeburyness where it was destroyed in a controlled explosion.

On the 26th February 2018, an EOD team destroyed numerous items of ordnance including shells and 20mm ammunition which had been exposed by storms on Selsey beach. A similar operation was required after more UXO finds on the beach in April 2018.

On the 31st March 2018, 2No. 870lb British PMs were found in waters off Guernsey. They were destroyed in controlled explosions.

On the 20th May 2018, a 1,000kg German sea mine washed ashore at Elmer beach near Bognor Regis, West Sussex. A 1 mile exclusion zone was enforced before an EOD team towed the device out to sea for a controlled explosion.

On the 24th May 2018, numerous ordnance-related items were found on a proposed residential development in Burntwood, Staffordshire.

On the 10th July 2018, a suspected 1,000kg German UXB was found by scuba divers near Teignmouth Pier in Devon. The UXB was towed out into open sea by a RN EOD team for a controlled explosion.

On the 30th August 2018, a 2,000lb German PM was trawled up by a fishing vessel off Mersea in Essex. The PM was moved to an area of open sea where it was destroyed in a controlled explosion by a RN EOD team.

On the 29th November 2018 a large naval projectile was found at Wembury Point, Plymouth. It was destroyed in a controlled explosion.

During January and February 2019 a military EOD was called out to deal with several items of UXO washed up at Medmerry Beach in Selsey. The site of a former gunnery range, it followed on from several similar incidents in 2018.

On the 21st January 2019 a suspected 1,000lb torpedo was brought into Brixham Harbour by a fishing trawler. It was towed back out to sea and destroyed by a Naval EOD team.

On the 6th February 2019 3No. WWII projectiles were found on Chalkwell Beach near Southend-on-Sea, Essex. They were destroyed in a controlled explosion.

On the 19th February 2019 6No. projectiles were found on the beach at Lilstock, Somerset.

On the 14th March 2019 an unexploded pipe mine was found at the former RAF Manston airfield near Ramsgate, Kent. It was destroyed in a controlled explosion.

On the 21st March 2019 2No. unexploded shells were found on a building site in Brighton. They were removed by an EOD team.

On the 25th March 2019 an unexploded shell was found in Stechford, Birmingham. It was removed to a field and destroyed in a controlled explosion.

On the 22nd May 2019 70No. Self-Igniting Phosphorus (SIP) grenades were found during development works at Tongland Dam in Dumfries & Galloway, Scotland. They were destroyed in a controlled explosion.

On the 23rd May 2019 a 250kg German UXB was found by workers on a building site at Kingston University in London (see plate below). The UXB could not be safely removed and was consequently destroyed in situ by an EOD team.

On the 27th May 2019 24No. SIP grenades were found in a field near Sibton in Suffolk. An EOD team constructed a 2ft deep trench into which the grenades were placed before being destroyed in a controlled explosion.

On the 7th June 2019 a 50kg German fragmentation UXB was found at a building site in Kings Hill at the former RAF West Malling airfield. It was destroyed in a controlled explosion by an EOD team the following day. On the 26th September 2019 another 50kg German UXB was found at Kings Hill and was destroyed in a controlled explosion the next day.

On the 20th September 2019 a suspected 250kg German UXB was found on a construction site in Bordon, Hampshire. It was destroyed in a controlled explosion by an EOD team.

In September 2019 a German PM was found by divers off Southend-on-Sea, Essex. It was towed out to open water off Shoeburyness by a Royal Navy EOD team and destroyed in a controlled explosion.

On the 3rd February 2020, a 500kg German UXB was found on a building site in Soho, London. It was removed by an EOD team.

Appendix 4 Glossary and Definitions

Abandoned Explosive Ordnance (AXO)	Abandoned Explosive Ordnance is explosive ordnance that has not been used during an armed conflict, that has been left behind or disposed of by a party to an armed conflict, and which is no longer under control of that party. Abandoned explosive ordnance may or may not have been primed, fuzed, armed or otherwise prepared for use.
Close Combat Munitions	Items of ordnance thrown, propelled or placed during land warfare, to include grenades, mortars, projectiles, rockets and land mines.
Demil	Derived

Explosive Substances and Articles (ESA)	Explosive substances are solid or liquid substances (or a mixture of substances), which are either: • capable by chemical reaction in itself of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. • designed to produce an effect by heat, light, sound, gas or smoke, or a combination of these as a result of a non-detonative, self-sustaining, exothermic reaction. Explosive article is an article containing one or more explosive substances.
Fuze	A fuze is the part of an explosive device that initiates the main explosive charge to function. In common usage, the word fuze is used indiscriminately, but when being specific (and in particular in a military context), fuze is used to mean a more complicated device, such as a device within military ordnance.
Gaine	Small explosive charge that is sometimes placed between the detonator and the main charge to ensure ignition.
Geophysical survey	A geophysical survey is essentially a range of methods that can be used to detect objects or identify ground conditions without the need for intrusive methods (such as excavation or drilling). This is particularly suited to ordnance as disturbance of ordnance items is to be avoided where ever possible.
Gold line	This is the estimated limit of blast damage from an explosive storage magazine. It usually means that development within this zone is restricted.
High Explosive	Secondary explosives (commonly known as High Explosives (HE)) make up the main charge or filling of an ordnance device. They are usually less sensitive than primary explosives. Examples of secondary explosives are: Nitro glycerine (NG), Trinitrotoluene (TNT), AMATOL (Ammonia nitrate + TNT), Gunpowder (GP), and Cyclotrimethylenetrinitramine (RDX).
Munition	Munition is the complete device charged with explosives, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in military operations, including demolitions. This includes those munitions that have been suitably modified for use in training, ceremonial or non-operational purposes. These fall into three distinct categories:- • inert - contain no explosives whatsoever. • live - contain explosives and have not been fired. • blind - have fired but failed to function as intended.

Primary Explosive	Primary explosives are usually extremely sensitive to friction, heat, and pressure. These are used to initiate less sensitive explosives. Examples of primary explosives are: Lead Azide, Lead Styphnate, and Mercury Fulminate. Primary explosive are commonly found in detonators.
Propellants	Propellants provide ordnance with the ability to travel in a controlled manner and deliver the ordnance to a predetermined target. Propellants burn rapidly producing gas, pressure and flame. Although usually in solid form they can be produced in liquid form. Examples of propellants are: Ballistite often found in a flake form and Cordite used in small arms ammunition.
Pyrotechnic	A pyrotechnic is an explosive article or substance designed to produce an effect by heat, light, sound, gas or smoke, or a combination of any of these, as a result of non-detonative, self-sustaining, exothermic chemical reactions.
Small Arms Ammunition (SAA)	SAA includes projectiles around 12mm or less in calibre and no longer than approximately 100mm. They are fired from a variety of weapons, including rifles, pistols, shotguns and machine guns.
Unexploded Anti-Aircraft (UXAA) Shell	UXAA shells are army ordnance commonly containing HE, though they can also contain pyrotechnic compounds that produce smoke. Most commonly

Appendix 5 Bibliography

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Established for over 29 years,

zeticauxo

APPENDIX D

BGS Borehole Logs

C. ***TEST PUMPING SUMMARY*** (Please supply fully details on Form WR - 39)

Test Pumping Datum (if different from borehole datum)	_____ (mbd)	above / m below borehole datum
Pump Suction Depth	_____	mbd
Water Level (Start of Test)	_____	mbd
Water Level (End of Test)	_____	mbd
Pumping rate	_____	m^3/d : l/s
for	_____	days/hours
Recovery to (from end of pumping)	_____ mbd in _____	mins : hrs : days
Date(s) of measurements	_____	

Please Supply Chemical Analysis If Available

D. ***STRATA LOG*** SJ89/243 PIONEER CONCRETE (Miles Platting M/C)

Geological Classification (BGS only)	Description of Strata	Thickness m	Depth m
	CONCRETE	0.2	0.2
	BACK FILL	0.2	0.4
	BLACK CLAY	6.0	6.4
	BLACK CLAY & GRAVEL	2.6	9.0
	SANDY CLAY	12.8	21.8
	RED MARL	8.4	30.2
	SAND	1.8	32.0
	BLACK COAL MEASURES	28.0	60.0
	[continue on separate page if necessary]		

Other Comments (eg gas encountered, saline water intercepted, etc)

WHEN WE WENT INTO COAL MEASURES WE HIT A LOT OF WATER

FOR OFFICIAL USE ONLY

FILE ..... CONSENT NO ..... BGS REF NO .....

LICENCE NO ..... USE OF BH ..... NGR.....

GROUNDWATER

DATE RECEIVED 30-11-99

Oldham Road, Newton Heath, Manchester. 10.

Maps: One-inch 85 Six-inch 104 N.E.E County Lancashire

Height above O.D. 290 feet Latitude Longitude

Communicated by Professor George Hickling 210 Date of sinking 29th Aug. 1895.

Made by Dip of Strata

Hickling's No. 38.

Trans. Inst. Min. Eng. Vol. LIV. 1918. SB 8824 0072 M/C 89.

5/104 NE 12 A

	Thickness.		Depth from Surface.	
No well.			metres	
No record.			1.52	5 –
Clay	35	–	12.19	40 –
Quicksand	25	–	19.81	65 –
Blue clay	11	–	23.16	76 –
Yellow clay	34	–	33.52	110 –
Clay & gravel	5	–	35.05	115 –
? Roach. Soft red sandstone	6	–	36.88	121 –
O.D. 169+. Red marl	29	–	45.72	150 –
? CS. Red sandstone.	204	–	107.89	354 –

Total solids in solution: 42.6.

CaO	9.0
MgO	5.0
SO_3	5.16
CO_2	1.32
Cl.	2.41
Hardness	20%
Alkalinity	24.15%.

28.4 pts/100,000

Hickling's Synopsis: App. III.

Drift. 115 ft.

Permian marl. 35 feet.

Permian Sandstone. 204 feet.

(621) Wt. 5990—S.33 2000 6/22 Gp. 147 M.R.Co.Ltd.

SD 80 SE 78

SECTION OF 2nd Borehole at Messrs. H. & C. Wilson's Brewery, North Road, Newton Heath, Manchester

Site about 2/3rds up to road from Rly Bridge in Mousal Lane.

Maps: One-inch 85. Six-inch 104 N.E.E. County Lancashire

Height above O.D. 245 ft. Latitude Longitude

Communicated by Professor George Hickling (Borer's record seen) Date of sinking 1889

Made by Firm not known (letter heading partly destroyed) Dip of Strata

Address is Liverpool St., Cross Lane, Salford.

M/c 92 a

Hickling's No. 36. Trans. Inst. Min. Eng. Vol. LIV. 1918.

(85/104 NE 120-121)

	Thickness.			Depth from Surface.		
				metres		
Clay		53	—	16.15	53	—
Red sand		2	—	16.76	55	—
Clay		5	—	18.28	60	—
Running sand		2	6	19.05	62	6
Clay		5	—	20.57	67	6
Sand		2	6	21.33	70	—
Loamy sand		14	—	25.60	84	—
Clay with stones		5	—	27.12	89	—
Strong dark clay		19	—	32.91	108	—
Coarse red gravel		2	—	33.52	110	—
Red sandstone		10	—	36.57	120	—
Soft red sandstone		80	—	60.96	200	—
Coarse red sandstone		21	—	67.36	221	—
Fine loamy red sandstone		39	—	29.24	260	—
Coarse red sandstone		13	—	83.21	273	—
Fine loamy red sandstone		25	—	90.83	298	—
Coarse red sandstone.		12	—	94.48	310	—
Red sandstone		41	—	106.98	351	—
Loamy red sandstone		48	—	121.61	399	—
Hard red sandstone with white bands.		7	—	123.74	406	—
Coarse red sandstone		51	—	139.29	457	—
Fine loamy sandstone		21	—	145.69	478	—
Coarse sandstone		35	—	156.36	513	—
Fine red sandstone.		49	—	171.29	562	—

Hickling's synopsis:- App. III

ft. . . 110 ft

nter. . 452 p fr. ("p" = possibly Permian Sst.)

~~[illegible]~~

(For Survey use only) Geological Classification	NATURE OF STRATA If measurements start below ground surface, state how far ..	Thickness		Depth		
		Feet ..	Inches ..	Feet	Inches	
						d/m
	MADE GROUND.	2'	0"	2'	0"	0.61
	LOAMEY CLAY.	10'	0"	12'	0"	4.65
	RIVER SILT.	13'	0"	25'	0"	7.62
	SAND WITHFINE GRAVEL.	25'	0"	50'	0"	15.24
	BROWN MARL	62'	0"	112'	0"	34.13
	SOFT RED SANDSTONE.	124'	0"	236'	0"	71.93

British Geological Survey

SECTION OF Borehole at Manchester Corporation & Stuart Street Electricity Works, Clayton Vale Borehole, Manchester.

Maps: One-inch 85. Six-inch 104 N.E.E. County Lancashire.

Height above O.D. 190 feet 57.9 (196 I.W.S.) Latitude Longitude

SJ89NE93

Communicated by Professor George Hickling. Date of sinking 1909

Made by Dip of Strata

Hickling's. No. 39.
Trans. Inst. Min. Eng. Vol. LIV. 1918.

see Inland Water Survey M/C 83 Mersey Catchment

Lined to 55 feet from surface. (Tubed to 180' acc to IWS) No 20
Yield 25,000 gallons per hour. For condensing & boiler purposes.

(85/104 NE 125)

B.H started at 24 ins. in diam., & was reduced to 15" & then 8½"

Through the sides falling in the depth was reduced to 550 feet. & at this depth in Nov. 1915 the quantity of water was 18,000 gals. per hour.

	Thickness. Metres			Depth from Surface. Metres.		
Boulder clay	12.19	40	–	12.19	40	–
Fine red sandstone	34.14	112	–	46.33	152	–
Very fine red sandstone, slightly marly	6.10	20	–	52.43	172	–
Fine red sandstone	1.83	6	–	54.25	178	–
Very fine red sandstone	9.14	30	–	63.40	208	–
Fine white & red sandstone	6.10	20	–	69.49	228	–
Fine red sandstone	1.52	5	–	71.02	233	–
Coarse red sandstone	4.57	15	–	75.59	248	–
Fine red sandstone	6.10	20	–	81.69	268	–
Coarse red sandstone	1.52	5	–	83.21	273	–
Fine red sandstone.	4.57	15	–	87.78	288	–
Coarse red sandstone	4.57	15	–	92.35	303	–
Fine red sandstone	11.89	39	–	104.24	342	–
Coarse red sandstone	18.90	62	–	123.14	404	–
Fine red sandstone	1.83	6	–	124.97	410	–
Coarse red sandstone	13.72	45	–	138.68	455	–
Fine red sandstone	16.76	55	–	155.45	510	–
Marly red sandstone	9.14	30	–	164.59	540	–
Coarse red sandstone	18.29	60	–	182.88	600	–
Marls	6.71	22	–	189.59	622	–
Shale						

	Parts per 100,000.
Solids in Solution @ 120°C.	40
Lime (CaO.)	11.2.
Magnesia (MgO)	6.0.
Sulphuric Acid (SO_3)	1.84.
Chlorine (Cl.)	2.48.
Carbonic Acid free (CO)	0.99.

Hickling's Synopsis: App. III:-

Drift. 40 feet.

Permian Sst. 560 feet.

Coal Measures. 22 feet.

For further notes see Hickling's App. I:- p. 29 (of reprint)

APPENDIX E

Guidance on Contaminated Land Risk Assessments

Consequence of Risk Being Realised (based on CIRIA C552, 2001)			
Classification	**Category**	**Definition**	**Examples**
Severe short-term (acute) risks only	Humans	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part 2A.	High concentrations of cyanide on the surface of an informal recreation area.
	Controlled Waters	Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.	Major spillage of contaminants from site into controlled water.
	Property	Catastrophic damage to buildings/property.	Explosion causing building collapse (can also equate to a short-term human health risk if buildings are occupied.
	Ecological System	A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.	
Medium chronic (long term) risks; "significant harm"	Humans	Chronic damage to Human Health ("significant harm" as defined in Defra 2006).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).	Leaching of contaminants from a site into a major or minor aquifer.
	Ecological System	A significant change in a particular ecosystem	Death of a species within a designated nature reserve.
Mild chronic (long term) risks; less sensitive receptors	Controlled Waters	Pollution of non-sensitive water resources.	Pollution of non-classified groundwater
	Property	Significant damage to buildings, structures and services ("significant harm" as defined in Circular on Contaminated Land, Defra, 2006). Damage to sensitive buildings/structures/services	Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability)
	Ecological System	Significant damage to crops. Damage to the environment.	
Minor	Financial project	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve.	

Consequence of Risk Being Realised (based on CIRIA C552, 2001)			
Classification	**Category**	**Definition**	**Examples**
chronic (long term) risks; mild	Humans	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).	The presence of contaminants at such concentrations that protective equipment is required during site works.
	Property	Easily repairable effects of damage to buildings, structures and services	The loss of plants in a landscaping scheme. Discolouration of concrete.

Probability of Risk Being Realised (C552 CIRIA, 2001)	
Classification	**Definition**
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Risk Classification Definitions (C552 CIRIA, 2001)	
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.

Risk Classification Definitions (C552 CIRIA, 2001)	
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Moderate / Low	
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Risk Classification Matrix (C552 CIRIA, 2001)					
		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

APPENDIX F

Exploratory Hole Logs

ABBREVIATIONS

TF = Topsoil Fill

CONC = Concrete

CMG = Cohesive Made Ground

CMG = Granular Made Ground

DW = Suspected Construction and Demolition Waste

CW = Suspected Combustion Waste

CS = Suspected Colliery Spoil

HW = Suspected Household Waste

RNG = Suspected Reworked Natural Ground

CGT = Cohesive Glacial Till

GGT = Granular Glacial Till

CF = Chester Formation

CSF = Collyhurst Sandstone Formation

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH101
Sheet 1 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387208.10 N400184.69	
Project No. : LD10385	Drilling Equipment: Comacchio 205	Level : 76.77m AoD	Final Depth: 21.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
									Driller notes oily GRAVEL with cobbles of brick and concrete. GMG	
						6.00	70.77		Driller notes brown, sandy CLAY. CGT	
	▽					7.50	69.27		Driller notes wet SAND. GGT	

1 2 3 4 5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 17.00m	17.00m 20.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH101
Sheet 2 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387208.10 N400184.69	
Project No. : LD10385	Drilling Equipment: Comacchio 205	Level : 76.77m AoD	Final Depth: 21.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
									Driller notes wet SAND. GGT	10
										11
						12.00	64.77		Driller notes brown CLAY. CGT	12
										13
										14
						15.00	61.77		Driller notes mudstone. Probably very stiff CLAY as proven in redrill at RH206. CGT	15
										16
										17
						18.00	58.77		Driller notes mudstone. Probably very stiff CLAY as proven in redrill at RH206. CGT	18
										19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 17.00m	17.00m 20.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH101
Sheet 3 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387208.10 N400184.69	
Project No. : LD10385	Drilling Equipment: Comacchio 205	Level : 76.77m AoD	Final Depth: 21.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Sample and In Situ Testing: Type	Sample and In Situ Testing: Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
						21.00	55.77		Driller notes mudstone. Probably very stiff CLAY as proven in redrill at RH206. CGT	20
									End of Borehole at 21.00m	21
										22
										23
										24
										25
										26
										27
										28
										29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 17.00m	17.00m 20.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH102
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387499.89 N400233.25	
Project No. : LD10385	Drilling Equipment: Comacchio 205	Level : 82.60m AoD	Final Depth: 19.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Driller notes gravelly soil with cobble of bricks and concrete. GMG	1 2 3 4 5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 12.00m	12.00m 13.50m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH102
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387499.89 N400233.25	
Project No. : LD10385	Drilling Equipment: Comacchio 205	Level : 82.60m AoD	Final Depth: 19.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
	JC	MP		

Depth (m)	Level (m)	Stratum Description
		Driller notes gravelly soil with cobble of bricks and concrete. GMG
12.00	70.60	Driller notes GRAVELS. GGT
13.50	69.10	Driller notes gravelly CLAY. CGT
14.50	68.10	Driller notes brown CLAY. CGT
19.50	63.10	End of Borehole at 19.50m

Install. / Backfill | Water Strikes | Depth (m) | Type / FI | Coring: TCR, SCR, RQD | Diameter Recovery (SPT) | Legend | Scale

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 12.00m	12.00m 13.50m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH106
Sheet 1 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387492.00 N400076.00	
Project No. : LD10385	Drilling Equipment: Commachio 205	Level : 79.56m AoD	Final Depth: 45.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
									Driller notes CLAY. CGT	
						7.50	72.06		Driller notes GRAVEL. GGT	
						9.00	70.56		Driller notes CLAY. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 44.50m	44.50m 45.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH106
Sheet 2 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387492.00 N400076.00	
Project No. : LD10385	Drilling Equipment: Commachio 205	Level : 79.56m AoD	Final Depth: 45.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Sample and In Situ Testing: Type	Sample and In Situ Testing: Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
									Driller notes CLAY. CGT	10 11 12 13 14 15 16 17 18 19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 44.50m	44.50m 45.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH106
Sheet 3 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387492.00 N400076.00	
Project No. : LD10385	Drilling Equipment: Commachio 205	Level : 79.56m AoD	Final Depth: 45.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results						
									Driller notes CLAY. CGT	20
		22.00 – 22.80	C			22.00	57.56		Stiff to very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse quartz, mudstone, shale, and sandstone. CGT	21
		22.80 – 24.50	C			22.80	56.76		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to medium mudstone, sandstone, quartz and black igneous rock. CGT *23.50m - 25.50m : Becomes very stiff.*	22 23
		24.50 – 25.50	C							24 25
						25.50	54.06		Driller notes CLAY. CGT	26 27 28 29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 44.50m	44.50m 45.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH106
Sheet 4 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387492.00 N400076.00	
Project No. : LD10385	Drilling Equipment: Commachio 205	Level : 79.56m AoD	Final Depth: 45.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results						
									Driller notes CLAY. CGT	
		30.50 – 32.50	C			30.50	49.06		Firm to stiff, brown, clayey SILT. CGT	30
						30.90	48.66		Brown, very clayey, medium SAND. GGT	
						31.30	48.26		Driller notes sandy CLAY. CGT	31
										32
										33
		33.50 – 35.50	C							
										34
										35
										36
										37
										38
										39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 44.50m	44.50m 45.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Open Hole Borehole Log

BOREHOLE REFERENCE
RH106
Sheet 5 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/10/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387492.00 N400076.00	
Project No. : LD10385	Drilling Equipment: Commachio 205	Level : 79.56m AoD	Final Depth: 45.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results						
		40.00 – 41.50	C						Driller notes sandy CLAY. CGT	40
		41.50 – 43.00	C							41
		43.00 – 44.50	C							42
						43.00	36.56		Medium strong to strong, subrounded to rounded COBBLES of coarse grained gritstone, greenish grey fine grained sandstone, yellowish brown medium to coarse grained sandstone, and reddish brown fine grained sandstone. GGT	43
										44
						44.50	35.06		Driller notes SANDSTONE. Recovered as damp, reddish brown, slightly gravelly, fine to coarse SAND. Possibly weak, reddish brown, fine to coarse grained SANDSTONE with occasional pebbles. CSF	45
						45.00	34.56		End of Borehole at 45.00m	
										46
										47
										48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
																		0.00m 44.50m	44.50m 45.00m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 1 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
									Driller notes MADE GROUND. GMG	
						1.20	84.90		No recovery due to open hole techniques being used. Driller notes MADE GROUND. GMG	
						3.00	83.10		No recovery due to open hole techniques being used. Driller notes CLAY. CGT	
						5.30	80.80		No recovery due to open hole techniques being used. Driller notes dense SAND. GGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 2 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Flush	Depth (m)	Level (m)	Legend	Stratum Description	Scale
						10.00	76.10		No recovery due to open hole techniques being used. Driller notes dense SAND. GGT *See Next Page for Geological Information*	10
									See Next Page for Geological Information	11
									See Next Page for Geological Information *See Next Page for Geological Information*	12
									See Next Page for Geological Information	13
									See Next Page for Geological Information	14
									See Next Page for Geological Information	15
									See Next Page for Geological Information *See Next Page for Geological Information*	16
									See Next Page for Geological Information	17
									See Next Page for Geological Information *See Next Page for Geological Information*	18
									See Next Page for Geological Information	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 3 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	
		10.00 - 11.50		0	0		109mm				No recovery. Core loss presumed due to granular materials. Driller notes SAND with occasional cobbles. GGT	10
								11.50	74.60			11
		11.50 - 13.00		86	0		109mm	11.71	74.39		Zone of core loss. Core loss presumed due to granular materials. Driller notes SAND with occasional cobbles. GGT Light brown, silty, clayey, fine SAND. GGT	12
								13.00	73.10			13
		13.00 - 14.50		0	0		109mm				No recovery. Core loss presumed due to granular materials. Driller notes SAND with occasional cobbles. GGT	14
								14.50	71.60		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes sandy CLAY. CGT	15
		14.50 - 16.00		44	13		109mm	15.34	70.76		Partial recovery. Recovered material comprises light brown, silty, clayey, fine to medium SAND. CGT	
		15.80 - 16.00	CS					15.81	70.29		Partial recovery. Recovered material comprises firm, laminated, brown CLAY with occasional thin laminations of brown, silty, fine sand. CGT	
								16.00	70.10		Very stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of brown, silty, fine sand. CGT	16
		16.00 - 17.50		81	81		109mm					17
								17.22	68.88		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes CLAY. CGT	
								17.50	68.60		Very stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of brown, silty, fine sand. CGT	
		17.50 - 19.00		100	15		109mm	17.73	68.37		Brown, silty, clayey, fine SAND. GGT	18
								19.14	66.96		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 4 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		19.00 - 20.50		99	89		109mm				Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	20
		20.50 - 22.00		29	24		109mm	20.50	65.60		Partial recovery. Core loss presumed due to softer and / or more granular materials. Driller notes sandy CLAY. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	21
		22.00 - 23.50		39	25		109mm	22.00 22.21 22.58	64.10 63.89 63.52		Partial recovery. Recovered material comprises light brown, silty, clayey, fine to medium SAND. CGT Partial recovery. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies, including sandstone and mudstone. Sand is fine to medium. CGT Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes sandy CLAY. CGT	22 23
		23.50 - 25.00		41	41		109mm	23.50	62.60		Partial recovery. Core loss presumed due to softer and / or more granular material. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies, including sandstone and mudstone. Sand is fine to medium. CGT	24
		25.00 - 26.50		100	50		109mm	25.00 25.55 25.75	61.10 60.55 60.35		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to medium mixed natural lithologies. CGT Brown, slightly gravelly, clayey SAND. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. GGT Firm to very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse mudstone and mixed natural lithologies. CGT *25.80m - 25.88m : A single sandstone cobble at 28.80m.*	25 26
		26.50 - 28.00		100	100		109mm					27 28
		28.00 - 29.50		100	100		109mm	28.50	57.60		Light brown SAND. GGT	29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 5 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Light brown SAND. GGT	
		29.50 - 31.00		83	50		109mm	29.95	56.15		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	30
								30.70	55.40		Zone of core loss. Core loss presumed to be due to softer and / or more granular materials. Driller notes very dense clay. CGT	
								30.92	55.18		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	31
		31.00 - 32.50		100	100		109mm					32
		32.50 - 34.00		100	93		109mm	32.50	53.60		Firm to stiff, laminated, brown, slightly sandy, slightly gravelly CLAY with occasional thin laminations of brown, fine sand. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	33
		34.00 - 35.50		9	9		109mm	34.00	52.10		Minimal recovery. Core loss presumed due to softer and / or more granular material. Recovered core comprises stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of silty fine sand. CGT	34
												35
		35.50 - 37.00		0	0		109mm	35.50	50.60		No recovery. Core loss presumed due to granular materials. Driller notes SAND. GGT	36
		37.00 - 38.50		65	7		109mm	37.00	49.10		Recovered material is brown, silty, fine to medium SAND with occasional cobbles. GGT	37
												38
								38.50	47.60		Partial recovery. Core loss presumed due to weaker and / or more weathered materials. Recovered core comprises extremely weak, reddish brown, fine to medium grained SANDSTONE. Discontinuities are very close to medium spaced planar, smooth with occasional sand infill. CF	39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Hole Borehole Log

BOREHOLE REFERENCE
RH201
Sheet 6 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022 - 22/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387906.44 N400350.84	
Project No. : LD10385	Drilling Equipment: Commachio GEO305	Level : 86.10m AoD	Final Depth: 41.50m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
LT & JP	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		38.50 - 40.00		49	45		109mm				Partial recovery. Core loss presumed due to weaker and / or more weathered materials. Recovered core comprises extremely weak, reddish brown, fine to medium grained SANDSTONE. Discontinuities are very close to medium spaced planar, smooth with occasional sand infill. CF	40
								40.00	46.10			
		40.00 - 41.50		99	85		109mm				Extremely weak, reddish brown, fine to medium grained SANDSTONE. Discontinuities are very close to medium spaced planar, smooth with occasional sand infill. CGT	41
								41.28	44.82			
								41.50	44.60		Recovered as reddish brown, very sandy, angular to subangular, fine to coarse GRAVEL of extremely weak sandstone. Possibly extremely weak, reddish brown, fine to medium grained sandstone. CGT	42
											End of Borehole at 41.50m	43
												44
												45
												46
												47
												48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
41.50m	146mm	5.30m 41.50m	200mm 146mm	11.50m	16.00m													0.00m 39.50m	39.50m 41.50m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl, followed by rotary open hole drilling from 5.3m-10m through dense sands.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 1 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP+MS	JC	MP	%	50.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.50	84.37		Recovered as brown to reddish brown, mottled red, brown and cream, very sandy, very clayey GRAVEL with occasional cobble sized fragments of red brick, plasterboard and metal. Gravel is subangular to rounded of fine to coarse red brick, sandstone, mudstone, timber and plastic. Rare metal wire and metal bolts. GMG	
								Driller notes soil with bricks and other made ground FILL. DW	1
					1.20	83.67		Driller notes black ash FILL with large and small red bricks. CW	
					1.50	83.37		Recovered as brown to reddish brown, mottled white, green and blue, very sandy, very clayey GRAVEL with occasional cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, mudstone, sandstone, plastic and timber. Frequent plastic bag fragments and fibre glass tape. GMG	
					2.00	82.87		Driller notes black ash FILL with large and small red bricks. CW	2
					3.00	81.87		Driller notes black sandy ash FILL with bricks CW	3
									4
					5.00	79.87		Driller notes CONCRETE obstruction. CONC	5
					6.00	78.87		Driller notes black clay / ash FILL. CW	6
					7.00	77.87		Driller notes black CLAY / ASH with concrete and bricks. CW	7
					8.00	76.87		Driller notes crushed brick and concrete with larger fragments of brick and concrete. DW	8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30						0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 2 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP+MS	JC	MP	%	50.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Driller notes crushed brick and concrete with larger fragments of brick and concrete. DW	10
					10.50	74.37		*See Next Page for Geological Information*	
								See Next Page for Geological Information	11
								See Next Page for Geological Information	
								See Next Page for Geological Information	12
								See Next Page for Geological Information	
								See Next Page for Geological Information	
								See Next Page for Geological Information	13
								See Next Page for Geological Information	
								See Next Page for Geological Information	14
								See Next Page for Geological Information	
								See Next Page for Geological Information	15
								See Next Page for Geological Information	16
								See Next Page for Geological Information	17
								See Next Page for Geological Information	18
								See Next Page for Geological Information	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30						0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 3 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP+MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	10
								11.00	73.87		Firm to stiff, initially greyish brown, becoming brown from 11.00m, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. CGT	11
		11.00 - 12.50		63	63		109mm	11.55	73.32		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes medium CLAY. CGT Recovered core comprises firm, brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	12
								12.50	72.37		Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	
		13.10 - 13.50 12.50 - 14.00	CS	47	47		109mm	12.50 12.80	72.37 72.07		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes medium CLAY. CGT Partial recovery. Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	13
								13.50	71.37		A zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes medium CLAY. CGT	
								13.85 13.95	71.02 70.92		Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	14
		14.00 - 15.50		13	0		109mm	14.00	70.87		A zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes medium CLAY. CGT Minimal recovery. Core loss presumed to be softer and / or more sandy materials. Driller notes medium clay. Recovered material comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	15
		15.50 - 17.00		63	17		109mm	15.50	69.37		Partial recovery. Core loss presumed due to softer and / or more granular materials. Driller notes medium clay. Recovered core comprises soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	16
		17.00 - 18.50		100	100		109mm	17.00	67.87		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. CGT	17 18
		18.50 - 20.00		20	15		109mm	18.50	66.37		Minimal recovery. Core loss presumed to be softer and / or more granular materials. Driller notes very soft, brown clay. Recovered core comprises firm, brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. Recovered core sticks are 0.05m to 0.15m in length. CGT	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30												0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 4 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP+MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								20.00	64.87		Minimal recovery. Core loss presumed to be softer and / or more granular materials. Driller notes very soft, brown clay. Recovered core comprises firm, brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse coal, mudstone and sandstone. Recovered core sticks are 0.05m to 0.15m in length. CGT	20
		20.00 - 21.50		90	50		109mm	20.15	64.72		A zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes very soft, brown clay. CGT	
											Firm, brown, slightly sandy, gravelly CLAY with medium spaced thin to medium beds of multicoloured, subrounded to rounded, medium to coarse gravel of black diorite, pinkish brown granite and light brown gritstone. Gravel in clay is subangular to subrounded of fine to coarse coal, mudstone and sandstone CGT	21
		21.50 - 23.00		100	95		109mm	21.60	63.27		*20.33m : Diorite cobble at 20.33m.* Very stiff, brown, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse granite, coal, sandstone and mudstone. CGT	22
											21.90m - 22.20m : Occasional cobble sized lenses of reddish brown sand between 21.90m and 22.50m. *22.65m - 23.00m : Occasional brown sand laminations between 22.65m to 23.00m.*	
		23.00 - 24.50		100	100		109mm	23.00	61.87		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse granite, diorite, coal, sandstone and mudstone. CGT	23
												24
		24.50 - 26.00		100	100		109mm				*25.10m - 25.80m : Becoming stiff between 25.10m and 25.80m.*	25
								26.00	58.87		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse granite, diorite, coal, sandstone and mudstone. CGT	26
		26.00 - 27.50		90	90		109mm					27
								27.35	57.52		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes brown CLAY. CGT	
								27.50	57.37		Zone of core loss. Core loss presumed due granular materials. Driller notes SAND. GGT	
		27.50 - 29.00		50	50		109mm	28.25	56.62		Recovered core comprises stiff to very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse granite, diorite, coal, sandstone and mudstone. CGT	28
											28.45m - 28.50m : Brown sand band between 28.45m and 28.50m.	
								29.00	55.87		Very stiff, brown, slightly sandy, slightly gravelly CLAY with rare cobble sized lenses of brown sand. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. CGT	29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30												0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 5 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP+MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		29.00 - 30.50		100	100		109mm				Very stiff, brown, slightly sandy, slightly gravelly CLAY with rare cobble sized lenses of brown sand. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. CGT	30
		30.50 - 32.00		100	100		109mm					31
		32.00 - 33.50		100	100		109mm					32
		33.50 - 35.00		100	100		109mm					33
								34.00	50.87		Very stiff, laminated, brown, slightly sandy, slightly gravelly CLAY with close to medium spaced laminations of brown sand. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. CGT	34
								35.00	49.87			35
		35.00 - 36.50		7	7		109mm	35.10	49.77		Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. Recovered core stick is 0.10m in length. CGT Minimal recovery. Core loss presumed due to granular materials. Driller notes sand. Recovered material comprises reddish brown, slightly gravelly SAND. Gravel is angular to subrounded of fine to medium sandstone and mudstone. GGT	36
								36.60	48.27		Very stiff, brown, slightly sandy, slightly gravelly CLAY with close to medium spaced laminations of brown sand. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. CGT	37
		36.50 - 38.00		83	83		109mm				Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes brown, sandy CLAY. CGT	
								37.75	47.12		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, coal and sandstone. CGT	
								37.90	46.97			
								38.00	46.87			38
								38.10	46.77		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes brown, sandy CLAY. CGT	
		38.00 - 39.50		93	93		109mm				Stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, diorite, sandstone and coal. CGT	39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30												0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 6 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP+MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								39.50	45.37		Stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, diorite, sandstone and coal. CGT	
		39.50 - 41.00		13	13		109mm	39.70	45.17		Minimal recovery. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY with rare cobbles of quartzite and sandstone. Gravel is subangular to subrounded of fine to coarse mixed lithologies. Recovered core stick is 0.20m in length. CGT	40
								41.00	43.87		Minimal recovery. Core loss presumed due to granular materials. Driller notes sand with a small amount of clay. Recovered material comprises reddish brown, slightly gravelly SAND. Gravel is angular to subrounded of fine to medium sandstone and mudstone. GGT	41
		41.00 - 42.50		47	0		109mm				Partial recovery. Core loss presumed due to more granular materials. Driller notes small amount of brown clay with washed cobbles. Recovered material comprises brown, sandy, clayey, subangular to rounded, fine to coarse GRAVEL of sandstone, mudstone and granite. GGT	42
		42.50 - 44.00		30	0		109mm	42.50	42.37		Partial recovery. Core loss presumed to be more granular materials. Driller notes small amount of brown clay with washed cobbles. Recovered material comprises multicolored, gravelly COBBLES. Gravel and cobbles are subrounded to rounded of sandstone and quartzite. Gravel is coarse. GGT	43
		44.00 - 45.50		77	10		109mm	44.00	40.87		Recovered material comprises multicolored, gravelly COBBLES. Gravel and cobbles are subrounded to rounded of sandstone and quartzite. Gravel is coarse. Driller notes washed cobbles and sand. GGT	44
								45.00	39.87		Recovered material comprises brown, mottled reddish brown and yellow, sandy, clayey GRAVEL with rare rounded cobbles of sandstone. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. Driller notes washed cobbles and sand. GGT	45
		45.50 - 47.00		40	17		109mm	45.50	39.37		Partial recovery. Core loss presumed due to granular materials. Drillers note cored boulders. Recovered material comprises red, gravelly SAND with millet seed grains and occasional subrounded cobbles of sandstone. Gravel is subangular to subrounded of fine to coarse sandstone and mixed lithologies. GGT	46
								47.00	37.87		Zone of core loss. Core loss presumed due to granular materials. Drillers note cobbles and a bit of red sand. GGT	47
		47.00 - 48.50		40	20		109mm	47.50	37.37		Partial recovery. Core loss presumed due to poorly cemented and / or weathered rock. Driller notes cobbles and a little red sand. Recovered material comprises red, gravelly SAND with millet seed grains. Gravel is subangular to subrounded of fine to coarse sandstone. Possibly extremely weak, red, poorly cemented, reddish brown sandstone. CF	48
								48.50	36.37		Recovered material comprises reddish brown, angular, fine to medium GRAVEL of extremely weak, reddish brown sandstone. Drillers notes red sandstone. Possibly extremely weak, reddish brown, sandstone. CF	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30												0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH202
Sheet 7 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/03/2022 - 01/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387609.49 N400317.41	
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 84.87m AoD	Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP+MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		48.50 - 50.00		67	47		109mm	49.20	35.67		Recovered material comprises reddish brown, angular, fine to medium GRAVEL of extremely weak, reddish brown sandstone. Drillers notes red sandstone. Possibly extremely weak, reddish brown, sandstone. CF
								50.00	34.87		Recovered core comprises extremely weak to weak, laminated, reddish brown, fine to coarse SANDSTONE. CF
											49.50m - 49.60m : Yellowish brown between 49.50m and 49.60m.
											End of Borehole at 50.00m

Scale: 50, 51, 52, 53, 54, 55, 56, 57, 58

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
11.50m 50.00m	200mm 146mm	11.50m 50.00m	200mm 146mm	5.00m 9.50m 38.00m	6.00m 10.50m 41.00m	01:00 01:30 02:30												0.00m 46.00m	46.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 1 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & LT	JC	MP	%	50.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as topsoil over brown, slightly sandy GRAVEL with frequent cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, timber and plastic. Occasional fabric fragments, twigs, roots and rootlets. GMG	1
		1.90 – 2.90	B		1.90	84.27		Recovered as dark grey, sandy / ashy, very clayey GRAVEL with occasional cobble sized fragments of red brick and timber panels. Gravel is angular to rounded of fine to coarse red brick, timber, plastic and mixed lithologies. Slight hydrocarbon odour. GMG	2
		4.00 – 5.00	B						3
					4.20	81.97		Recovered as dark greyish brown, sandy / ashy, very clayey GRAVEL with frequent cobble sized fragments of red brick, breeze block and metal. Gravel is angular to subangular of fine to coarse red brick and mixed lithologies. GMG	4
		8.00 – 9.00	B		8.00	78.17		Recovered as soft, dark greyish brown, slightly sandy, gravelly CLAY with frequent cobble sized fragments of concrete, ceramics and metal. Gravel is angular to rounded of fine to coarse, red brick, concrete and mixed lithologies. CMG	5
		9.00 – 10.00	B		8.80	77.37		Recovered as soft, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm									0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 2 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & LT	JC	MP	%	50.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					10.00	76.17		Recovered as soft, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	10
								See Next Page for Geological Information	
								See Next Page for Geological Information	11
								See Next Page for Geological Information	12
								See Next Page for Geological Information	13
								See Next Page for Geological Information	14
								See Next Page for Geological Information	15
								See Next Page for Geological Information	16
								See Next Page for Geological Information	17
								See Next Page for Geological Information	18
								See Next Page for Geological Information	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm									0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 3 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	10
		10.00 - 11.00		50	50		109mm	11.00	75.17		Partial recovery. Core loss presumed due to softer and / or more granular materials. Drillers note very soft, sandy, gravelly clay. Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	11
		11.00 - 12.50		7	7		109mm	12.50	73.67		Minimal recovery. Core loss presumed due to softer and / or more granular materials. Drillers note very soft, sandy, gravelly clay. Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of medium to coarse mixed natural lithologies. Recovered core stick is 0.10m length. CGT	12
		12.50 - 14.00		0			109mm	14.00	72.17		Zone of core loss. Core loss presumed due to more granular materials. Drillers note SAND. GGT	13
		14.00 - 15.50		0			109mm	15.50	70.67		Zone of core loss. Core loss presumed due to more granular materials. Drillers note dense blowing SAND. GGT	14
		15.50 - 17.00		50	0		109mm	17.00	69.17		Partial recovery. Core loss presumed due to granular materials. Driller notes dense, blowing sand. Recovered material comprises wet, brown SAND. GGT	15
		17.00 - 18.50		73	20		109mm	18.50	67.67		Recovered material comprises wet, brown SAND. Driller notes dense blowing sand. GGT	16
		18.50 - 20.00		0			109mm				Zone of core loss. Core loss presumed due to granular materials. Driller notes sand. Recovered material from flush arisings comprises wet, brown, slightly gravelly SAND. Gravel is subrounded of fine bituminous mudstone. GGT	17
												18
												19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm															0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 4 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Zone of core loss. Core loss presumed due to granular materials. Driller notes sand. Recovered material from flush arisings comprises wet, brown, slightly gravelly SAND. Gravel is subrounded of fine bituminous mudstone. GGT	20
		20.00 - 21.50		0			109mm					21
		21.50 - 23.00		0			109mm					22
								23.00	63.17			23
		23.00 - 24.50		10			109mm				Minimal recovery. Core loss presumed due to granular materials. Drillers note sandy clay. Recovered material comprises wet, brown, slightly gravelly, clayey SAND. Gravel is subrounded of fine bituminous mudstone. GGT	24
								24.50	61.67			
								24.85	61.32		Recovered core comprises firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Zone of core loss (0.15m) but depth range uncertain. CGT	25
		24.50 - 26.00		66	27		109mm				Recovered as soft, wet, brown, slightly gravelly, sandy CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. Zone of core loss (0.25m) but depth range uncertain. CGT	
								26.00	60.17			26
								26.25	59.92		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes stiff clay with gravels. CGT	
		26.00 - 27.50		83	80		109mm				Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, diorite, mudstone and sandstone. CGT	27
								27.40m - 27.50m : Becoming sandy between 27.40m and 27.50m.				
								27.50	58.67		Partial recovery. Core loss presumed to be softer and / or more granular materials. Driller notes clay and cobbles. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY with a single diorite cobble at 28.30m. Gravel is subangular to rounded of fine to coarse granite, diorite, mudstone and sandstone. CGT	28
		27.50 - 29.00		40	33		109mm					
								29.00	57.17		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes sandy CLAY. CGT	29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm															0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 5 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		29.00 - 30.50		57	53		109mm	29.55	56.62		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes sandy CLAY. CGT Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, diorite, mudstone and sandstone. CGT	30
		30.50 - 32.00		43	33		109mm	30.50	55.67		Partial recovery. Core loss presumed due to softer and / or more granular materials. Driller notes clay and cobbles. Recovered core comprises very stiff, becoming firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse granite, diorite, mudstone and sandstone. CGT	31
		32.00 - 33.50		37	32		109mm	32.00	54.17		Partial recovery. Core loss presumed due to softer and / or more granular materials. Driller notes clay and cobbles. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY with laminations of firm, brown, sandy clay. Gravel is subangular to rounded of fine to coarse granite, diorite, mudstone and sandstone. CGT *33.25m : A single diorite cobble at 33.25m.*	32 33
		33.50 - 35.00		100	100		109mm	33.50	52.67		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and mixed natural lithologies. Sand is fine. CGT	34
		35.00 - 36.50		31	31		109mm	35.00	51.17		Partial recovery. Core loss presumed due to softer and / or more granular materials. Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and mixed natural lithologies. Sand is fine. CGT	35 36
		36.50 - 38.00		95	95		109mm	36.50	49.67		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	37
								37.22	48.95		Stiff, thinly laminated, brown, slightly sandy CLAY with occasional laminations of brown, silty, fine sand. Sand is fine. CGT	
								37.82	48.35		Firm to stiff, brown, slightly sandy CLAY. Sand is fine. CGT	
								37.92	48.25		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Drillers notes CLAY. CGT	38
		38.00 - 39.50		36	36		109mm	38.00	48.17		Partial recovery. Core loss presumed due to softer and / or more granular materials. Drillers note clay and sand. Recovered core comprises firm to stiff, brown, slightly sandy CLAY. Sand is fine. CGT	39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm															0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 6 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								39.50	46.67		Partial recovery. Core loss presumed due to softer and / or more granular materials. Drillers note clay and sand. Recovered core comprises firm to stiff, brown, slightly sandy CLAY. Sand is fine. CGT	
		39.50 - 41.00		30	0		109mm	40.75	45.42		Partial recovery. Core loss presumed due to more granular materials. Drillers note clay with sand. Recovered material comprises light brown, gravelly, medium to coarse SAND. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Recovered core is 0.14m in length and comprises firm, brown, slightly sandy CLAY. GGT	40
		41.00 - 42.50		98	98		109mm	41.00	45.17		Partial recovery. Core loss presumed due to be softer and / or more granular materials. Drillers note clay with sand. Recovered core is 0.14m in length and comprises firm, brown, slightly sandy CLAY. CGT	41
											Very stiff, laminated, brown CLAY with occasional thin laminations of brown, silty fine sand and rare orangish brown, fine to medium sand. CGT	42
		42.50 - 44.00		100	100		109mm					43
								43.67	42.50		Stiff, brown, slightly sandy CLAY. Sand is fine. CGT	
		44.00 - 45.50		55	55		109mm	44.00	42.17		Recovered core comprises stiff, brown, slightly sandy CLAY. Sand is fine. CGT	44
								44.83	41.34		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes CLAY. CGT	45
		45.50 - 46.50		100	100		109mm	45.50	40.67		Firm, brown, sandy CLAY. Sand is fine. CGT	46
		46.50 - 47.50		100	100		109mm	46.88	39.29		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone, coal and mixed natural lithologies. Sand is fine to medium. CGT	47
		47.50 - 49.00		24	7	7	109mm	47.50	38.67		Minimal recovery. Core loss presumed due to weaker and / more weathered material. Driller notes red sandstone. Recovered core is 0.10m in length and comprises extremely weak, reddish brown, medium to coarse grained SANDSTONE. Remaining material recovered as reddish brown, medium to coarse sand. CF	48
								49.00	37.17			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm															0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH203
Sheet 7 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387696.77 N400389.59
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 86.17m AoD / Final Depth: 50.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		49.00 - 50.00		100	64	21	109mm	49.15	37.02		Extremely weak, reddish brown, medium to coarse grained SANDSTONE. CF
								49.35	36.82		Recovered as reddish brown, sandy, angular to subangular, fine to coarse GRAVEL of extremely weak, reddish brown, fine grained sandstone. CF
								49.85	36.32		Extremely weak to weak, reddish brown, fine to medium grained SANDSTONE. Discontinuities are subhorizontal (15°), closely spaced, planar smooth, tight to open. CF
								50.00	36.17		Recovered as reddish brown, fine SAND. CF
											End of Borehole at 50.00m

Scale: 50, 51, 52, 53, 54, 55, 56, 57, 58

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.00m 50.00m	200mm 146mm	7.50m 50.00m	200mm 146mm															0.00m 47.00m	47.00m 50.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 1 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	%	46.00m

Install. / Backfill	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
	0.00 – 1.00	B					Recovered as black, very gravelly, slightly clayey SAND / ASH with occasional cobble sized fragments of red brick and concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, slate and suspected clinker. Hydrocarbon odour. CW	1
	2.00 – 2.80	B		2.00	77.18		Recovered as wet, dark greyish brown, very sandy, clayey GRAVEL with occasional cobble sized inclusions of soft, wet, dark greyish brown, slightly sandy, gravelly clay and occasional cobble sized fragments of red brick and concrete. Gravel is angular of fine to coarse red brick and concrete GMG	2
	2.80 – 3.80	B		2.80	76.38		Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded of fine to coarse mixed natural lithologies. CGT	3
								4
	5.00 – 6.00	B		5.00	74.18		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse mixed natural lithologies. CGT	5
								6
								7
				7.30	71.88		*See Next Page for Geological Information*	8
							See Next Page for Geological Information	9
							See Next Page for Geological Information	
							See Next Page for Geological Information	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30						0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 2 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09	
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD	Final Depth: 46.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	1
											See Previous Page for Geological Information	2
											See Previous Page for Geological Information	3
											See Previous Page for Geological Information	4
											See Previous Page for Geological Information	5
											See Previous Page for Geological Information	6
											See Previous Page for Geological Information	7
		7.30 - 8.45		100	100		109mm				Firm, brown to reddish brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY with occasional cobbles of sandstone and mudstone. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and mixed natural litholoiges. CGT	8
											Recovered as cobble sized fragment of mudstone. Possible cored boulder of mudstone. CGT	
		8.45 - 9.85		90	85		109mm				Firm, brown to reddish brown, mottled black, grey and orange, slightly sandy, gravelly CLAY with rare cobbles of mudstone. Gravel is angular to subrounded of fine to coarse of mixed natural lithologies. CGT	9
								9.25	69.93			
								9.35	69.83		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes firm, brown, slightly sandy CLAY. CGT	
								9.75	69.43			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30												0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 3 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09	
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD	Final Depth: 46.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								9.85	69.33		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes firm, brown, slightly sandy CLAY. CGT	
								10.05	69.13			10
								10.20	68.98		Firm, brown to reddish brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and mixed natural lithologies. CGT	
		9.85 - 11.45		90	65		109mm					
								11.30	67.88		Firm, brown to reddish brown, mottled grey and green, slightly sandy, gravelly CLAY with occasional subangular to subrounded cobbles of mudstone and sandstone. Gravel is angular to subrounded of fine to coarse sandstone and mudstone. CGT	11
								11.45	67.73		Firm, brown to reddish brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and mixed natural lithologies. CGT	
		11.45 - 12.85		95	86		109mm					12
								12.75	66.43		Zone of core loss. Core loss presumed to be softer and / or more granular materials. Driller notes firm, brown, slightly sandy CLAY CGT	
								12.91	66.27			
								13.10	66.08		Firm, brown to reddish brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY with rare subangular to subrounded cobbles of mudstone and sandstone. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and mixed natural lithologies. CGT	13
		12.85 - 14.40		96	55		109mm	13.50	65.68		Zone of core loss. Core loss due to core being dropped. Driller notes firm to stiff, brown, slightly sandy, slightly gravelly CLAY CGT	
											Firm, reddish brown to brown, slightly sandy CLAY. CGT	14
											Soft to firm, brown to light reddish brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	
		14.40 - 15.95		52	40		109mm	15.20	63.98		Firm, brown to reddish brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of reddish brown, fine to medium sand and occasional cobbles of mudstone and sandstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	15
								16.00	63.18		Zone of core loss. Core loss presumed due to loss of flush due to bowser running out of water. Possibly reddish brown SAND GGT	16
		15.95 - 17.45		96	90		109mm				Firm, brown to reddish brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of reddish brown, fine to medium sand and occasional cobbles of mudstone and sandstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies CGT	
								17.00	62.18		Firm, brown, dark grey and reddish brown mottled, slightly sandy, gravelly CLAY with occasional subangular to subrounded cobbles of mudstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	17
								17.45	61.73		Firm, brown to reddish brown, slightly sandy, gravelly CLAY with rare subangular to subrounded cobbles of mudstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	
		17.45 - 19.05		100	100		109mm					18
								19.05	60.13		Firm to stiff, reddish brown, mottled orange, grey, black and green, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of reddish brown, fine to medium sand and rare subangular to rounded cobbles of mudstone, sandstone and quartzite. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, quartzite and dolerite CGT	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30												0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 4 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD / Final Depth: 46.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		19.05 - 20.45		100	95		109mm				Firm to stiff, reddish brown, mottled orange, grey, black and green, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of reddish brown, fine to medium sand and rare subangular to rounded cobbles of mudstone, sandstone and quartzite. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, quartzite and dolerite CGT	20
		20.45 - 21.95		100	95		109mm					21
		21.95 - 23.40		100	100		109mm	21.95	57.23		Firm to stiff, reddish brown to dark brown, slightly sandy, slightly gravelly CLAY with rare cobble sized pockets of dark grey to black gravel and rare rounded cobble of sandstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	22
		23.40 - 25.00		100	100		109mm	23.45	55.73		Soft to firm, brown to reddish brown, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies CGT	23
								24.55	54.63		Firm to stiff, reddish brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	24
		25.00 - 26.40		100	80		109mm	25.00	54.18		Firm to stiff, brown to reddish brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of orangish brown fine to medium sand CGT *25.60m - 25.90m : Becoming gravelly between 25.60 and 25.90m*	25
								26.30	52.88		Soft to firm, dark brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies CGT	26
		26.40 - 27.95		100	75		109mm	26.50	52.68		Firm, reddish brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY with rare rounded cobbles of mudstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	27
		27.95 - 29.50		100	98		109mm	27.95	51.23		Firm, laminated, reddish brown to brown, mottled grey, black and orange, slightly sandy, slightly gravelly CLAY with occasional thin laminations of light yellow to orangish brown, fine sand. Occasional cobble sized pockets of light yellow to orangish brown, fine to medium sand. Gravel is angular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies CGT	28
								29.30	49.88		Firm, laminated, brown, slightly sandy, slightly gravelly CLAY with occasional thin laminations of yellow to orange, fine to medium sand. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30												0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 5 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD / Final Depth: 46.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								29.50	49.68		Firm, laminated, brown, slightly sandy, slightly gravelly CLAY with occasional thin laminations of yellow to orange, fine to medium sand. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	
		29.50 - 30.50		45	20		109mm	30.00	49.18		Partial recovery. Recovered core comprises soft to firm, brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of firm to coarse sandstone and mudstone CGT	30
								30.50	48.68		Zone of core loss. Core loss presumed due to granular materials. Driller notes brown, silty SAND GGT	
		30.50 - 32.45		12	12		109mm				Minimal recovery. Core loss presumed due to granular materials. Driller notes fine silt and sand with some gravel. Recovered material comprises reddish brown to orangish brown, slightly gravelly, slightly clayey, possibly silty SAND with occasional cobbles of sandstone and mudstone. Gravel is subangular to rounded of fine to coarse sandstone and mudstone. GGT	31
											31.05m - 33.90m : Driller notes majority of sand and silt washed away by flush. Only small recovery plus gravel. High torque on drill string also noted.	32
								32.45	46.73			
		32.45 - 33.75		0	0		109mm				Minimal recovery. Core loss presumed due to granular materials. Driller notes fine silt and sand with some gravel. Recovered material comprises multicolored, subrounded to rounded, medium to coarse GRAVEL of mixed lithologies. GGT	33
								33.75	45.43			
								33.90	45.28		Zone of core loss. Core loss presumed due to granular materials. Driller notes fine silt and sand with some gravel. GGT	34
		33.75 - 35.45		80	80		109mm				Firm, reddish brown to dark brown, slightly sandy, slightly gravelly CLAY with occasional irregularly distributed cobble sized pockets of yellow to orange fine to medium sand and rare rounded cobbles of sandstone. Gravel is subangular to subrounded of fine to coarse sandstone. CGT	35
								35.45	43.73			
								35.45	43.73		Soft to firm, laminated, reddish brown, slightly sandy, slightly gravelly CLAY with irregular, fine laminations of reddish brown, fine to medium sand. Gravel is subangular to subrounded of fine to medium sandstone. CGT	
		35.45 - 37.00		100	85		109mm					36
								37.00	42.18		Recovered as soft to firm, laminated, reddish brown, slightly sandy CLAY with irregular, fine laminations of reddish brown, fine to medium sand. CGT	37
		37.00 - 38.45		60	45		109mm	37.60	41.58		Zone of core loss. Core loss presumed due to granular materials. Driller notes blowing sand. Recovered material comprises brown, clayey SAND. GGT	38
								38.45	40.73		Partial recovery. Core loss presumed due to granular materials and pushing down possible cobble. Recovered material comprises light brown, gravelly SAND with rare rounded cobbles of quartzite and sandstone. Gravel is subrounded to rounded of fine to coarse sandstone, mudstone and quartzite GGT	39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30												0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH204
Sheet 6 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 08/04/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.50 N400263.09	
Project No. : LD10385	Drilling Equipment: Dando 2500+Commachio GEO305	Level : 79.18m AoD	Final Depth: 46.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		38.45 - 40.00		48	35		109mm	40.00	39.18		Partial recovery. Core loss presumed due to granular materials and pushing down possible cobble. Recovered material comprises light brown, gravelly SAND with rare rounded cobbles of quartzite and sandstone. Gravel is subrounded to rounded of fine to coarse sandstone, mudstone and quartzite GGT	40
		40.00 - 41.45		21	0		109mm	41.50	37.68		Firm, reddish brown to dark brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of orange to yellow, fine to medium sand and rare rounded cobbles of sandstone. Gravel is angular to subrounded of fine to coarse sandstone CGT	41
		41.45 - 42.95		3	0		109mm	42.95	36.23		Minimal recovery. Core loss presumed due to granular materials and intermittent flush with sand being washed away by flush. Drillers note dense, brown, sandy gravel with cobbles. Recovered material comprises multicolored, possibly sandy, subangular to rounded, fine to coarse GRAVEL with frequent rounded cobbles. Gravel and cobbles are of mudstone, sandstone, andesite and quartzite. GGT	42
		42.95 - 44.40		41	25		109mm	44.10	35.08		Minimal recovery. Core loss presumed due to granular materials and intermittent flush with sand being washed away by flush. Drillers note dense, brown, sandy gravel with cobbles. Recovered material comprises multicolored, possibly sandy, subangular to rounded, fine to coarse GRAVEL of mudstone, sandstone, andesite and quartzite. GGT	43
		44.40 - 46.00		100	100	0	109mm	46.00	33.18		Partial recovery. Core loss presumed due to granular materials and intermittent flush with sand being washed away by flush. Drillers note dense, brown, sandy gravel with cobbles. Recovered material comprises multicolored, possibly sandy, subangular to rounded, fine to coarse GRAVEL with frequent rounded cobbles. Gravel and cobbles are of mudstone, sandstone, basalt, granite, gritstone and quartzite. GGT	44
											Recovered as reddish brown, initially silty, fine to coarse SAND with millet seed grains and subhorizontal (20°) laminations. Driller notes weathered, red, silty sandstone. Possibly extremely weak, laminated, reddish brown, fine to coarse grained SANDSTONE with millet seed grains. CF	45
											End of Borehole at 46.00m	46
												47
												48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
7.30m 46.00m	200mm 146mm	7.30m 46.00m	200mm 146mm	37.60m 38.45m 38.50m	38.45m 38.50m 40.00m	00:15 00:45 01:30												0.00m 45.00m	45.00m 46.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 1 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & LT	JC	MP	68%	50.30m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as dark brown, very sandy GRAVEL with rare cobbles sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, tiles, coal and mixed natural lithologies. Occasional roots and rootlets. GMG	
	▽	1.00 – 2.00	B		1.00	80.36		Recovered as wet, dark greyish brown, sandy, angular to subangular, fine to coarse GRAVEL of plastic, slate, fabric, plastic buttons and porcelain. Occasional roots, rootlets and metal wire fragments. GMG	1
		2.00 – 3.00	B		2.00	79.36		Recovered as soft, wet, dark greyish brown, mottled red and orange in places, slightly sandy, slightly gravelly CLAY with rare cobbles sized fragments of yellow sandstone. Gravel is angular to subangular of fine to coarse red brick, concrete, sandstone, timber, ceramic and suspected slag. Occasional metal wire. CMG	2
		3.00 – 4.00 3.00	B SPT(S)	N=49 (5,5/7,18,14,10)	3.00	78.36		Recovered as wet, greyish brown, sandy GRAVEL with occasional cobble sized fragments of red brick. Gravel is angular to rounded of fine to coarse red brick, glass, coal, plastic, slate and timber. Occasional nails. GMG	3
		4.00 – 5.00 4.50	B SPT(S)	N=36 (13,11/17,7,7,5)					4
		5.00 – 6.00	B		5.00	76.36		Recovered as dark grey, sandy GRAVEL with occasional cobble sized fragments of red brick and suspected slag. Gravel is angular to rounded of fine to coarse concrete, suspected slag, plastic, tiles and ceramic. Occasional metals nails, metal rods, metal screws and bundles of threads of fibre. GMG	5
		6.00 – 7.00 6.00	B SPT(S)	N=24 (1,0/1,8,7,8)	6.00	75.36		Recovered as wet dark grey, sandy GRAVEL with occasional cobble sized fragments of red brick and suspected slag. Gravel is angular to rounded of fine to coarse red brick, concrete, slate, metal, plastic and timber. Rare rootlets, coils of metal wire, nails and plastic bag fragments. GMG	6
		7.00 – 8.00 7.50	B SPT(S)	50 (25 for 30mm/50 for 30mm)	7.00	74.36		Recovered as wet, dark greyish brown, sandy GRAVEL with occasional cobble sized fragments of red brick and timber. Gravel is angular to rounded of fine to coarse of red brick, concrete, timber, metal, slate, flint and mixed lithologies. Occasional metal wire, metal coils and threads of fabric. GMG	7
		8.00 – 9.00	B						8
		9.00 – 10.00 9.00	B SPT(S)	N=2 (2,0/0,0,1,1)	9.00	72.36		Recovered as damp, greyish brown, sandy, angular to rounded, fine to coarse GRAVEL of red brick, slate, sandstone, plastic and mixed lithologies. GMG	9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm									0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 2 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & LT	JC	MP	68%	50.30m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.00 – 11.00	B		10.00	71.36		Recovered as damp, greyish brown, sandy, angular to rounded, fine to coarse GRAVEL of red brick, slate, sandstone, plastic and mixed lithologies. GMG	10
		10.50	SPT(S)	N=4 (8,2/0,1,1,2)	10.75	70.61		Recovered as damp, greyish brown, sandy GRAVEL with occasional cobble sized fragments of red brick. Gravel is angular to rounded of fine to coarse red brick, coal, slate and mixed natural lithologies. GMG	
		11.00 – 12.00	B					Soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	11
		12.00	SPT(S)	N=21 (2,3/4,5,6,6)	12.20	69.16		*See Next Page for Geological Information*	12
								See Next Page for Geological Information	13
								See Next Page for Geological Information	14
								See Next Page for Geological Information	15
								See Next Page for Geological Information	
								See Next Page for Geological Information	16
								See Next Page for Geological Information	17
								See Next Page for Geological Information	18
								See Next Page for Geological Information	
								See Next Page for Geological Information	
								See Next Page for Geological Information	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm									0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 3 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD / Final Depth: 50.30m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	10
											See Previous Page for Geological Information	
											See Previous Page for Geological Information	11
												12
		12.80 - 12.80	CS	100	100		109mm				Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	
		12.80 - 14.30		100	100		109mm					13
												14
											14.52m : Single subangular sandstone cobble at 14.52m.	
		14.30 - 15.80		93	93		109mm					15
								15.69	65.67		Zone of core loss. Core loss presumed due to core being dropped or scrubbed. Driller notes firm, gravelly, silty CLAY. CGT	
								15.80	65.56			16
		15.80 - 17.30		100	100		109mm				Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	
											Zone of core loss. Core loss presumed due to softer and / more granular materials. Driller notes soft to firm, gravelly, silty CLAY with sand lenses. CGT	17
								17.30	64.06		Recovered core comprises stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	
		17.30 - 18.80		61	47		109mm	17.89	63.47		Recovered material comprises brown, silty, clayey, fine to medium SAND. GGT	18
								18.33	63.03		Recovered core comprises stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	
								18.54	62.82			
								18.80	62.56		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	19
		18.80 - 20.30		97	97		109mm					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm															0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 4 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD / Final Depth: 50.30m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	20
								20.25	61.11		Zone of core loss. Core loss presumed due to core being dropped or scrubbed. Driller notes soft to firm, gravelly, silty CLAY with sand lenses. CGT	
		20.30 - 21.80		100	100		109mm	20.30	61.06		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. Sand is fine to medium. CGT	21
		21.80 - 23.30		100	100		109mm					22
		23.30 - 24.80		100	100		109mm					23
		24.80 - 26.30		100	100		109mm					24
		26.30 - 27.80		100	100		109mm					25
		27.80 - 29.30		100	100		109mm					26
												27
												28
								29.02	52.34		Very stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of brown, silty, fine sand. CGT	29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm															0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 5 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD / Final Depth: 50.30m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		29.30 - 30.80		81	81		109mm				Very stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of brown, silty, fine sand. CGT	30
								30.52	50.84			
								30.80	50.56		Zone of core loss. Core loss presumed due to softer and / more granular materials. Driller notes soft to firm, gravelly, silty CLAY with sand lenses. CGT	
		30.80 - 32.30		93	93		109mm				Very stiff, laminated, brown, slightly sandy CLAY with occasional thin laminations of brown, silty, fine sand. CGT	31
								31.93	49.43			
								32.20	49.16		Very stiff, brown, slightly sandy CLAY. Sand is fine. CGT	32
								32.30	49.06		Zone of core loss. Core loss presumed due to softer and / more granular materials. Driller notes soft to firm, gravelly, silty CLAY with sand lenses. CGT	
		32.30 - 33.80		84	82		109mm				Very stiff, brown, slightly sandy CLAY. Sand is fine. CGT	33
								33.16	48.20		Stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. CGT	
								33.56	47.80		Zone of core loss. Core loss presumed due to softer and / more granular materials. Driller notes soft to firm, gravelly, silty CLAY with sand lenses. CGT	
								33.80	47.56		Stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. CGT	34
		33.80 - 35.30		100	100		109mm					35
		35.30 - 36.80		99	99		109mm					36
								36.80	44.56		Zone of core loss. Core loss presumed due to softer and / more granular materials. Driller notes firm, gravelly CLAY with sand lenses and cobbles. CGT	
								36.98	44.38		Stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. CGT	37
		36.80 - 38.30		88	69		109mm					
								38.00	43.36		Dark grey, very sandy, clayey subangular to subrounded, fine to coarse GRAVEL of mudstone, sandstone and mixed natural lithologies. GGT	38
								38.30	43.06		Zone of core loss. Core loss presumed due to granular materials. Probably as above and below. GGT	
		38.30 - 39.80		75	0		109mm				Recovered material comprises dark grey, very sandy, clayey subangular to subrounded, fine to coarse GRAVEL of mudstone, sandstone and mixed natural lithologies. GGT	39
								38.68	42.68			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm															0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 6 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD / Final Depth: 50.30m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								39.80	41.56		Recovered material comprises dark grey, very sandy, clayey subangular to subrounded, fine to coarse GRAVEL of mudstone, sandstone and mixed natural lithologies. GGT	
		39.80 - 41.30		47	0		109mm				Partial recovery. Core loss presumed due to granular materials. Recovered material comprises dark grey, very sandy, clayey subangular to subrounded, fine to coarse GRAVEL of mudstone, sandstone and mixed natural lithologies. GGT	40
		41.30 - 42.80		47	16		109mm					41
		42.80 - 44.30		100	100		109mm	42.80	38.56			42
		44.30 - 45.80		100	100		109mm				Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone, coal and mixed natural lithologies. CGT	43
												44
												45
		45.80 - 47.30		60	60		109mm	45.80	35.56		Recovered core comprises very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone, mudstone, coal and mixed natural lithologies. CGT	
								46.80	34.56		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes firm, gravelly CLAY with sand lenses and cobbles. CGT	46
								47.20	34.16		Recovered material comprises light grey, rounded, coarse GRAVEL and COBBLES of sandstone and quartzite. GGT	
								47.30	34.06		Minimal recovery. Core loss presumed due to more granular materials. Drillers notes sand with cobbles. Recovered material comprises reddish brown, possibly sandy, subangular to subrounded, coarse GRAVEL and COBBLES of sandstone, mudstone, diorite and mixed natural lithologies. GGT	47
		47.30 - 48.80		66	47	30	109mm				Recovered as damp, reddish brown, slightly gravelly SAND. Gravel is subangular to rounded of fine sandstone and rare mudstone. Drillers note weathered sandstone. Possibly extremely weak, reddish brown, fine to coarse grained sandstone. CF	
								48.10	33.26		Extremely weak, laminated, reddish brown, fine to coarse grained SANDSTONE with millet seed grains. CF	48
								48.60	32.76		Weak, thinly laminated, reddish brown, fine to coarse grained SANSDTONE with millet seed grains. CF	
								48.80	32.56			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm															0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH205
Sheet 7 of 7

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 30/03/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387647.28 N400164.42
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 81.36m AoD / Final Depth: 50.30m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & LT	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		48.80 - 50.30		93	87	13	109mm				Weak, thinly laminated, reddish brown, fine to coarse grained SANDSTONE with millet seed grains. CF *49.50m - 49.60m : Light greyish white in colour between 49.50 and 49.60m.*	50
								50.30	31.06		End of Borehole at 50.30m	51
												52
												53
												54
												55
												56
												57
												58

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
12.45m 50.30m	200mm 146mm	12.45m 50.30m	200mm 146mm															0.00m 48.10m	48.10m 50.30m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 1 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	%	48.60m

Install. / Backfill	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
				0.25	76.67		Driller notes TOPSOIL. TF	
							Driller notes black ash, bricks, and bits of clay. CW	1
				1.20	75.72		Drillers note ash and brick fill. CW	
								2
								3
				4.00	72.92		Driller notes firm brown / grey CLAY. CGT	4
				5.00	71.92		*See Next Page for Geological Information*	5
							See Next Page for Geological Information	
							See Next Page for Geological Information	
							See Next Page for Geological Information	6
							See Next Page for Geological Information	
							See Next Page for Geological Information	7
								8
							See Next Page for Geological Information	
							See Next Page for Geological Information	9
							See Next Page for Geological Information	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm									0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 2 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD / Final Depth: 48.60m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											See Previous Page for Geological Information
											See Previous Page for Geological Information
											See Previous Page for Geological Information
											See Previous Page for Geological Information
								5.13	71.79		Stiff, light brown, mottled yellowish orange, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and quartzite. CGT
								5.25	71.67		
		5.00 - 6.50		85	63		109mm	5.52	71.40		Stiff, dark brown to brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse sandstone, mudstone and quartz. CGT
		6.00 - 6.45	CS								Firm, brown to reddish brown, mottled orange, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse of mudstone. CGT
								6.25	70.67		
								6.50	70.42		Stiff, dark brown to brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and quartzite. CGT
		6.50 - 8.50		27	13		109mm				Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes very soft to stiff CLAY. CGT
											Partial recovery. Core loss due to core being dropped down borehole and then scrubbed. Recovered core comprises firm to stiff, light brown to brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT
								8.50	68.42		Zone of core loss. Core loss due to core being dropped down borehole and then scrubbed. Driller notes dense CLAY. CGT
								8.75	68.17		Stiff, brown to reddish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT
		8.50 - 10.00		83	66		109mm				
								9.58	67.34		Stiff, brown to dark reddish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT

Scale: 1, 2, 3, 4, 5, 6, 7, 8, 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm															0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 3 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21	
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD	Final Depth: 48.60m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								10.00	66.92		Stiff, brown to dark reddish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	10
		10.00 - 11.50		85	63		109mm	10.20	66.72		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes dense CLAY. CGT	
											Firm, brown to dark brown, slightly gravelly, sandy CLAY with occasional coarse gravel sized inclusions of fine to medium sand. Gravel is angular to subrounded of fine to coarse mudstone. CGT	11
								11.40	65.52		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes dense CLAY. CGT	
		11.50 - 13.00		90	83		109mm	11.50	65.42			
								11.65	65.27			
								11.70	65.22		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes dense CLAY. CGT	12
											Soft to firm, brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	
								12.60	64.32		Firm to stiff, brown to dark brown, mottled orange to reddish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	
		13.00 - 14.50		66	50		109mm	13.00	63.92			13
								13.50	63.42		Firm to stiff, brown to dark brown, mottled greyish white, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	
											Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes dense CLAY. CGT	14
								14.50	62.42		Recovered core comprises soft to firm, brown to dark brown, mottled cream, reddish brown and orange, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse quartzite, sandstone and mudstone. CGT	
		14.50 - 16.00		95	80		109mm	14.58	62.34			
								14.70	62.22		Zone of core loss. Core loss presumed due to softer and / or more granular materials. Driller notes dense CLAY. CGT	15
											Soft, wet, brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone. CGT	
								16.00	60.92		Firm to stiff, brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and quartzite. CGT	16
		16.00 - 17.50		35	23		109mm				Partial recovery. Core loss presumed due to softer and / or more granular material. Recovered core comprises firm, brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone and quartzite. CGT	17
								17.50	59.42		Firm to stiff, brown, mottled cream and grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of medium to coarse mudstone, sandstone and quartzite. CGT	18
		17.50 - 19.00		100	95		109mm				*18.60m : Cobble of sandstone at 18.60m.*	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm															0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 4 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD / Final Depth: 48.60m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		19.00 - 20.50		100	95		109mm				Firm to stiff, brown, mottled cream and grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of medium to coarse mudstone, sandstone and quartzite. CGT	20
		20.50 - 22.00		100	100		109mm	20.70	56.22		Stiff, brown to reddish brown, mottled red to orange, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	21
								21.25	55.67		Reddish brown, medium to coarse SAND. GGT	
								21.35	55.57		Stiff, brown to reddish brown, mottled red to orange, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	
								21.70	55.22		Stiff, brown to reddish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	22
		22.00 - 23.50		80	66		109mm					23
		23.50 - 25.00		98	98		109mm	23.50	53.42		Firm to stiff, brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse mudstone, sandstone and quartzite. CGT	24
								24.50	52.42		Zone of core loss. Core loss presumed due to granular materials. Reddish brown SAND noted on outer edge of core liner. GGT	
								24.55	52.37			
								25.00	51.92		Firm to stiff, brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse mudstone, sandstone and quartzite. CGT	25
		25.00 - 26.50		100	66		109mm				Firm to stiff, brown to dark brown, slightly sandy, slightly gravelly CLAY with rare cobbles of mudstone. Gravel is angular to subangular of fine to coarse mudstone. CGT	
											Soft to firm, brown to dark brown, mottled orangish brown, slightly gravelly, sandy CLAY. Gravel is angular to subangular of fine to coarse mudstone. CGT	26
								26.70	50.22		Firm to stiff, brown to dark brown, slightly sandy, slightly gravelly CLAY with rare cobbles of mudstone. Gravel is angular to subangular of fine to coarse mudstone. CGT	
								26.90	50.02		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse mudstone and sandstone. CGT	27
		26.50 - 28.00		98	80		109mm				Soft to firm, brown, slightly gravelly, sandy CLAY. Gravel is angular to subangular of fine sandstone. CGT	
								28.00	48.92		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse mudstone and sandstone. CGT	28
								28.25	48.67			
								28.30	48.62		Firm to stiff, laminated, brown, slightly sandy, slightly gravelly CLAY with horizontal fractures infilled with sand. Gravel is angular to subangular of fine to coarse mudstone and sandstone. CGT	
		28.00 - 29.50		83	66		109mm					29
								29.10	47.82		Zone of core loss. Core loss presumed due to granular materials. Possibly SAND. GGT	
								29.25	47.67			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm															0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 5 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD / Final Depth: 48.60m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Zone of core loss. Core loss presumed due to granular materials. Possibly SAND. GGT	
								29.95	46.97			
		29.50 - 31.00		53	43		109mm				Recovered core comprises firm to stiff, laminated, brown, slightly sandy CLAY with frequent thin laminations of brown fine to medium sand. CGT	30
								30.35	46.57			
								30.55	46.37		Recovered core comprises soft to firm, wet, brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized pockets of brown, fine to medium sand. Gravel is angular to subrounded of fine to medium mixed natural lithologies. CGT	
								31.00	45.92			31
		31.00 - 32.50		40	0		109mm				Zone of no recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Recovered material from flush returns comprises reddish brown, slightly gravelly SAND. Gravel is subangular to subrounded of fine to coarse mixed lithologies. GGT	
											Partial recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Recovered material from flush returns comprises light brown, slightly gravelly SAND. Gravel is subangular to subrounded of fine to coarse mixed lithologies. GGT	32
								32.50	44.42			
		32.50 - 34.00		0			109mm				No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Recovered material from flush returns comprises reddish brown, slightly gravelly SAND. Gravel is subrounded to rounded of fine to coarse mixed lithologies. GGT	33
								34.00	42.92			34
		34.00 - 35.50		0			109mm				No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Drillers note SAND to soft clay. GGT	35
								35.50	41.42			
		35.50 - 37.00		0			109mm				No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Recovered material from flush returns comprises reddish brown, slightly gravelly SAND with occasional cobble sized inclusions of soft to firm, laminated, sandy clay. Gravel is subrounded to rounded of fine to coarse mixed lithologies. GGT	36
								37.00	39.92			37
											Recovered as soft to firm, brown, slightly sandy CLAY. Sand is fine to medium. CGT	
								37.50	39.42			
		37.00 - 38.50		66	43		109mm				Recovered as firm to stiff, interlaminated, brown CLAY and brown, fine to medium SAND. CGT	
								37.80	39.12		Zone of core loss. Core loss due to casing being pushed down to combat sub-artesian conditions. Drillers note SAND to soft clay. GGT	38
								38.50	38.42			
											No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Drillers note light brown SAND. GGT	39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm															0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
RH206
Sheet 6 of 6

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/03/2022 - 23/03/2022	
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387215.79 N400186.21	
Project No. : LD10385	Drilling Equipment: Commachio GEO305 +Dando 2500	Level : 76.92m AoD	Final Depth: 48.60m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
JP & MS	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		38.50 - 40.00		0			109mm				No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Drillers note light brown SAND. GGT	
		40.00 - 41.50		0			109mm					40
		41.50 - 43.00		0			109mm	42.00	34.92			41
		43.00 - 44.50		0			109mm				No recovery. Core loss due to casing being pushed down to combat sub-artesian conditions. Drillers note dark brown SAND. GGT	42
		44.50 - 46.00		0			109mm	45.00	31.92			43
		46.00 - 47.00		0			109mm				No recovery. Core loss presumed due to weaker and / more weathered materials. Recovered material from flush comprises reddish brown, fine to medium SAND with black, red, white and green grains and rare angular, fine, black gravel. Drillers note significant increase in resistance during drilling. Possibly extremely weak, poorly cemented, reddish brown, fine to medium grained sandstone. CSF	44
		47.00 - 48.00		0			109mm					45
		48.00 - 48.60		0			109mm					46
								48.60	28.32		End of Borehole at 48.60m	47
												48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
8.50m 48.60m	200mm 146mm	8.50m 48.60m	200mm 146mm															0.00m 45.00m	45.00m 48.00m	PLAIN SLOTTED	

General Remarks

Inspection pit hand dug to 1.20m bgl.
Coring using 146mm wireline system (Geobore S) using air / mist flush.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Target depth achieved and depth to bedrock proven.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP101/RH109
Sheet 1 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 29/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387806.00 N400346.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.78m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	43.00m

Install. / Backfill	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
	0.00 – 1.00	B					Recovered as very loose, dark grey, slightly clayey to clayey GRAVEL with occasional roots and rootlets. Gravel is subangular to subrounded of fine to coarse mudstone (40%), siltstone (30%), red brick (15%), slate (10%) and mixed lithologies (5%).	
				0.40	85.38		TF	
	1.00 – 2.00	B					Recovered as 70% loose, dark grey, slightly clayey to clayey GRAVEL; 15% cobble sized fragments of mudstone and siltstone; 10% cobble sized red brick fragments; and 5% cobble sized coal fragments. Gravel is subangular to subrounded of fine to coarse mudstone (40%), siltstone (30%), red brick (15%), slate (10%) and mixed lithologies (5%).	1
	1.00	SPT(S)	N=3 (1,1/0,1,1,1)					
	1.50		0.30ppmv	1.40	84.38		CS	
							Recovered as stiff, friable, dark grey and black in places, very gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mudstone, siltstone, red brick, and coal.	2
	2.20	SPT(S)	N=8 (1,2/3,2,1,2)				CS	
				2.45	83.33		Recovered as 90% cobble sized inclusions of very soft to stiff, light grey, gravelly CLAY; and 10% boulder sized concrete fragments. Gravel is angular to subangular of fine to coarse mudstone, siltstone, sandstone, and coal.	
	3.00	SPT(S)	N=20 (2,8/4,5,5,6)				CS	3
	4.00 – 5.00	ES						
	4.00	SPT(S)	N=12 (3,3/4,3,2,3)					4
	4.50		0.70ppmv	4.45	81.33		Recovered as 60% cobble to boulder size inclusions of very stiff, greyish brown to black, slightly gravelly CLAY; 25% cobble sized mudstone and siltstone fragments; and 15% cobble to boulder sized pockets of weathered reddish brown, subangular to subrounded fine to coarse GRAVEL of mudstone, siltstone and occasional coal. Gravel within clay is subangular to subrounded of fine mixed lithologies.	
	5.00 – 6.00	B					CS	5
	5.00 – 6.00	ES						
	5.20	SPT(S)	N=14 (1,2/3,3,3,5)	5.20	80.58		Stiff to very stiff, brown, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse gritstone, sandstone, mudstone, crystalline rocks, pebbles, slate, marl, shale, coal and mixed natural lithologies.	
							CGT	6
	6.50	SPT(S)	N=13 (0,2/2,2,4,5)					
	6.50		0.20ppmv					7
	8.00 – 8.45	UT		8.00	77.78		Firm to stiff, wet, brown, slightly gravelly, clayey SAND. Gravel is subangular to rounded of fine to coarse quartz, shale, mudstone, rounded pebbles and mixed natural lithologies. Sand is fine to medium.	8
							GGT	
								9
	9.50	SPT(S)	N=8 (1,1/1,2,2,3)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 14.45m	200mm 150mm	7.00m 12.00m	200mm 150mm									0.00m 18.00m 0.00m 40.00m	18.00m 22.00m 40.00m 42.50m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 14.45m and then rotary open hole follow on through a bentonite seal from 14.45m to 43m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP101/RH109
Sheet 2 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 29/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387806.00 N400346.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.78m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	43.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
	10.00 – 11.00	ES					Firm to stiff, wet, brown, slightly gravelly, clayey SAND. Gravel is subangular to rounded of fine to coarse quartz, shale, mudstone, rounded pebbles and mixed natural lithologies. Sand is fine to medium. GGT	10
	10.50		0.00ppmv					
	11.00 – 12.00 11.00	B SPT(S)	N=15 (1,2/3,3,4,5)					11
	12.50	SPT(S)	N=29 (4,2/3,7,9,10)					12
	14.00	SPT(S)	N=37 (4,4/8,8,9,12)					13
				14.45	71.33		Driller notes SAND. GGT	14
								15
								16
								17
								18
								19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 14.45m	200mm 150mm	7.00m 12.00m	200mm 150mm									0.00m 18.00m 0.00m 40.00m	18.00m 22.00m 40.00m 42.50m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 14.45m and then rotary open hole follow on through a bentonite seal from 14.45m to 43m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP101/RH109
Sheet 3 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 29/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387806.00 N400346.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.78m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	43.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
							Driller notes SAND. GGT	
				20.00	65.78			20
							Driller notes CLAY. CGT	
								21
								22
								23
				24.00	61.78			24
							Driller notes boulder CLAY. CGT	
								25
								26
								27
								28
								29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 14.45m	200mm 150mm	7.00m 12.00m	200mm 150mm									0.00m 18.00m 0.00m 40.00m	18.00m 22.00m 40.00m 42.50m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 14.45m and then rotary open hole follow on through a bentonite seal from 14.45m to 43m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP101/RH109
Sheet 4 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 29/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387806.00 N400346.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.78m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	43.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
							Driller notes boulder CLAY. CGT	
				30.00	55.78			30
							Driller notes soft CLAY. CGT	
								31
								32
								33
								34
								35
								36
								37
				38.00	47.78			38
							Driller notes boulder CLAY. CGT	
								39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 14.45m	200mm 150mm	7.00m 12.00m	200mm 150mm									0.00m 18.00m 0.00m 40.00m	18.00m 22.00m 40.00m 42.50m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 14.45m and then rotary open hole follow on through a bentonite seal from 14.45m to 43m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP101/RH109
Sheet 5 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 29/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387806.00 N400346.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.78m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	43.00m

Install. / Backfill	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
							Driller notes boulder CLAY. CGT	
				40.00	45.78		Driller notes SAND. CSF	40
				43.00	42.78		End of Borehole at 43.00m	41 42 43 44 45 46 47 48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 14.45m	200mm 150mm	7.00m 12.00m	200mm 150mm									0.00m 18.00m 0.00m 40.00m	18.00m 22.00m 40.00m 42.50m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 14.45m and then rotary open hole follow on through a bentonite seal from 14.45m to 43m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP102/RH110
Sheet 1 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 02/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387560.73 N400386.17
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 84.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	67%	41.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	83.90		Driller notes TOPSOIL. TF Recovered as 70% loose, greyish brown, very sandy, clayey GRAVEL; 10% cobble sized inclusions of soft, brown and grey mottled, slightly sandy CLAY; 10% cobble sized red brick and concrete fragments; 5% twigs; and 5% plastic sheeting. Gravel is subangular to subrounded of fine to coarse red brick (35%); concrete (25%); coal (20%); sandstone (10%); and glass (10%). GMG	
		1.00 – 2.00 1.00 – 2.00 1.00	B B SPT(S)	N=8 (1,1/2,2,2,2)					1
		2.00	SPT(S)	N=1 (1,1/0,0,0,1)					2
		2.50	ES		2.50	81.50		Recovered as firm, brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, concrete, sandstone and suspected clinker. CMG	
		3.00	SPT(S)	N=13 (2,4/0,0,8,5)	3.00	81.00		Medium dense, light pink, gravelly, slightly clayey, fine to coarse SAND. Gravel is subangular to subrounded of fine to medium mudstone, siltstone, sandstone and quartz. GGT	3
					3.40	80.60		Very soft to soft, slightly sandy, slightly gravelly CLAY with occasional plant remains and rootlets. Gravel is subangular to subrounded of fine to medium mudstone, sandstone, siltstone, coal and crystalline rocks. Sand is fine to medium. CGT	
▽		4.00	SPT(S)	N=0 (0,0/0,0,0,0)				*4.00m - 5.00m : Becoming stiff. Sand becoming fine. Gravel becoming subrounded to wellrounded.*	4
		5.00 – 6.00 5.00 – 6.00 5.00	B B SPT(S)	N=5 (0,1/1,1,2,1)				*5.00m - 5.45m : Becoming soft. No sand. Silty laminations.*	5
		6.00 – 7.00 6.00 – 7.00	B B					*6.00m - 7.30m : Becoming very soft.*	6
		6.50	SPT(S)	N=17 (2,2/3,3,5,6)					7
					7.30	76.70		Medium dense, brown sandy, slightly clayey, subangular to well rounded, fine to coarse GRAVEL of mixed natural lithologies. GGT	
					7.90	76.10		Driller notes firm, reddish brown, sandy, gravelly CLAY. CGT	8
▽		8.20	SPT(S)	N=21 (2,4/6,5,5,5)					
					9.10	74.90		Driller notes medium dense, reddish brown, coarse SAND with occasional laminations of clay and occasional gravels. GGT	9
		9.20	SPT(C)	N=18 (1,2/3,3,6,6)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.50m 41.00m	200mm 150mm	3.00m 41.00m	200mm 150mm									0.00m 35.00m	35.00m 39.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised until 7.9m (8 inch until 3m 6 inch until 7.9) and then rotary open hole follow on through a bentonite seal from 7.9 to 41m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP102/RH110
Sheet 2 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 02/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387560.73 N400386.17
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 84.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	67%	41.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		11.00	SPT(C)	N=17 (3,4/4,4,4,5)				Driller notes medium dense, reddish brown, coarse SAND with occasional laminations of clay and occasional gravels. GGT	10
		12.20	SPT(S)	N=20 (3,3/4,5,6,5)					11
		13.30	SPT(C)	N=22 (1,2/4,6,6,6)					12
									13
					13.75	70.25		Driller notes brown CLAY. CGT	14
									15
									16
									17
					18.00	66.00		Driller notes GRAVELS. GGT	18
									19
					19.50	64.50		Driller notes gravelly CLAY. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.50m 41.00m	200mm 150mm	3.00m 41.00m	200mm 150mm									0.00m 35.00m	35.00m 39.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised until 7.9m (8 inch until 3m 6 inch until 7.9) and then rotary open hole follow on through a bentonite seal from 7.9 to 41m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP102/RH110
Sheet 3 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 02/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387560.73 N400386.17
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 84.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	67%	41.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Driller notes gravelly CLAY. CGT	20
					21.00	63.00		Driller notes SAND. GGT	21
									22
					23.00	61.00		Driller notes boulder CLAY. CGT	23
		24.00 – 25.50	C						24
									25
		25.50 – 27.00	C		25.50	58.50		Stiff to very stiff, brown, slightly gravelly, slightly sandy CLAY with possible medium cobble content. Cobbles are subrounded mixed natural lithologies. Gravel is fine to coarse, subangular to subrounded of gritstone, sandstone, crystalline rocks, and mixed natural lithologies. Sand is fine. CGT	26
					26.40	57.60		Soft, wet, brown, slightly sandy, slightly gravelly CLAY with possible medium cobble content. Cobbles are subrounded mixed natural lithologies. Gravel is fine to coarse, subangular to subrounded of gritstone, sandstone, crystalline rocks, and mixed natural lithologies. Sand is fine. CGT *26.70m - 27.00m : No core recovery.*	27
					27.00	57.00		Driller notes boulder CLAY. CGT	28
									29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.50m 41.00m	200mm 150mm	3.00m 41.00m	200mm 150mm									0.00m 35.00m	35.00m 39.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised until 7.9m (8 inch until 3m 6 inch until 7.9) and then rotary open hole follow on through a bentonite seal from 7.9 to 41m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP102/RH110
Sheet 4 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 02/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387560.73 N400386.17
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 84.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	67%	41.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
								Driller notes boulder CLAY. CGT	30
									31
									32
									33
									34
									35
		36.00 – 38.00	D		36.00	48.00		Recovered as damp, brown, slightly gravelly SAND. Gravel is subangular to subrounded of fine to coarse quartz, crystalline rocks and red sandstone. GGT *36.00m - 38.00m : Driller notes soft clay lamination. Drillers' description.*	36
									37
									38
									39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.50m 41.00m	200mm 150mm	3.00m 41.00m	200mm 150mm									0.00m 35.00m	35.00m 39.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised until 7.9m (8 inch until 3m 6 inch until 7.9) and then rotary open hole follow on through a bentonite seal from 7.9 to 41m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP102/RH110
Sheet 5 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/10/2020 - 02/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387560.73 N400386.17
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 84.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	67%	41.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as damp, brown, slightly gravelly SAND. Gravel is subangular to subrounded of fine to coarse quartz, crystalline rocks and red sandstone. GGT	40
					41.00	43.00		End of Borehole at 41.00m	41
									42
									43
									44
									45
									46
									47
									48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.50m 41.00m	200mm 150mm	3.00m 41.00m	200mm 150mm									0.00m 35.00m	35.00m 39.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised until 7.9m (8 inch until 3m 6 inch until 7.9) and then rotary open hole follow on through a bentonite seal from 7.9 to 41m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP103
Sheet 1 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/10/2020 - 27/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387694.00 N400344.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.85m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	15.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
	0.50		0.50ppmv	0.40	85.45		Recovered as 70% loose, brown, slightly clayey, sandy GRAVEL; 15% whole and half red brick; 10% cobble sized wood fragments; and 5% roots and rootlets. Gravel is angular to subangular of fine to coarse red brick (70%), suspected clinker (15%), slate (5%) and mixed lithologies (10%). Slight hydrocarbon odour. GMG	
	1.20	SPT(C)	N=4 (1,0/0,1,1,2)				Recovered as 35% loose, dark brown, slightly clayey, sandy GRAVEL; 25% whole and half red brick; 20% cobble sized timber fragments; 10% plastic sheeting; and 10% cobble sized metal fragments. Gravel is subangular to subrounded of fine to coarse red brick (60%), suspected clinker (15%), wood (10%), glass (5%) and mixed lithologies (10%). DW	1
	1.50		3.50ppmv					
	2.00 – 3.00	ES						2
	2.20	SPT(S)	N=8 (1,1/1,1,2,4)	2.20	83.65		Recovered as 95% medium dense, brown, stained black in places, sandy, slightly clayey GRAVEL; and 5% cobble sized timber fragments. Gravel is subangular to subrounded of fine to coarse medium grained sandstone (40%), red brick (30%), green crystalline rock (10%) and gravel sized inclusions of soft, dark brown, slightly sandy CLAY (10%), concrete (5%) and glass (5%). CMG	
	2.50		1.70ppmv					
	3.00	SPT(S)	N=17 (2,2/2,4,5,6)					3
	3.50		1.00ppmv	3.45	82.40		Recovered as 45% medium dense, brown, slightly sandy, slightly clayey GRAVEL; 20% cobble sized red brick; fragments; 20% cobble sized timber fragments; and 15% cobble sized inclusions of soft, brown, stained black, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium red brick (20%), sandstone (10%), concrete (10%), glass (5%), plastic (5%), wood fragments (5%) and mixed lithologies (45%). Sand is fine to medium. GMG	
	4.00 – 5.00	ES						4
				4.20	81.65			
				4.65	81.20		Recovered as 80% cobble sized inclusions of soft, friable, black, slightly gravelly CLAY; 5% fabric; 5% metal, 5% plastic sheeting; and 5% wood fragments. Gravel is subangular to subrounded of fine to medium concrete, wood fragments, mudstone, sandstone, and mixed lithologies. CMG	
	5.00	SPT(S)	N=4 (2,2/1,1,1,1)					5
	5.50		4.30ppmv				Recovered as 45% loose, brown, stained black, slightly sandy, slightly clayey GRAVEL; 10% cobble sized fragments of light brown, medium grained sandstone and concrete; 10% plastic (bottles); 10% cobble sized timber fragments; 15% cobble sized red brick fragments; 5% cobble sized inclusions of very soft, brown, stained black, slightly sandy CLAY; and 5% fabric. Gravel is angular to subrounded of fine to coarse red brick (20%), wood (15%), ceramic (5%), glass (5%), plastic (5%), and mixed lithologies (50%). Hydrocarbon odour. DW *5.60m - 7.00m : Hydrocarbon odour.*	
				5.80	80.05			6
	6.50	SPT(S)	N=5 (1,0/0,1,2,2)					
							Recovered as 35% medium dense, multicoloured, slightly sandy GRAVEL; 30% cobble sized red brick fragments; 15% cobble sized timber fragments; 10% cobble sized inclusions of soft, brown, stained black, slightly gravelly CLAY; 5% fabric; 2.5% plastic; and 2.5% cobble sized crystalline rock fragments. Gravel is subangular to subrounded of fine to coarse red brick (30%), crystalline rocks (30%), ceramic (5%), glass (5%) and mixed lithologies (30%). DW *6.50m - 6.95m : No recovery from SPT.*	7
	8.00 – 9.00	B						8
	8.00	SPT(S)	N=32 (1,2/3,6,10,13)	8.20	77.65		Recovered as medium dense, damp, brown, fine to medium, slightly gravelly, slightly clayey SAND. Gravel is subangular to subrounded of fine to coarse red mudstone, crystalline rocks, sandstone, and hard, black glassy rock. GGT *8.20m : Driller notes sandstone boulder. Drillers' description.* *8.45m - 9.00m : Moderate cobble content. Cobbles are subangular to subrounded of brown, medium grained sandstone.*	
	8.50		0.50ppmv					
	9.00 – 10.00	ES						9
	9.50	SPT(S)	N=8 (1,1/1,2,2,3)				Firm, soft where wet, brown, slightly gravelly, sandy CLAY with possible medium cobble content. Cobbles are subrounded of sandstone. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Sand is fine to medium. CGT	
	9.50		0.20ppmv	9.70	76.15			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	8.20m 15.00m	200mm 150mm	8.00m	9.00m	01:20						0.00m 2.00m 0.00m 8.20m	2.00m 6.00m 8.20m 10.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 8.2m, where a bentonite seal was placed then 6 inch casing until 15m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP103
Sheet 2 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/10/2020 - 27/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387694.00 N400344.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.85m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	15.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
							Firm, soft where wet, brown, slightly gravelly, sandy CLAY with possible medium cobble content. Cobbles are subrounded of sandstone. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Sand is fine to medium. CGT	10
				10.50	75.35		Soft, wet, brown, slightly sandy, slightly gravelly CLAY with possible medium cobble content. Cobbles are subrounded of sandstone. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Sand is fine. CGT	
	11.00 – 12.00	B						11
	11.00 – 12.00	B						
	11.00	SPT(S)	N=15 (1,2/3,3,4,5)				*11.00m - 12.00m : Becomes firm.*	
							12.00m - 14.00m : Wet and very soft.	12
	12.50	SPT(S)	N=29 (4,2/3,7,9,10)					13
	14.00	SPT(S)	N=37 (4,4/8,8,9,12)					14
	14.50		0.20ppmv					
				15.00	70.85		End of Borehole at 15.00m	15
								16
								17
								18
								19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	8.20m 15.00m	200mm 150mm	8.00m	9.00m	01:20						0.00m 2.00m 0.00m 8.20m	2.00m 6.00m 8.20m 10.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 8.2m, where a bentonite seal was placed then 6 inch casing until 15m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP103
Sheet 3 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/10/2020 - 27/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387694.00 N400344.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.85m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	15.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					

20
21
22
23
24
25
26
27
28
29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	8.20m 15.00m	200mm 150mm	8.00m	9.00m	01:20						0.00m 2.00m 0.00m 8.20m	2.00m 6.00m 8.20m 10.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 8.2m, where a bentonite seal was placed then 6 inch casing until 15m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP103
Sheet 4 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/10/2020 - 27/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387694.00 N400344.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 85.85m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	15.00m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					

30
31
32
33
34
35
36
37
38
39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	8.20m 15.00m	200mm 150mm	8.00m	9.00m	01:20						0.00m 2.00m 0.00m 8.20m	2.00m 6.00m 8.20m 10.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 8.2m, where a bentonite seal was placed then 6 inch casing until 15m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP104
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020 - 13/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387561.89 N400245.14
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 83.40m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	13.30m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.50	ES					Recovered as 70% loose, brown, very clayey, very sandy/ ashy GRAVEL; 20% cobble sized red brick and concrete fragments; and 5% cobble sized inclusions of firm, greenish grey and brown mottled CLAY with rootlets; 5% cobble sized slate fragments. Gravel is angular to subangular of fine to coarse brick (70%), suspected slag (20%), and concrete (10%). Strong chemical odour. GMG	1
		1.20	SPT(S)	N=9 (3,4/4,3,1,1)					
					1.60	81.80		Recovered as dark grey, mottled light brown. slightly sandy, slightly gravelly CLAY with occasional rootlets. Gravel is angular to subrounded of fine to coarse brick (40%), sandstone (20%), timber (20%), mudstone (10%), and concrete (10%). Slight odour. CMG	
		2.00	SPT(S)	N=30 (2,3/5,1,10,14)	2.05	81.35			2
		2.70						Recovered as loose, light pink, gravelly, fine to medium SAND. Gravel is subangular to subrounded of fine to coarse sandstone, red brick and mudstone. GMG	
		2.70	ES						
		3.00	SPT(S)	N=4 (4,2/1,1,1,1)	3.00	80.40		Recovered as 80% dense, dark grey, stained black, very gravelly, clayey SAND; and 20% carpet fragments. Gravel is angular to subangular of fine to coarse sandstone (60%), brick (20%), and glass (20%). Strong odour. HW	3
								3.50m : Rare plastic sheeting and timber fragments (15cm), and occasional metal (35cm).	
		4.00	SPT(S)	N=39 (4,6/8,11,7,13)					4
					4.60	78.80		Recovered as 65% very dense, dark grey, sandy/ashy, slightly clayey GRAVEL; 25% whole and half red brick; 5% plastic (sheets and bags); and 5% cobble sized metal fragments. Gravel is angular to subangular of fine to coarse brick (60%), concrete (15%), glass (15%), suspected slag (5%) and mudstone (5%). Odour. GMG	
		5.00	SPT(S)	N=50 (4,5/5,11,13,21)				*5.00m : A single concrete cobble (25cm).*	5
								5.00m - 6.00m : Rare cobble sized inclusions of firm, brown, black and grey mottled, silty CLAY with rootlets.	
		6.00	SPT(S)	N=28 (1,4/6,5,9,8)	6.00	77.40		Recovered as dense, black, gravelly, slightly clayey, fine to medium SAND. Gravel is angular to subangular of red brick. Slight odour. GMG	6
					6.45	76.95		Recovered as 65% cobble sized red brick fragments; 20% medium dense, reddish brown, gravelly, slightly clayey SAND; 10% cobble sized metal fragments; and 5% cobble sized timber fragments. Gravel is angular to subangular of red brick (80%) and concrete (20%). Odour. DW	
		7.00	SPT(C)	N=10 (1,1/1,3,3,3)	7.00	76.40			7
		7.30						Recovered as 55% medium dense, dark grey to black, very sandy, clayey GRAVEL; 15% cobble sized suspected slag fragments; 15% whole and half red brick; 5% cobble sized timber fragments; 5% cobble sized metal fragments; and 5% plastic cup fragments. Gravel is angular to subangular of fine to coarse red brick, concrete, suspected slag and glass. Strong odour. DW	
		7.30	ES						
		8.65	SPT(C)	N=16 (2,7/5,5,2,4)					8
		9.10	SPT(C)	N=13 (7,4/2,2,7,2)					9
								9.40m : Metal obstruction	
					9.60	73.80		Firm, light brown, slightly gravelly CLAY possibly with occasional silt laminations. Gravel is subangular to subrounded of fine mixed natural lithologies. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.30m	200mm	11.00m	200mm	4.45m 5.40m 9.50m	4.60m 5.70m 9.80m	01:00 01:00 01:00									

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP104
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020 - 13/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387561.89 N400245.14
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 83.40m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	13.30m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00	SPT(S)	N=25 (3,4/4,6,6,9)				Firm, light brown, slightly gravelly CLAY possibly with occasional silt laminations. Gravel is subangular to subrounded of fine mixed natural lithologies. CGT	10
		11.00 – 11.45	UT						11
		11.45 – 11.65	UT					*11.45m - 11.50m : Becoming stiff and thinly laminated with occasional silty partings.* *11.50m : A single subrounded cobble of sandstone (15cm).* *11.50m - 12.45m : Becoming slightly sandy with cobble sized pockets of soft, brown, sandy CLAY. Gravel is fine to coarse.*	12
		12.85	SPT(S)	N=16 (2,3/2,4,4,6)					13
					13.30	70.10		End of Borehole at 13.30m	14
									15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
13.30m	200mm	11.00m	200mm	4.45m 5.40m 9.50m	4.60m 5.70m 9.80m	01:00 01:00 01:00									

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP105
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020 - 06/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387418.00 N400264.00
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 80.36m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	10.65m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.05	80.31		Recovered as firm, dark brown, slightly sandy, slightly gravelly CLAY with abundant roots and rootlets. Gravel is subangular to subrounded of fine to coarse mixed lithologies. TF	
		0.50 0.50	ES	0.10ppmv					
		1.20	SPT(S)	N=3 (1,1/1,1,1,0)	1.20	79.16		Recovered as 60% loose, damp, gravelly, clayey SAND/ ASH; 30% cobble sized red brick and sandstone fragments; 5% cobble sized glass and plastic fragments; and 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to coarse red brick, glass, mudstone and suspected clinker. CW	1
		1.50 1.50 1.65 – 2.00	ES B	0.80ppmv	1.65	78.71		Recovered as 60% cobble sized inclusions of firm to stiff, brown, slightly sandy, slightly gravelly CLAY; and 40% loose, angular to subrounded fine to coarse GRAVEL of red brick and mixed lithologies. CMG	
		2.00 – 3.00 2.00	B SPT(S)	N=4 (1,1/1,1,1,1)	2.00	78.36		Recovered as 35% loose, dark brown and black stained, slightly gravelly, very clayey GRAVEL; 30% gravel to cobble sized inclusions of soft to firm, brown, slightly sandy, slightly gravelly CLAY; 20% cobble sized timber fragments; 10% cobble sized suspected slag fragments; and 5% cobble sized glass fragments. Gravel is subangular to subrounded of fine to coarse red brick, timber and chalk/lime. DW	2
		2.50 2.50	ES	0.20ppmv					
		3.00	SPT(S)	N=6 (1,1/1,1,2,2)	3.15	77.21		Recovered as 60% hard, friable, whitish grey possible CHALK; and 40% loose, white and black, slightly sandy, slightly clayey, subangular to subrounded, fine to coarse GRAVEL of mixed lithologies. CMG	3
		3.45 – 4.00	B						
		4.00 – 4.45 4.00 – 5.00	UT B					Soft to firm, brown, slightly sandy, slightly gravelly CLAY possibly with occasional silt lenses. Sand is fine. Gravel is angular to subrounded of fine to medium mudstone, red sandstone and red marl. CGT	4
		4.45 – 4.65 4.50 4.50	UT ES	0.10ppmv					
	Water Added = 2l	5.00 – 5.45 5.00 – 6.00 5.00	D B SPT(S)	N=13 (2,2/3,3,3,4)					5
		6.00 – 6.45 6.00 – 7.00	UT B						6
		6.45 – 6.65	UT						
		7.00	SPT(S)	N=14 (1,2/2,4,4,4)					7
		7.45 – 7.90	D		7.50	72.86		Soft, grey, slightly sandy, silty CLAY. CGT	
		8.00 – 8.45	UT						8
		9.00	SPT(S)	N=18 (2,2/3,4,5,6)					9
					9.30	71.06		Firm to stiff, brown, slightly sandy, slightly gravelly CLAY possibly with thin laminations of SILT. Gravel is angular to rounded of fine to medium mudstone, red sandstone, crystalline rocks, limestone and gritstone. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.65m	200mm	5.85m	200mm	3.80m	4.00m	01:00									

Remarks

Dimensions given in length x width. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP105
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020 - 06/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387418.00 N400264.00
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 80.36m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	10.65m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.00 – 10.45	UT					Firm to stiff, brown, slightly sandy, slightly gravelly CLAY possibly with thin laminations of SILT. Gravel is angular to rounded of fine to medium mudstone, red sandstone, crystalline rocks, limestone and gritstone. CGT	10
		10.45 – 10.65	UT		10.65	69.71		End of Borehole at 10.65m	11
									12
									13
									14
									15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.65m	200mm	5.85m	200mm	3.80m	4.00m	01:00									

Remarks

Dimensions given in length x width. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP106
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 06/10/2020 - 07/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387366.52 N400246.25
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 78.79m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	11.50m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	78.59		Recovered as very soft, black, silty CLAY with frequent roots and rootlets. TF	
		0.50	ES					Recovered as 80% very soft, white and black, slightly sandy, very gravelly CLAY; and 20% cobble sized suspected slag and clinker fragments. Gravel is subangular to subrounded of fine to coarse suspected slag and clinker, chalk and mixed lithologies. Slight sweet odour. CMG	1
		1.20	SPT(S)	N=7 (1,1/1,1,1,4)					
					1.40	77.39		Recovered as 70% very loose, black, subangular to subrounded GRAVEL of suspected clinker (95%) and chalk (5%); 10% cobbles sized fragments of suspected clinker and slag; 10% cobble sized inclusions of very soft, white, slightly gravelly CLAY; 5% cobble sized inclusions of very soft, light orangish brown, slightly sandy, gravelly CLAY; 2.5% cobble sized timber fragments; and 2.5% cobble sized plastic fragments. Gravel is subangular to angular of fine to medium clinker and chalk. CW	
		1.65 – 2.00	B						
		1.80	ES						
		2.00 – 3.00	B						2
		2.00	SPT(S)	N=3 (1,1/1,1,1,0)					
	▽	3.00 – 4.00	B		3.00	75.79		Recovered as 70% soft, light brown, stained black, slightly sandy, gravelly CLAY; and 30% timber planks and fragments. Gravel is subangular to subrounded of fine to coarse timber fragments, suspected clinker and plastic. Hydrocarbon odour. CMG	3
		3.00	SPT(S)	N=4 (1,1/1,1,1,1)					
		3.50	ES						
		4.00	SPT(S)	N=5 (1,2/1,1,1,2)	4.00	74.79		Recovered as 40% loose, wet, brown, clayey GRAVEL; 30% cobble sized timber fragments, 10% cobbles sized suspected clinker and slag fragments; 10% fabrics; and 10% cobble sized plastic fragments. Gravel is subangular to subrounded of fine to coarse mixed lithologies. Hydrocarbon odour. DW	4
					4.65	74.14		Soft, grey, slightly sandy, silty CLAY. CGT	
		5.00 – 6.00	B						5
		5.00	SPT(S)	N=10 (1,1/1,1,2,6)					
					5.65	73.14		Soft to firm, slightly sandy, slightly gravelly CLAY. Sand is fine. Gravel is angular to subrounded of fine to medium black mudstone, quartz, shale, red coarse grained sandstone and crystalline rocks. CGT	
		6.00 – 6.45	UT						6
		6.00 – 7.00	B						
		7.00	SPT(S)	N=15 (2,2/3,3,4,5)					7
		8.00 – 8.45	UT					*8.00m : Becomes stiff.*	8
		8.00 – 9.00	B						
		8.45 – 8.65	UT						
		9.00	SPT(C)	N=28 (2,3/5,6,8,9)				*9.00m - 10.00m : Silty.*	9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
11.50m	200mm	5.40m	200mm	3.80m	4.00m	01:00									

Remarks

Dimensions given in length x width. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP106
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 06/10/2020 - 07/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387366.52 N400246.25
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 78.79m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	11.50m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00 – 10.45	UT					Soft to firm, slightly sandy, slightly gravelly CLAY. Sand is fine. Gravel is angular to subrounded of fine to medium black mudstone, quartz, shale, red coarse grained sandstone and crystalline rocks. CGT	10
		10.45 – 10.65	UT					*10.45m : Becomes very stiff.*	
		11.00	SPT(S)	N=35 (3,5/6,8,10,11)					11
					11.50	67.29		End of Borehole at 11.50m	
									12
									13
									14
									15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
11.50m	200mm	5.40m	200mm	3.80m	4.00m	01:00									

Remarks

Dimensions given in length x width. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP107
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020 - 13/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387529.06 N400306.76
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 83.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	12.45m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		0.00 – 1.00	B						
		0.00 – 1.00	B		0.30	83.40		Firm, dark brown, slightly sandy, slightly gravelly CLAY with frequent roots and rootlets. Gravel is angular to well rounded of fine to coarse red brick (60%), concrete (20%), ceramic (5%), quartz (5%), and suspected clinker (5%). Sand is fine to medium. TF	
		0.50	ES						
		1.00	SPT(S)	N=1 (1,1/0,0,0,1)				Recovered as 45% loose, dark brown, very sandy, very clayey GRAVEL; 15% whole and half bricks; 10% cobble sized inclusions of soft, organic, grey and brown mottled, sandy CLAY; 10% carpet; 10% cobble sized plastic fragments; 5% tinfoil; and 5% cobble sized tarmacadam fragments. Gravel is subangular of fine to coarse brick (50%), concrete (15%), wood chips (15%), suspected clinker (7.5%), glass (7.5%), slate (2.5%), quartz (2.5%), suspected slag (2.5%) and sandstone (2.5%). Organic odour. HW	1
		2.00 – 3.00	B						
		2.00	SPT(S)	N=3 (2,2/2,0,0,1)				*2.00m : Rare carpet.*	2
		3.00							
		3.00	ES						3
		3.00 – 3.45	D					*3.20m - 3.30m : Black, slight gravelly, silty CLAY. Gravel is subangular to angular of coal and brick.*	
		3.00	SPT(S)	N=9 (2,1/2,2,3,2)				*3.30m - 4.10m : Occasional subangular cobbles of concrete and brick, fine gravel to cobble sized timber fragments, plastic sheeting. Rare metal fragments, hardboard, and carpet fragments.*	
		4.00	SPT(S)	N=12 (4,3/6,2,2,2)					4
		4.50			4.10	79.60		Recovered as 55% medium dense, dark grey, sandy, clayey GRAVEL; 15% cobble sized wood and timber fragments; 10% cobble sized metal fragments; 10% cobble sized inclusions of soft, brown CLAY; 5% plastic sheeting; and 5% roots and rootlets. Gravel is angular to subangular of fine to coarse concrete, brick, glass and ceramics. GMG	
		4.50	ES						
		5.00 – 5.45	D		5.00	78.70			5
		5.00	SPT(S)	N=17 (2,1/6,6,2,3)				Recovered as medium dense, black, slightly silty, fine to medium SAND. Gravel is angular to subangular of fine to coarse red brick (10%), concrete (10%), yellowish brown sandstone (5%), mudstone (5%), glass (5%), slate (5%), plastic (5%), metal (2.5%), wood (2.5%), and mixed lithologies (50%). Slight odour. GMG	
								5.20m : Becoming slightly silty, very sandy GRAVEL with occasional cobbles of brick, clinker, and concrete and rare cobble sized fragments of timber.	6
		6.50	SPT(S)	N=17 (7,14/7,4,3,3)				*6.00m : Rare cobbles and plastic sheeting.*	
								7.00m : Becoming very gravelly SAND.	7
		8.00	SPT(S)	N=50 (13,7/20,30,0,0)				*8.00m : Occasional cobbles of brick.*	8
									9
		9.30	SPT(S)	N=13 (3,3/3,3,3,4)	9.30	74.40		Firm, laminated, light brown, slightly gravelly CLAY with occasional rootlets. Gravel is subangular of fine siltstone. Lamination are thin, closely spaced and of firm, brown silt. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
12.45m	200mm	9.00m	200mm									0.00m 5.00m	5.00m 9.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP107
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020 - 13/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387529.06 N400306.76
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 83.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	12.45m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		11.00 – 11.45	UT					Firm, laminated, light brown, slightly gravelly CLAY with occasional rootlets. Gravel is subangular of fine siltstone. Lamination are thin, closely spaced and of firm, brown silt. CGT	10
								11.00m - 12.45m : Becoming stiff and gravel is subangular to wellrounded of fine to medium mixed natural lithologies.	11
		12.00	SPT(S)	N=28 (2,4/4,4,10,10)					12
					12.45	71.25		End of Borehole at 12.45m	13
									14
									15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
12.45m	200mm	9.00m	200mm									0.00m 5.00m	5.00m 9.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP108
Sheet 1 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020 - 07/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387309.99 N400245.27
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 77.93m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	20.40m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	77.83		Recovered as very loose, soft, brown, slightly gravelly, sandy CLAY with frequent rootlets. Gravel is subangular to rounded of fine to coarse mixed lithologies. TF	
		0.50 0.50	ES	0.10ppmv				Recovered as 70% wet, black, sandy, slightly clayey GRAVEL; 10% cobble sized inclusions of soft, light brown, slightly gravelly CLAY; 10% cobbles sized suspected clinker and slag fragments; 5% whole and half red brick; and 5% rootlets. Gravel is angular to subrounded of fine to coarse suspected clinker and slag. CW	1
		1.20	SPT(S)	N=3 (1,1/0,1,1,1)					
		1.50 1.50	ES	0.50ppmv					
		2.20	SPT(S)	N=1 (2,1/0,1,0,0)	2.20	75.73			2
		2.40 2.40	ES	0.30ppmv				Recovered as 40% loose, wet, dark brown, sandy, slightly clayey GRAVEL; 30% cobble sized fragments of red brick; 10% cobble sized inclusions of soft, light brown, slightly gravelly CLAY; 10% cobbles sized slate, red brick, suspected clinker and sandstone fragments; 2.5% cobble sized glass fragments; 2.5% cobble sized timber fragments; 2.5% cobble sized metal fragments; and 2.5% cobble sized ceramic fragments. Gravel is subrounded to angular of fine to medium red brick, glass, coal, suspected clinker, mudstone and mixed lithologies. Slight hydrocarbon odour. CW	
		3.20	SPT(S)	N=4 (2,1/0,1,1,2)					3
		4.20	SPT(S)	N=4 (1,1/0,2,1,1)	4.20	73.73			4
		5.00 5.00 – 5.45 5.00 5.10	ES D SPT(S)	N=27 (2,4/5,5,6,11) 0.10ppmv	5.00	72.93		Recovered as 50% loose, wet, dark greyish brown, sandy GRAVEL; 30% very soft, wet, brown, very clayey GRAVEL; and 20% cobbles sized concrete paving fragments. Gravel is subrounded to angular of fine to coarse concrete (20%), red brick (15%), glass (10%), suspected clinker (5%), coal (5%), plastic (5%) and mixed lithologies (45%). Slight hydrocarbon odour. GMG	5
		6.00 – 6.45 6.00 – 6.45	UT UT					Firm, brown, slightly gravelly CLAY. Gravel is subrounded to subangular of fine to medium mudstone, shale and crystalline rocks. CGT *5.40m - 5.45m : Recovered as soft, light brown, very sandy CLAY. Sand is medium.*	6
		6.45 – 6.90	D						
		7.00	SPT(S)	N=21 (5,4/4,5,6,6)					7
					7.20	70.73		Stiff, wet, brown, slightly sandy, slightly gravelly to gravelly in places CLAY. Gravel is angular to rounded of fine to coarse sandstone, gritstone and mudstone. CGT	
		8.00 – 8.45 8.00 – 8.45	UT UT					*8.00m - 9.00m : Occasional cobbles of rounded to subrounded sandstone.*	8
		9.00 – 9.45 9.00	D SPT(S)	N=39 (6,8/8,9,10,12)					9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.40m	200mm	18.00m	200mm	13.00m 14.00m	14.00m 18.00m	00:45 05:00						0.00m 2.20m	2.20m 5.00m	PLAIN SLOTTED	63mm 63mm

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP108
Sheet 2 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020 - 07/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387309.99 N400245.27
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 77.93m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	20.40m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.00 – 10.45	UT					Stiff, wet, brown, slightly sandy, slightly gravelly to gravelly in places CLAY. Gravel is angular to rounded of fine to coarse sandstone, gritstone and mudstone. CGT	10
		10.00 – 10.45	UT					*10.00m : Becomes very stiff.*	
									11
		11.50	SPT(S)	N=16 (1,2/3,3,4,6)				*11.50m - 12.70m : Occasional laminations of SILT.*	
									12
					12.70	65.23		Stiff, brown, slightly sandy, silty CLAY. CGT	
		13.00	SPT(S)	N=20 (3,3/4,4,6,6)	13.00	64.93		Stiff, wet, brown, slightly sandy, gravelly CLAY with possible medium cobble content. Cobbles are angular to subrounded of crystalline rocks and sandstone. Gravel is subangular of fine mixed natural lithologies. CGT	13
					14.00	63.93		Very soft, wet, brown, slightly gravelly, silty CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	14
		14.50 – 14.95	UT		14.50	63.43		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	
		14.50 – 14.95	UT						15
		16.00	SPT(S)	N=9 (1,0/1,0,3,5)	16.00	61.93		Firm, brown, very sandy CLAY. CGT	16
					16.40	61.53		Stiff, soft where wet, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse red sandstone, grey sandstone, quartz and mudstone. CGT	
		17.00	SPT(S)	N=41 (5,7/7,10,12,12)	17.00	60.93		*16.40m - 17.00m : Occasional cobbles of sandstone.* Soft, very wet, brown, slightly sandy, slightly gravelly CLAY. Sand is fine. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	17
		18.00 – 18.45	UT						18
		18.00 – 18.45	UT						
		19.00 – 20.00	B						19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.40m	200mm	18.00m	200mm	13.00m 14.00m	14.00m 18.00m	00:45 05:00						0.00m 2.20m	2.20m 5.00m	PLAIN SLOTTED	63mm 63mm

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP108
Sheet 3 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020 - 07/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387309.99 N400245.27
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 77.93m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	20.40m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Sample and In Situ Testing: Type	Sample and In Situ Testing: Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					20.40	57.53		Soft, very wet, brown, slightly sandy, slightly gravelly CLAY. Sand is fine. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	20
								End of Borehole at 20.40m	21
									22
									23
									24
									25
									26
									27
									28
									29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.40m	200mm	18.00m	200mm	13.00m 14.00m	14.00m 18.00m	00:45 05:00						0.00m 2.20m	2.20m 5.00m	PLAIN SLOTTED	63mm 63mm

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP109
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020 - 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387572.00 N400193.00
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.60m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	14.80m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.55	82.05		Recovered as 90% brown, very gravelly, slightly clayey, fine to coarse SAND; 5% roots and rootlets; and 5% plastic (bags and sheeting). Gravel is angular to subangular of fine to coarse brick (60%), concrete (15%), glazed ceramic (5%), plastic (5%), glass (5%), slate (5%), and sandstone (5%). GMG	
		1.00	ES					Recovered as 70% cobble sized inclusions of stiff, brown, slightly gravelly CLAY; 10% cobble sized red brick fragments; 10% cobble sized inclusions of soft, black, slightly sandy, slightly gravelly CLAY; 2.5% cobble sized glazed ceramic fragments, 2.5% rags and sponge; 2.5% wooden chips; and 2.5% roots and rootlets. Gravel is subrounded to well rounded of fine to medium mixed lithologies. Strong organic odour. CMG	1
		1.20	SPT(S)	N=34 (2,5/1,2,5,26)					
					1.85	80.75			
		2.00	SPT(S)	N=10 (2,5/4,4,1,1)					2
	▽							Recovered as 90% soft to firm, dark grey to black, slightly sandy, gravelly CLAY; and 10% cobble sized plastic fragments. Gravel is angular to subangular of fine to coarse brick (70%), concrete (20%) and slate (10%). Organic odour. CMG	
		3.00 – 3.50	ES		3.00	79.60			3
		3.00	SPT(S)	N=4 (1,1/1,1,1,1)				Recovered as loose, brown, very clayey, angular to subangular, fine to coarse GRAVEL of red brick (55%), concrete (15%), mudstone (10%), sandstone (10%), timber (5%) and glass (5%). Decaying vegetation odour. GMG	
					3.65	78.95		Recovered as 55% loose, wet, brown, slightly sandy, slightly clayey GRAVEL; 20% cobble sized red brick fragments; 5% cobble sized flagstone fragments; 5% wooden peg fragments; 5% red bottle tops; 5% cobble sized metal fragments; and 5% plastic (sheeting and bags). Gravel is angular of fine to coarse brick (40%), concrete (40%), and glass (20%). Strong solvent odour. DW	
		4.00	SPT(C)	N=39 (2,2/5,14,11,9)	4.00	78.60			4
		5.00	SPT(C)	N=10 (2,2/3,3,2,2)	5.00	77.60		Recovered as 90% cobble sized red brick and concrete fragments; 5% brown, slightly clayey, gravelly, fine to coarse SAND; and 5% cobble sized timber fragments. Gravel is subangular to subrounded of fine to coarse mixed lithologies. DW	5
		6.00	SPT(C)	N=14 (5,6/4,3,3,4)	6.00	76.60		Recovered as 75% dark grey, very sandy, slightly clayey GRAVEL; 10% cobble sized timber fragments; 10% cobbles sized red brick and concrete fragments; 5% plastic fragments (pipes, glasses frame); and 5% plastic bags. Sand is fine to coarse. Gravel is angular to subangular of fine to coarse brick (50%), concrete (20%), glass (10%), ceramic (10%), sandstone (5%), and slate (5%). DW	6
		7.00	SPT(C)	N=37 (7,12/10,16,8,3)				Recovered as 60% cobbles sized red brick and concrete fragments; 10% medium dense, dark grey, very sandy, slightly clayey GRAVEL; 10% cobble sized timber fragments; 10% cobble sized metal fragments; 5% fabrics; and 5% glass. Gravel is angular to subangular of fine to coarse brick (50%), concrete (20%), glass (10%), ceramic (10%), sandstone (5%), and slate (5%). DW	7
		7.50							
		7.50	ES						
		8.00	SPT(C)	N=14 (3,2/4,4,3,3)	8.00	74.60		Recovered as 90% glass and metal fragments (bottles and lids); and 10% black, gravelly, fine to coarse SAND. Gravel is fine to medium of brick and concrete. HW	8
		9.00	SPT(C)	N=10 (2,1/1,2,3,4)	9.00	73.60		Recovered as 75% medium dense, dark grey, very sandy, slightly clayey GRAVEL; 15% cobble sized red brick fragments; 10% cobble sized fragments of sandstone; 5% cobble sized metal fragments; and 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to coarse brick (50%), concrete (30%), slate (10%), glass (5%), and sandstone (5%). DW	9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
14.80m	200mm	14.10m 14.80m	200mm 150mm									0.00m 9.00m	9.00m 13.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 14.1m, where a bentonite seal was placed then 6 inch casing until 14.8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP109
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020 - 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387572.00 N400193.00
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.60m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	14.80m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00	SPT(C)	N=34 (9,14/10,12,8,4)				Recovered as 75% medium dense, dark grey, very sandy, slightly clayey GRAVEL; 15% cobble sized red brick fragments; 10% cobble sized fragments of sandstone; 5% cobble sized metal fragments; and 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to coarse brick (50%), concrete (30%), slate (10%), glass (5%), and sandstone (5%). DW	10
		11.00	SPT(C)	N=15 (2,3/2,4,3,6)				*11.00m - 13.80m : Frequent timber fragments (35cm) and strong odour.*	11
		12.00	SPT(C)	N=13 (2,2/2,3,4,4)					12
		13.00	SPT(C)	N=6 (1,1/3,1,1,1)					13
		14.00	SPT(S)	N=40 (4,7/9,11,11,9)	13.85	68.75		Stiff, brown, slightly gravelly CLAY. Gravel is subrounded of fine mixed natural lithologies. CGT	14
					14.10	68.50		Brown, fine to medium SAND. GGT	
					14.80	67.80		End of Borehole at 14.80m	15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
14.80m	200mm	14.10m 14.80m	200mm 150mm									0.00m 9.00m	9.00m 13.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 14.1m, where a bentonite seal was placed then 6 inch casing until 14.8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP110
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387426.48 N400217.34
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 80.41m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.50m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.20	80.21		Firm, dark brown, slightly sandy, silty CLAY. TF	
		0.60	ES					Recovered as dark grey, gravelly, very clayey, fine to coarse SAND. Gravel is subangular to subrounded of fine to coarse brick, concrete and sandstone. GMG	
		0.60		0.10ppmv	0.80	79.61		Recovered as very soft, white, gravelly CLAY. Gravel is subangular of fine to coarse weathered chalk. CMG	1
		1.50	SPT(S)	N=1 (1,0/0,0,0,1)	1.50	78.91		Driller notes black ashy GRAVEL of brick with occasional brick cobbles. GMG	2
	▽	2.50	SPT(C)	N=4 (1,2/1,0,2,1)	2.50	77.91		Recovered as 85% grey and brown sandy, very clayey GRAVEL; 15% cobble sized inclusions of firm, brown CLAY. Gravel is angular to subangular of fine to coarse mixed lithologies. GMG	3
		3.50	SPT(C)	N=13 (1,2/4,3,3,3)					
	▽				4.00	76.41		Stiff, brown, gleyed grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CGT	4
		4.50 – 4.95	D						
		4.50 – 5.50	B						5
		4.50	SPT(S)	N=10 (2,3/3,2,2,3)					
	▼	5.50 – 5.95	UT					*5.50m - 5.70m : Driller notes thin lamination of SAND.*	6
		7.00 – 7.45	D						
		7.00 – 8.50	B						7
		7.00 – 8.50	B						
		7.00	SPT(S)	N=10 (1,2/2,3,3,2)					
		8.00 – 8.45	UT						8
					8.50	71.91		End of Borehole at 8.50m	9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
1.20m 8.50m	300mm 200mm	7.00m	200mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP112/RH103
Sheet 1 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387644.00 N400248.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 83.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	31.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	83.80		Recovered as brown, organic, slightly sandy, gravelly CLAY with occasional roots and rootlets. TF	
		1.00	SPT(S)	N=11 (3,3/3,3,3,2)				Recovered as 75% firm, brown and grey mottled, slightly sandy, gravelly CLAY; 10% cobble sized fragments of red brick; 5% cobble sized metal fragments; 5% cobble sized aminated hardboard fragments; 5% cobble sized timber fragments; and 5% roots and rootlets. Gravel is angular to subrounded of fine to coarse brick (60%), concrete (5%), ceramic (5%), glass (5%), sandstone (5%) and mudstone (5%). CMG	1
		1.50	ES						
		2.00	SPT(S)	N=8 (1,1/1,2,2,3)	2.00	81.90		Recovered as medium dense, brown, clayey, very sandy angular to subrounded of fine to coarse GRAVEL of timber (45%), red brick (30%), glass (10%), concrete (5%) and ceramic (5%). GMG	2
		3.00	SPT(S)	N=20 (3,4/3,3,5,9)	3.00	80.90		Recovered as 75% dark brown, stained black, gravelly, fine to coarse SAND; 20% cobble sized inclusions of firm, brown and grey mottled, slightly gravelly CLAY; and 5% rootlets. Gravel is angular to subangular of fine to medium brick (80%), ceramic, glass, and sandstone (20%). Hydrocarbon odour. GMG	3
		3.50	ES						
	▽	4.00	SPT(S)	N=5 (1,2/2,1,1,1)	4.00	79.90		Recovered as 60% cobble to boulder sized inclusions of stiff, brown mottled grey in places, slightly gravelly CLAY; 15% plastic sheeting, 15% cobble sized red brick and concrete fragments; and 10% cobble sized timber fragments. Gravel is subangular to subrounded of fine to medium mixed lithologies. Very strong odour. CMG	4
	▼	5.00	SPT(S)	N=12 (1,1/2,2,4,4)	5.00	78.90		Recovered as firm, brown, slightly gravelly CLAY with occasional rootlets. Gravel is subangular to well rounded of fine to medium mixed lithologies. CMG	5
					5.45	78.45		*5.40m - 5.45m : Brown, fine to medium SAND.*	
		6.50	SPT(S)	N=11 (1,2/2,2,3,4)				Recovered as 80% grey, sandy, slightly clayey GRAVEL; 10% cobble sized timber fragments; 5% cobble sized metal fragments, 5% plastic. Gravel is subangular to subrounded of fine to coarse glass, brick, and concrete. Hydrocarbon odour. GMG	6
					6.80	77.10		Firm, brown, slightly sandy, slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	7
					7.60	76.30		Medium dense, light brown, gravelly, fine to medium SAND possibly with occasional cobble sized pockets of sand. Gravel is subrounded of fine to coarse sandstone, mudstone, and siltstone. GGT	8
		8.00							
		8.00	ES						
		8.00	SPT(S)	N=15 (4,4/3,3,5,4)				*8.45m - 9.30m : Occasional cobble sized pockets of black sand.*	
									9
					9.30	74.60		Soft, brown, slightly sandy, slightly gravelly CLAY possibly with occasional laminations of fine sand. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Sand is fine to medium. CGT	
		9.50	SPT(S)	N=19 (3,2/4,4,5,6)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 15.80m	200mm 150mm	7.00m 15.80m	200mm 150mm									0.00m 8.00m 0.00m 27.00m	8.00m 9.00m 27.00m 30.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 15.8m and then rotary open hole follow on through a bentonite seal from 15.8m to 31m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP112/RH103
Sheet 2 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387644.00 N400248.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 83.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	31.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Soft, brown, slightly sandy, slightly gravelly CLAY possibly with occasional laminations of fine sand. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Sand is fine to medium. CGT *10.20m : Becoming firm, brown, slightly sandy, slightly gravelly CLAY.*	10
		11.00 – 12.00 11.00	B SPT(S)	N=19 (2,2/4,4,5,6)	11.00	72.90		Stiff, brown, slightly gravelly CLAY. Gravel is subangular to well rounded of fine to medium mixed natural lithologies. CGT	11
		12.50 – 12.95	UT						12
		12.85 – 13.30	UT		12.85	71.05		Very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to well rounded of fine to medium mixed natural lithologies. CGT *13.00m - 15.80m : Becoming soft with coarse gravel sized pockets of fine sand.*	13
									14
									15
					15.80	68.10		Driller notes sandy CLAY. CGT	16
									17
					18.00	65.90		Driller notes wet SAND. GGT	18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 15.80m	200mm 150mm	7.00m 15.80m	200mm 150mm									0.00m 8.00m 0.00m 27.00m	8.00m 9.00m 27.00m 30.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 15.8m and then rotary open hole follow on through a bentonite seal from 15.8m to 31m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP112/RH103
Sheet 3 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387644.00 N400248.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 83.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	31.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
								Driller notes wet SAND. GGT	20
					20.50	63.40			
					20.70	63.20		Driller notes BOULDER. GGT	
								Driller notes wet SAND. GGT	21
									22
									23
									24
									25
									26
		26.50 – 28.50	D						27
					28.00	55.90		Very stiff to hard, friable, thinly laminated, brown, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	28
		28.50 – 30.50	C						29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 15.80m	200mm 150mm	7.00m 15.80m	200mm 150mm									0.00m 8.00m 0.00m 27.00m	8.00m 9.00m 27.00m 30.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 15.8m and then rotary open hole follow on through a bentonite seal from 15.8m to 31m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP112/RH103
Sheet 4 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387644.00 N400248.00
Project No. : LD10385	Drilling Equipment: Dando 2500 & Comacchio 205	Level : 83.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG	JC	MP	67%	31.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					29.50	54.40		Very stiff to hard, friable, thinly laminated, brown, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	
								Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to subangular of fine to coarse gritstone and crystalline rocks. Sand is fine. CGT	30
					30.37	53.53		Very stiff to hard, friable, thinly laminated, brown, slightly gravelly CLAY with possible medium cobble content. Cobbles are subangular to subrounded of mixed natural lithologies. Gravel is subangular to rounded of fine to coarse grey siltstone, gritstone, quartz, and crystalline rocks. CGT	
					31.00	52.90		End of Borehole at 31.00m	31
									32
									33
									34
									35
									36
									37
									38
									39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
7.00m 15.80m	200mm 150mm	7.00m 15.80m	200mm 150mm									0.00m 8.00m 0.00m 27.00m	8.00m 9.00m 27.00m 30.00m	PLAIN SLOTTED PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 15.8m and then rotary open hole follow on through a bentonite seal from 15.8m to 31m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP113
Sheet 1 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020 - 09/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387534.31 N400109.85
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 81.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.10	81.10		Recovered as firm, dark brown, slightly sandy, silty CLAY. TF	
					0.40	80.80		Recovered as 70% whole and half red bricks ; and 30% cobble sized inclusions of brown and orange, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse red brick. CMG	
	▽	0.50	ES		0.60	80.60		Recovered as dark grey, sandy CLAY. Gravel is subangular of fine to coarse coal, suspected clinker and glass. CMG	
		0.50		0.10ppmv					1
		0.80							
		0.80	ES						
		0.80		0.80ppmv					
		1.20	SPT(S)	N=13 (3,3/4,2,2,5)	1.20	80.00		Soft to firm, slightly sandy, slightly gravelly CLAY possibly with occasional silt and fine sand lenses. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CGT	
		2.00	SPT(S)	N=18 (1,2/3,7,5,3)				*0.95m : Slight seepage.*	2
					2.20	79.00		Medium dense, brown, silty, very clayey, fine to medium SAND. GGT	
					2.40	78.80			
	▽				2.60	78.60		Firm to stiff, brown mottled grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium sandstone, mudstone and coal. CGT	
		3.00 – 3.45	UT					Driller notes medium dense, orangish brown coarse SAND. GGT	3
	▼	3.45 – 3.65	UT					Driller notes brown, sandy, silty CLAY with occasional sandy, gravelly lenses. CGT	
		4.00	SPT(S)	N=15 (1,2/3,3,4,5)					4
		5.00 – 5.45	UT						5
		5.45 – 6.00	B						
		5.45 – 6.00	B						6
		6.45 – 7.00	B						
		6.45 – 7.00	B						
		7.00 – 7.45	UT						7
					8.00	73.20		End of Borehole at 8.00m	8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.00m	200mm	1.20m 8.00m	200mm 150mm									0.00m 1.30m	1.30m 3.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 1.2m, where a bentonite seal was placed then 6 inch casing until 8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP113
Sheet 2 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020 - 09/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387534.31 N400109.85
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 81.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					10 11 12 13 14 15 16 17 18 19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.00m	200mm	1.20m 8.00m	200mm 150mm									0.00m 1.30m	1.30m 3.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 1.2m, where a bentonite seal was placed then 6 inch casing until 8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP113
Sheet 3 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020 - 09/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387534.31 N400109.85
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 81.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					

20
21
22
23
24
25
26
27
28
29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.00m	200mm	1.20m 8.00m	200mm 150mm									0.00m 1.30m	1.30m 3.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 1.2m, where a bentonite seal was placed then 6 inch casing until 8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP113
Sheet 4 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020 - 09/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387534.31 N400109.85
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 81.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					30 31 32 33 34 35 36 37 38 39

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.00m	200mm	1.20m 8.00m	200mm 150mm									0.00m 1.30m	1.30m 3.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 1.2m, where a bentonite seal was placed then 6 inch casing until 8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP113
Sheet 5 of 5

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020 - 09/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387534.31 N400109.85
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 81.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	8.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					40 41 42 43 44 45 46 47 48

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
8.00m	200mm	1.20m 8.00m	200mm 150mm									0.00m 1.30m	1.30m 3.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion clean drilling method utilised. 8 inch casing used until 1.2m, where a bentonite seal was placed then 6 inch casing until 8m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP114/RH108
Sheet 1 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 29/10/2020 - 04/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387847.93 N400452.83
Project No. : LD10385	Drilling Equipment: Dando 2500+Comacchio 205	Level : 85.45m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	28.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00							
		0.00 – 1.00	ES					Recovered as soft, grey, slightly sandy, slightly gravelly CLAY with occasional roots and rootlets. Gravel is subangular to subrounded of fine to coarse red brick (20%), timber (20%), ceramic (10%), glass (5%), and mixed natural lithologies (55%). Sand is fine to medium. TF	
		0.50		0.10ppmv					
		1.00	SPT(S)	N=3 (0,0/1,0,1,1)					1
					1.10	84.35		Soft, brown, mottled light grey, slightly gravelly CLAY. Gravel is angular of fine shale. CGT	
					1.30	84.15		Firm to stiff, soft where wet, brown, mottled grey and orangish brown, slightly sandy, slightly gravelly CLAY with occasional silt lenses. Sand is fine. Gravel is subangular to rounded of fine to coarse pebbles, crystalline rocks, sandstone, siltstone, and red sandstone. CGT	
		2.00 – 3.00	B						
		2.00	SPT(S)	N=7 (1,1/2,1,1,3)					2
		3.00	SPT(S)	N=18 (2,3/3,4,5,6)				*3.00m - 3.45m : Occasional plant remains.*	3
		4.00	SPT(S)	N=8 (1,1/2,2,2,2)					4
		5.00 – 6.00							
		5.00 – 6.00	ES						5
		5.00	SPT(S)	N=9 (1,1/2,2,2,3)					
		5.50		0.00ppmv					
		6.00 – 7.00	B						6
		6.60	SPT(S)	N=44 (3,4/4,9,13,18)	6.60	78.85		Dense, wet, brown, fine to coarse, slightly gravelly, clayey SAND. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. GGT	7
		8.00 – 9.00	ES		8.00	77.45		Medium dense, damp, brown, fine to coarse, slightly gravelly SAND. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. GGT	8
		8.00	SPT(S)	N=10 (1,2/2,2,2,4)					
		8.50		0.20ppmv					
		9.00 – 10.00	B						9
		9.50	SPT(S)	N=50 (3,10/15,25,10,0)				*9.50m - 10.00m : Occasional medium gravel sized inclusions of soft, brown CLAY.*	
					9.80	75.65			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.50m	200mm	11.00m	200mm									0.00m 26.00m	26.00m 27.80m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 10.95m and then rotary open hole follow on through a bentonite seal from 10.95m to 28m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP114/RH108
Sheet 2 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 29/10/2020 - 04/11/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387847.93 N400452.83
Project No. : LD10385	Drilling Equipment: Dando 2500+Comacchio 205	Level : 85.45m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	67%	28.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Sample and In Situ Testing: Type	Sample and In Situ Testing: Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					10.95	74.50		Very dense, damp, orangish brown, fine to coarse SAND. GGT	10
								See Next Page for Geological Information	11
									12
									13
									14
								See Next Page for Geological Information	15
									16
									17
								See Next Page for Geological Information	18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
10.50m	200mm	11.00m	200mm									0.00m 26.00m	26.00m 27.80m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 10.95m and then rotary open hole follow on through a bentonite seal from 10.95m to 28m.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
CP114/RH108
Sheet 3 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 29/10/2020 - 04/11/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387847.93 N400452.83	
Project No. : LD10385	Drilling Equipment: Dando 2500+Comacchio 205	Level : 85.45m AoD	Final Depth: 28.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											See Previous Page for Geological Information	10
											Driller notes SAND. GGT	11
												12
												13
												14
								15.00	70.45		Driller notes GRAVEL. GGT	15
												16
												17
								18.00	67.45		Driller notes consolidated CLAY. CGT	18
												19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.50m	200mm	11.00m	200mm															0.00m 26.00m	26.00m 27.80m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 10.95m and then rotary open hole follow on through a bentonite seal from 10.95m to 28m.

Log printed on 13/09/2022 at 13:09

Rotary Cored Borehole Log

BOREHOLE REFERENCE
CP114/RH108
Sheet 4 of 4

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 29/10/2020 - 04/11/2020	
Location: Newton Heath	Contractor: Geotron	Co-ords: E387847.93 N400452.83	
Project No. : LD10385	Drilling Equipment: Dando 2500+Comacchio 205	Level : 85.45m AoD	Final Depth: 28.00m

Logged By	Checked By	Approved By	Bit Type	Core Barrel
ZH	JC	MP		

Install. / Backfill	Water Strikes	Depth (m)	Type / FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	Scale
											Driller notes consolidated CLAY. CGT	20
								22.00	63.45		Driller notes boulder CLAY. CGT	21
								26.00	59.45		Recovered as damp, reddish brown, slightly gravelly, fine to coarse SAND. Gravel is subangular to rounded of fine to coarse sandstone, quartz and mixed natural lithologies. GGT	22
								28.00	57.45		End of Borehole at 28.00m	23
												24
												25
												26
												27
												28
												29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						Installation			
Base	Diameter	Base	Diameter	Top	Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Type	Colour	Min (%)	Max (%)	Top	Base	Pipe Type	Diameter
10.50m	200mm	11.00m	200mm															0.00m 26.00m	26.00m 27.80m	PLAIN SLOTTED	

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present. Cable percussion method utilised until 10.95m and then rotary open hole follow on through a bentonite seal from 10.95m to 28m.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP201
Sheet 1 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/03/2022 - 18/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387475.67 N400304.35
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.55m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC & JP	JC	MP	65%	19.95m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 1.20	B		0.30	82.25		Recovered as dark brown, gravelly, very clayey, fine to medium SAND with occasional cobble sized fragments of red brick, concrete and ceramics. Gravel is angular of fine to coarse red brick, ceramic and concrete. TF	
					1.20	81.35		Recovered as soft to firm, dark brown, slightly gravelly, sandy CLAY with frequent cobble sized fragments of red brick and concrete. Gravel is angular of fine to medium red brick, bitumen and concrete. Hydrocarbon / bitumen odour. CMG	1
		1.50 – 2.50	B						
		1.50	SPT(S)	N=4 (2,1/1,1,1,1)				Recovered as damp, dark brownish grey, gravelly, very clayey, fine to medium SAND with occasional cobble sized fragments of red brick and plastic. Gravel is angular of fine to medium red brick, plastic, glass and concrete. Hydrocarbon odour. GMG	2
		2.50	SPT(S)	N=7 (2,1/1,1,2,3)	2.40	80.15		Recovered as wet, dark grey, sandy GRAVEL with occasional cobble sized fragments of red brick, glass and timber. Gravel is angular to subrounded of fine to coarse suspected clinker, glass, timber, plastic and shale. Hydrocarbon odour. GMG	
		3.00 – 4.00	B					*3.00m : Becoming very sandy from 3.00m.*	3
		4.50	SPT(S)	N=7 (3,10/1,1,2,3)				*4.50m : Strong hydrocarbon odour from 4.50m.*	4
		5.00 – 6.00	B		5.00	77.55		Recovered as wet, black, very sandy GRAVEL with occasional cobble sized fragments of metal and red brick. Gravel is angular to subrounded of fine to coarse red brick, glass, concrete, shale and suspected clinker. Occasional cobble sized plastic sheeting fragments. Strong hydrocarbon odour. GMG	5
		6.00	SPT(S)	N=19 (5,1/3,4,5,7)				*6.00m - 6.45m : Recovered as clayey between 6.00m and 6.45m.*	6
									7
		7.50 – 8.40	B		7.50	75.05			
		7.50	SPT(S)	N=12 (1,1/2,2,3,5)				Recovered a soft to firm, probably firm to stiff as recovered from the SPT tool, wet, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	8
		8.20 – 9.00	B						
		9.00	SPT(S)	N=28 (5,5/6,7,7,8)					9
		9.50 – 10.20	B						

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.95m	200mm	8.50m	200mm	12.00m 15.00m 16.70m 16.95m 18.00m	15.00m 16.00m 16.95m 18.00m 19.00m	04:00 02:00 01:25 02:00 01:00						0.00m 2.00m	2.00m 7.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP201
Sheet 2 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/03/2022 - 18/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387475.67 N400304.35
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.55m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC & JP	JC	MP	65%	19.95m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					9.95	72.60		Recovered a soft to firm, probably firm to stiff as recovered from the SPT tool, wet, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	10
		10.50	SPT(S)	N=30 (3,4/4,6,10,10)				Recovered as soft to stiff, probably stiff to very stiff as recovered from the SPT tool, wet, brown, slightly sandy CLAY with rare subangular to subrounded, fine to medium gravel of mixed lithologies. CGT	
		11.00 – 11.30	B						11
		12.00	SPT(S)	N=50 (6,7/7,14,13,16)				*12.00m : Becoming slightly gravelly from 12.00m.*	12
		12.50 – 13.00	B						13
		14.00	SPT(S)	N=50 (5,6/11,13,13,13)	14.00	68.55		Recovered as soft to firm, probably stiff to very stiff as recovered from the SPT tool, wet, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded, fine to medium of mixed lithologies. CGT	14
		14.50 – 15.00	B						
		15.00 – 16.00	B		15.00	67.55		Very stiff to hard, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular of fine to medium mixed natural lithologies. CGT	15
		15.00	SPT(S)	N=50 (6,6/10,15,15,10)					
		16.50	SPT(S)	50 (6,10/15,15,20 for 50mm)					16
		16.70	D		16.70	65.85		Driller notes grey / brown hard rock. Possibly a very large boulder within very stiff to hard, dark brown, slightly sandy, slightly gravelly CLAY. Gravel as above and below. CGT	17
					17.45	65.10		Very stiff to hard, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	
		18.00	SPT(S)	N=50 (7,8/10,12,12,16)					18
		19.50	SPT(S)	50 (6,12/15,20,15 for 37.5mm)				*19.50m - 19.95m : Recovered as soft to stiff between 19.50m and 19.95m.*	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.95m	200mm	8.50m	200mm	12.00m 15.00m 16.70m 16.95m 18.00m	15.00m 16.00m 16.95m 18.00m 19.00m	04:00 02:00 01:25 02:00 01:00						0.00m 2.00m	2.00m 7.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP201
Sheet 3 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/03/2022 - 18/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387475.67 N400304.35
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.55m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC & JP	JC	MP	65%	19.95m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					19.95	62.60		Very stiff to hard, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	20
								End of Borehole at 19.95m	21
									22
									23
									24
									25
									26
									27
									28
									29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.95m	200mm	8.50m	200mm	12.00m 15.00m 16.70m 16.95m 18.00m	15.00m 16.00m 16.95m 18.00m 19.00m	04:00 02:00 01:25 02:00 01:00						0.00m 2.00m	2.00m 7.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP202
Sheet 1 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/04/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387549.70 N400181.97
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	68%	19.80m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
	0.00 – 1.00	B					Recovered as dark brown, gravelly SAND. Gravel is angular to subrounded of fine to coarse red brick, concrete, suspected slag, burnt timber, sandstone, mudstone, slate and mixed lithologies. GMG	
	1.00 – 2.00	B		1.00	81.18		Recovered as damp, brown, sandy GRAVEL with occasional cobble sized fragments of red brick, metal and sandstone. Gravel is angular to subangular of fine to coarse red brick, metal, glass, sandstone, timber. suspected slag and suspected clinker. Occasional gravel sized plastic bag fragments. GMG	1
	1.50	SPT(S)	N=36 (1,2/7,10,11,8)				*1.50m - 1.60m : Recovered from the SPT tool as firm, brown, sandy, gravelly clay. Gravel as above.*	
	2.00 – 3.00	B					*2.00m - 3.00m : Becoming very sandy and no longer damp.*	2
	3.00	SPT(S)	N=50 (6,6/2,3,2,43)	3.00	79.18		Recovered as dark greyish brown, gravelly, ashy SAND with rare cobble sized fragments of suspected slag. Gravel is angular to subangular of fine to coarse glass, red brick, suspected slag, suspected clinker, timber, tile, quartz and mixed lithologies. Occasional cobble sized fragments of fabric / carpet and plastic sheeting. GMG	3
	4.00 – 5.00	B					*4.00m - 6.00m : Becoming damp with occasional cobble sized fragments of red brick, suspected slag and sandstone.*	4
	4.40	SPT(S)	N=2 (1,0/1,0,0,1)					
	5.00 – 6.00	B						5
	6.00 – 7.00	B		6.00	76.18			6
	6.00	SPT(S)	N=21 (2,3/2,2,8,9)				Recovered as dark greyish brown, sandy, ashy in places GRAVEL with frequent cobble sized fragments of timber, concrete, suspected slag, sandstone and metal. Gravel is angular to rounded of fine to coarse red brick, suspected slag, timber, concrete, glass, tiles, metal, quartz, slate, plastic and mixed lithologies. GMG	
	7.00 – 8.00	B					*7.00m - 8.00m : Becoming damp with frequent cobble sized plastic sheeting fragments.*	7
	7.40	SPT(S)	N=8 (2,2/2,2,2,2)					
	8.00 – 9.00	B		8.00	74.18		Recovered as dark greyish brown, gravelly SAND with occasional cobble sized fragments of red brick, rubber / tyres and suspected slag. Gravel is angular to rounded of fine to coarse red brick, metal, timber, suspected slag and mixed lithologies GMG	8
	9.00 – 10.00	B					*8.00m - 9.00m : Occasional metal rods, metal springs and plastic bags.*	
	9.00	SPT(S)	N=31 (9,15/12,7,7,5)				*9.00m - 10.00m : Becoming ashy with rare cobble sized fragments of concrete.*	9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.40m	200mm	13.50m	200mm	1.40m 4.00m 7.40m 18.00m	2.30m 8.00m 12.50m 19.40m	00:45 01:20 01:25 01:35									

Remarks

Inspection pit hand dug to 1.20m bgl.
Could not install as the standpipe became buoyant and could not be pushed down to the required depths. Redrill required as CP202A.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP202
Sheet 2 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/04/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387549.70 N400181.97
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	68%	19.80m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
	10.00 – 11.00	B					Recovered as dark greyish brown, gravelly SAND with occasional cobble sized fragments of red brick, rubber / tyres and suspected slag. Gravel is angular to rounded of fine to coarse red brick, metal, timber, suspected slag and mixed lithologies GMG	10
	10.50	SPT(S)	N=45 (5,4/2,1,1,41)				*10.00m - 11.00m : Becoming very gravelly and within occasional cobble sized fragments of red brick, concrete and sandstone.*	
	11.00 – 12.00	B						11
	11.00 – 12.00	B						
	12.00 – 13.00	B		12.00	70.18		Recovered as soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse red brick, timber, plastic, wood, metal and mixed lithologies. GMG	12
	12.00	SPT(S)	N=15 (2,2/6,3,3,3)					
				12.70	69.48		Soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	
	13.00 – 14.00	B						13
	13.50	SPT(S)	N=23 (3,3/5,5,6,7)				*13.50m - 13.95m : Recovered from the base of the SPT tool as brown sand. Possible lense of brown sand.*	
	14.00 – 15.00	B						14
	15.00 – 16.00	B					*15.00m - 17.00m : Damp between 15.00m and 17.00m.*	15
	15.00	SPT(S)	N=28 (3,4/5,6,8,9)					
	16.00 – 17.00	B						16
	17.00 – 18.00	B						17
	18.00 – 19.00	B						18
	18.00	SPT(S)	N=43 (8,11/11,11,10,11)					
	19.00 – 19.40	B						19
	19.40	SPT(S)	100 (4,8/11,21,18,50 for 80mm)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.40m	200mm	13.50m	200mm	1.40m 4.00m 7.40m 18.00m	2.30m 8.00m 12.50m 19.40m	00:45 01:20 01:25 01:35									

Remarks

Inspection pit hand dug to 1.20m bgl.
Could not install as the standpipe became buoyant and could not be pushed down to the required depths. Redrill required as CP202A.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP202
Sheet 3 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/04/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387549.70 N400181.97
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	68%	19.80m

Install. / Backfill	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
	Depth (m)	Type	Results					
				19.80	62.38		Soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	
							End of Borehole at 19.80m	

20
21
22
23
24
25
26
27
28
29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.40m	200mm	13.50m	200mm	1.40m 4.00m 7.40m 18.00m	2.30m 8.00m 12.50m 19.40m	00:45 01:20 01:25 01:35									

Remarks

Inspection pit hand dug to 1.20m bgl.
Could not install as the standpipe became buoyant and could not be pushed down to the required depths. Redrill required as CP202A.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP202A
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/04/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387549.70 N400181.97
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Driller notes Made Ground FILL with brick, concrete, glass, timber and fabric. GMG	1 2 3 4 5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	14.10m	200mm	1.50m	0.00m	01:45						0.00m 13.00m	13.00m 15.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Redrill for CP202 as monitoring well at this position became buoyant and could not be installed at the correct depth.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth for monitoring well that was supposed to be installed as CP202 was achieved.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP202A
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/04/2022 - 20/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387549.70 N400181.97
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.18m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Driller notes Made Ground FILL with brick, concrete, glass, timber and fabric. GMG	10
					12.70	69.48		Driller notes firm brown boulder CLAY. CGT	11
					13.10	69.08		Driller notes brown fine SAND. GGT	12
					13.70	68.48		Driller notes firm brown boulder CLAY. CGT	13
					15.00	67.18		End of Borehole at 15.00m	14
									15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	14.10m	200mm	1.50m	0.00m	01:45						0.00m 13.00m	13.00m 15.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Redrill for CP202 as monitoring well at this position became buoyant and could not be installed at the correct depth.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth for monitoring well that was supposed to be installed as CP202 was achieved.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP203
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 04/04/2022 - 06/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387702.20 N400203.13
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.68m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	68%	14.95m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as dark brown, gravelly SAND with occasional cobble size fragments of red brick, fabric and leather. Gravel is angular to rounded of fine to coarse red brick, concrete, glass, fabric and mixed lithologies. Occasional plastic bag fragments and roots / rootlets. GMG	
		1.00 – 2.00	B		1.00	81.68		Recovered as brown, sandy, clayey GRAVEL with rare cobble sized fragments of carpet. Gravel is angular to subrounded of fine to coarse glass, red brick, tiles, burnt wood and mixed lithologies. Occasional roots and rootlets. GMG	1
		1.60	SPT(S)	N=8 (2,3/2,2,2,2)	1.50	81.18		Recovered as soft, brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized fragments of metal and hessian fabric. Gravel is angular to subrounded of fine to coarse red brick, coal, burnt wood, tiles and mixed lithologies. CMG	
		2.00 – 3.00	B						2
		3.00 – 4.00	B					*3.00m - 4.50m : Becoming damp with occasional cobble sized fragments of red brick between 3.00m and 4.50m.*	3
		3.00	SPT(S)	N=4 (4,1/1,0,2,1)					
		4.00 – 5.00	B						4
		4.70	SPT(S)	N=16 (4,4/4,4,4,4)	4.70	77.98		Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded of fine to coarse mixed natural lithologies. CGT	
		5.00 – 6.00	B		5.15	77.53		Medium dense, becoming loose from 7.50m, light brown gravelly, silty coarse SAND. Gravel is angular to rounded of fine to coarse sandstone and coal. GGT	5
		6.00 – 7.00	B						6
		6.00	SPT(S)	N=13 (2,3/2,3,4,4)					
		7.00	B						7
		7.00 – 8.00	B						
		7.40	SPT(S)	N=9 (0,0/1,2,3,3)					
		8.00 – 9.00	B		7.80	74.88		Soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to medium coal and mixed natural lithologies. CGT *8.00m : Becoming damp from 8.00m.*	8
		9.00 – 10.00	B						9
		9.45	SPT(S)	N=13 (2,3/3,3,3,4)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
14.50m	200mm	9.00m	200mm	13.50m	14.50m	00:45						0.00m 4.50m	4.50m 7.50m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP203
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 04/04/2022 - 06/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387702.20 N400203.13
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.68m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	68%	14.95m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.00 – 11.00	B					Soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to medium coal and mixed natural lithologies. CGT	10
		10.50 – 10.95	U	Ublow=110				*10.00m - 11.00m : Becoming sandy between 10.00m and 11.00m.*	
		10.95 – 11.05	D		11.00	71.68			11
		11.00 – 12.00	B					Recovered as soft to firm, probably firm as recovered from the SPT tool, reddish brown to brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. CGT	
		12.00 – 13.00	B					*11.00m - 12.00m : Damp between 11.00m and 12.00m.*	
		12.00	SPT(S)	N=14 (2,2/3,3,4,4)				*12.00m - 13.00m : With occasional subangular to rounded cobbles of mudstone.*	12
		13.00 – 14.00	B					*13.00m - 14.00m : Becoming wet between 13.00m and 14.00m.*	13
		13.60	SPT(S)	N=26 (2,4/5,6,7,8)					
		14.00 – 14.50	B						14
		14.50	SPT(S)	N=35 (4,5/5,8,11,11)				*14.50m : Possibly becoming stiff from 14.50m.*	
					14.95	67.73		End of Borehole at 14.95m	15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
14.50m	200mm	9.00m	200mm	13.50m	14.50m	00:45						0.00m 4.50m	4.50m 7.50m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP204
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 31/03/2022 - 07/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387729.42 N400285.79
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 85.16m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	65%	18.25m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as soft, dark brown to dark grey, mottled black, red and orange, sandy, gravelly CLAY with occasional cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, red brick, timber and mixed lithologies. CMG	1
		1.50	SPT(S)	N=10 (5,1/2,3,2,3)	1.50	83.66		Recovered as soft, brown to grey, mottled black, slightly gravelly, sandy / ashy CLAY with rare cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, red brick, suspected clinker, suspected slag, concrete and mixed lithologies. CMG	
		2.00 – 2.40	B						2
		3.00	SPT(S)	N=23 (6,6/7,7,3,6)					3
		3.70 – 4.00	B						
	▽	4.00	B		4.00	81.16		Recovered as soft, dark brown brownish grey, slightly sandy, gravelly CLAY with rare cobble sized fragments of red brick and concrete. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, suspected slag and suspected clinker. CMG	4
		4.00 – 4.50	B						
	▼	4.50	SPT(S)	N=16 (1,0/3,3,5,5)	4.60	80.56		Recovered as soft, brown to dark grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse sandstone and mudstone. CMG	
	▽	5.00 – 5.60	B						5
		6.00	SPT(S)	N=49 (5,4/10,12,12,15)	6.00	79.16		Recovered as firm, reddish brown to greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, sandstone and mudstone. CMG	6
		6.50 – 7.00	B						
	▼	7.50 – 8.00	B		7.50	77.66		Recovered as soft to firm, wet, brown, slightly sandy, slightly gravelly CLAY with occasional cobble sized fragments of red brick, sandstone and quartzite. Gravel is subangular to rounded of fine to coarse red brick, sandstone and quartzite. Driller notes sheen on water and hydrocarbon oodur. CMG	7
		7.50	SPT(S)	N=14 (3,6/6,4,2,2)					
	▽	8.10 – 9.00	B		8.00	77.16		Recovered as soft, brown to reddish brown, slightly sandy, slightly gravelly CLAY with frequent cobble sized fragments of sandstone and quartzite. Gravel is angular to subrounded of fine to coarse sandstone and mudstone. CMG	8
		9.00	SPT(S)	N=18 (3,2/4,4,5,5)	9.00	76.16		Recovered as soft to firm, probably stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Drillers note hints of red brick. CMG	9
		9.30 – 9.45	B					Recovered as soft to firm, probably stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	
					9.50	75.66			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
18.00m	200mm	16.00m	200mm	6.00m 8.50m 10.50m 11.50m 15.50m	7.50m 9.00m 11.20m 13.00m 18.00m	01:00 00:35 00:45 01:15 02:30						0.00m 12.00m	12.00m 17.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP204
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 31/03/2022 - 07/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387729.42 N400285.79
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 85.16m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	65%	18.25m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.50	SPT(S)	N=28 (3,4/6,8,7,7)				Recovered as soft to firm, probably stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT *10.00m : Becoming firm from 10.00m.*	10 11
		11.50 – 12.00	B		11.50	73.66		Driller notes stiff, dark brown, boulder CLAY. CGT	
		12.00	SPT(S)	N=26 (2,4/4,6,8,8)					12
		13.00 – 13.50	B						13
		13.50 – 14.50 13.50	B SPT(S)	N=44 (4,6/10,10,11,13)	13.50	71.66		Recovered as soft to firm, probably very stiff as noted by drillers, wet, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	14
		15.00	SPT(S)	50 (7,8/25,25 for 50mm)	15.00	70.16		Brown SAND. GGT	15
		16.50	SPT(S)	N=50 (10,9/12,13,13,12)	16.00	69.16		Driller notes very stiff, brown, boulder CLAY. CGT	16 17
		18.00	SPT(S)	50 (10,12/30,20,0 for 0mm)	18.25	66.91		End of Borehole at 18.25m	18 19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
18.00m	200mm	16.00m	200mm	6.00m 8.50m 10.50m 11.50m 15.50m	7.50m 9.00m 11.20m 13.00m 18.00m	01:00 00:35 00:45 01:15 02:30						0.00m 12.00m	12.00m 17.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP205
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/04/2022 - 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387739.59 N400236.33
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.88m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	65%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as dark brown to reddish brown, mottled orangish red, very gravelly, very clayey SAND with occasional cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramic, concrete and mixed lithologies. GMG	
		1.00 – 2.00	B						1
		1.50	SPT(S)	N=5 (1,0/2,1,1,1)					
		2.00 – 3.00	B						2
					2.20	80.68		Recovered as wet, dark brown, mottled reddish brown, gravelly, clayey SAND / ASH. Gravel is angular to rounded of fine to coarse red brick, plastic, glass, timber, suspected slag, suspected clinker and mixed lithologies. CW	
		3.00 – 4.00	B						3
	▽	3.00	SPT(S)	N=2 (1,0/1,0,1,0)					
					3.40	79.48		Recovered as soft, brown to grey, slightly gravelly, sandy / ashy CLAY. Gravel is angular to subangular of fine to coarse red brick, timber and mixed lithologies. CMG	
		4.00 – 5.00	B						4
		4.50	SPT(S)	N=2 (1,1/0,1,0,1)					
		5.00 – 6.00	B		5.00	77.88		Recovered as soft, brown to dark brown, slightly sandy / ashy, gravelly CLAY. Gravel is angular of fine to coarse red brick and mixed lithologies. CMG	5
		6.00 – 7.00	B						6
		6.00	SPT(S)	N=9 (2,1/2,1,3,3)					
		7.00 – 8.00	B						7
					7.20	75.68		Dense reddish brown slightly gravelly SAND. Gravel is angular to subrounded of fine to medium sandstone. GGT	
		7.50	SPT(S)	N=33 (5,5/5,9,9,10)					
		8.00	B						8
		8.00 – 9.00	B						
					8.50	74.38		Firm, reddish brown to dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	
		9.00 – 10.00	B						9
		9.00	SPT(S)	N=14 (2,2/2,4,4,4)					
					9.70	73.18		Driller notes firm, brown, boulder CLAY. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	9.50m	200mm	1.20m 1.50m	2.20m 2.80m	01:20 01:00						0.00m 1.00m	1.00m 7.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP205
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/04/2022 - 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387739.59 N400236.33
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.88m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	65%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00 – 11.00	B					Driller notes firm, brown, boulder CLAY. CGT	10
		10.50	SPT(S)	N=22 (2,2/3,4,5,10)					
		11.00 – 12.00	B						11
		12.00 – 12.45	U	Ublow=69					12
		12.00 – 13.00	B						
		13.00 – 14.00	B						13
		13.50	SPT(S)	N=37 (4,5/7,8,10,12)					
		14.00 – 15.00	B						14
					15.00	67.88		End of Borehole at 15.00m	15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	9.50m	200mm	1.20m 1.50m	2.20m 2.80m	01:20 01:00						0.00m 1.00m	1.00m 7.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP206
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022 - 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387698.92 N400248.88
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 86.76m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	65%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as brown, orange and grey mottled, very sandy, clayey, angular to subangular, fine to coarse GRAVEL of red brick, sandstone and concrete. GMG	
		1.00 – 1.50	B						1
		1.50	SPT(S)	N=2 (1,0/1,0,1,0)					
		2.20 – 2.50	B		2.20	84.56		Driller notes black ASH / SAND with red bricks and concrete CW	2
		2.80 – 3.00	B		2.80	83.96		Recovered as firm, greyish brown, slightly gravelly, sandy CLAY. Gravel is subangular of fine to medium red brick, concrete and mixed lithologies. CMG	
		3.00	SPT(S)	N=15 (1,2/1,2,4,8)	3.10	83.66		Recovered as soft to firm, black, slightly gravelly, sandy CLAY. Gravel is subangular of fine to medium red brick, concrete and mixed lithologies. CMG	3
		4.00	B						4
		4.50 – 5.00	B						
		5.00	SPT(S)	N=16 (4,3/4,2,5,5)					5
		5.50 – 6.00	B		5.50	81.26		Stiff to very stiff, greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	6
		6.50	SPT(S)	N=29 (2,5/5,6,8,10)					7
		8.50	SPT(S)	50 (25,0 for 0mm/50 for 0mm)					8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	4.50m	200mm	2.20m 7.00m 8.50m	3.00m 8.00m 10.00m	01:00 00:45 01:00						0.00m 6.00m	6.00m 15.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP206
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022 - 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387698.92 N400248.88
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 86.76m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP	JC	MP	65%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.60	SPT(S)	N=42 (2,4/4,7,14,17)				Stiff to very stiff, greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	10
		11.50	SPT(S)	N=47 (5,8/12,10,10,15)					11
		12.00 – 12.50	B						12
		13.00	SPT(S)	N=65 (2,4/11,17,22,15)					13
		13.70 – 14.10	B					*13.50m : Drillers notes becoming hard from 13.50m.*	14
		14.50	SPT(S)	50 (25,0 for 0mm/50 for 0mm)					15
					15.00	71.76		End of Borehole at 15.00m	16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	4.50m	200mm	2.20m 7.00m 8.50m	3.00m 8.00m 10.00m	01:00 00:45 01:00						0.00m 6.00m	6.00m 15.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP207
Sheet 1 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/03/2022 - 29/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387606.75 N400224.81
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.77m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	68%	20.10m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		0.00 – 1.00	B					Recovered as brown, slightly sandy GRAVEL with occasional cobble sized fragments of red brick, timber and concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, timber and mixed lithologies. Occasional roots and rootlets. GMG	
		1.00 – 2.00	B		1.00	81.77		Recovered as brown, slightly sandy, slightly clayey GRAVEL with rare cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, sandstone, coal, glass, concrete and mixed lithologies. GMG	1
		1.50	SPT(S)	N=22 (1,3/4,9,7,2)					
		2.00 – 3.00	B		2.00	80.77		Recovered as brown, slightly sandy GRAVEL with frequent cobble sized fragments of red brick, concrete, polystyrene, plastic, glass, timber, sandstone, leather and slate. Gravel is angular to subangular, fine to coarse of the above. GMG	2
		3.00 – 4.00	B		3.00	79.77		Recovered as brown, very sandy, slightly clayey GRAVEL with frequent cobble sized inclusions of red brick, metal, plastic, fabric and slate. Gravel is angular to subangular, fine to coarse of the above. Frequent screws, bolts, plastic sheeting fragments and metal wire. GMG	3
		3.10	SPT(S)	N=18 (2,5/9,3,3,3)					
		4.00 – 5.00	B		4.00	78.77		Recovered as reddish brown, very gravelly SAND with occasional cobble sized fragments of red brick, metal and timber. Gravel is angular to subrounded of fine to coarse red brick, timber, metal plastic and mixed lithologies. Occasional wire and nails. GMG	4
		4.50	SPT(S)	N=31 (16,9/9,9,8,5)					
		5.00 – 6.00	B		5.00	77.77		Recovered as wet, dark brown to dark grey, sandy, silty GRAVEL with occasional cobble sized inclusions of firm, brown, sandy, gravelly clay. Gravel is angular to subrounded of fine to coarse red brick, timber, metal, ceramics and mudstone. Occasional roots and rootlets. GMG	5
		6.00 – 7.00	B		6.00	76.77		Recovered as damp dark brown to dark grey, sandy GRAVEL with occasional cobble sized fragments of red brick and concrete. Gravel is angular to subrounded of fine to coarse red brick, plastic, tile, metal and concrete. Occasional plastic bag fragments. GMG	6
		6.00	SPT(S)	N=13 (2,1/0,1,6,6)					
		6.50	SPT(S)	N=30 (4,6/6,7,7,10)					
		7.00 – 8.00	B		7.00	75.77		Recovered as wet, dark brown to dark grey, sandy, slightly clayey GRAVEL with occasional cobble sized fragments of red brick and ceramics. Gravel is angular to subrounded of fine to coarse red brick, metal, plastic, tile, timber and mixed lithologies. Occasional roots. GMG	7
		7.50	SPT(S)	N=34 (3,8/11,11,7,5)					
		8.00 – 9.00	B						8
		9.00 – 10.00	B		8.90	73.87		Recovered as soft, wet, dark brown, mottled dark grey and black, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone, concrete, timber, metal and red brick. CMG	9
		9.00	SPT(S)	N=19 (1,1/1,1,1,16)	9.00	73.77		Recovered as damp, dark brown, sandy, clayey GRAVEL with occasional cobble sized fragments of red brick and suspected ACM. Gravel is angular to subrounded of fine to coarse red brick, timber and plastic. GMG	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.00m	200mm	19.40m	200mm	4.00m 10.00m 18.70m 16.50m	5.00m 10.50m 19.00m 19.00m	01:00 00:40 00:45 02:00						0.00m 17.50m	17.50m 19.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP207
Sheet 2 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/03/2022 - 29/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387606.75 N400224.81
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.77m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	68%	20.10m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00 – 11.00	B		10.00	72.77		Recovered as damp, dark brown, sandy, clayey GRAVEL with occasional cobble sized fragments of red brick and suspected ACM. Gravel is angular to subrounded of fine to coarse red brick, timber and plastic. GMG	10
		10.00 – 11.00	B						
		10.50	SPT(S)	N=19 (6,5/3,8,5,3)				Recovered as dark brown to dark grey, sandy, clayey GRAVEL with occasional cobble sized fragments of timber and metal. Gravel is angular to subangular of fine to coarse red brick, slate, plastic, timber and suspected slag. GMG	
		11.00 – 12.00	B		11.00	71.77		Recovered as dark grey to dark brown, sandy, clayey GRAVEL with frequent cobble sized fragments of red brick, suspected slag and timber board. Gravel is angular to subrounded of fine to coarse red brick, plastic, suspected slag, plastic and mixed lithologies. Slight hydrocarbon odour. GMG	11
		12.00 – 13.00	B						
		12.00	SPT(S)	N=14 (1,2/2,3,3,6)	12.10	70.67		Soft to firm, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	12
		13.00 – 14.00	B						13
		13.50	SPT(S)	N=21 (2,3/3,5,6,7)	13.50	69.27		Firm, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	
		14.00 – 15.00	B					*13.50m - 13.95m : Some dark brown to black sand recovered from the SPT tool.*	14
		15.00 – 15.45	U	Ublow=120	15.00	67.77		Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse coal and mixed natural lithologies. CGT	15
		15.00 – 16.00	B						
		16.00 – 17.00	B					*16.00m : Becoming sandy from 16.00m.*	16
		16.50	SPT(S)	N=30 (4,6/6,7,7,10)					
		17.00 – 18.00	B						17
					17.50	65.27		Dense, wet, brown SAND. Driller notes cobbles. GGT	
		18.00	B						18
		18.00 – 19.00	B						
		18.00	SPT(S)	N=48 (4,8/8,10,15,15)					
		18.70	SPT(S)	N=40 (8,9/10,10,10,10)					
		19.00 – 20.00	B		19.10	63.67		Recovered as firm, probably stiff as recovered from the SPT tool, wet, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse red sandstone, coal and mixed natural lithologies. CGT	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.00m	200mm	19.40m	200mm	4.00m 10.00m 18.70m 16.50m	5.00m 10.50m 19.00m 19.00m	01:00 00:40 00:45 02:00						0.00m 17.50m	17.50m 19.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP207
Sheet 3 of 3

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/03/2022 - 29/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387606.75 N400224.81
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 82.77m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JP & MS	JC	MP	68%	20.10m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		19.75	U	Ublow=120	20.10	62.67		Recovered as firm, probably stiff as recovered from the SPT tool, wet, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse red sandstone, coal and mixed natural lithologies. CGT End of Borehole at 20.10m	20 21 22 23 24 25 26 27 28 29

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
20.00m	200mm	19.40m	200mm	4.00m 10.00m 18.70m 16.50m	5.00m 10.50m 19.00m 19.00m	01:00 00:40 00:45 02:00						0.00m 17.50m	17.50m 19.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP208
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/03/2022 - 17/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387562.18 N400340.68
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 84.14m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC & MS	JC	MP	68%	15.45m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 1.00	B					Recovered as dark brown, very gravelly, very clayey, fine to medium SAND with occasional cobble sized fragments of red brick and concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, ceramic, timber, plastic and suspected slag. GMG	1
		1.50	SPT(S)	N=15 (3,3/4,5,3,3)					
		2.00 – 3.00	B					*2.00m - 2.90m : Recovered with occasional cobble sized fragments of rubber and timber between 2.00m and 2.90m. Acrid odour and rope also noted.*	2
		2.90	SPT(S)	N=16 (4,13/5,4,4,3)	2.90	81.24			
		3.00 – 4.00	B					Recovered from the SPT tool as very stiff, dark brownish grey, stained black in places, slightly sandy, slightly gravelly CLAY. Gravel is angular of fine to coarse red brick and concrete. Acrid / sweet odour. CMG	3
	▽				3.35	80.79		Recovered as wet, black, very sandy, clayey GRAVEL with frequent cobble sized fragments of red brick and concrete and occasional cobble sized inclusions of firm, brown, slightly sandy clay. Gravel is angular of fine to coarse red brick, timber and concrete. Hydrocarbon odour. GMG	4
		4.40	SPT(S)	N=10 (2,2/3,4,1,2)				*4.00m : Sweet / hydrocarbon odour from 4.00m.*	
		5.00 – 6.00	B						5
					5.10	79.04		Initially soft, becoming firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular of fine mixed natural lithologies. CGT	
		6.00	SPT(S)	N=8 (8,6/1,2,2,3)	6.10	78.04			6
		6.30 – 7.50	B					Firm to stiff, brown CLAY with rare angular, fine gravel of mixed natural lithologies. CGT	
	▽				6.80	77.34		Soft to firm, damp, brown, silty CLAY. CGT	7
					7.30	76.84			
		7.50 – 8.50	B					Firm to stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CGT	
		7.50	SPT(S)	N=27 (3,4/5,7,7,8)					8
	▽								
		9.00 – 10.00	B						9
		9.00	SPT(S)	N=26 (2,3/6,6,7,7)					
	▽				9.40	74.74		Wet, brown, very sandy, subangular to subrounded, fine to medium GRAVEL of mixed natural lithologies. GGT	
					9.80	74.34			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	11.50m	200mm	12.30m	15.00m	02:30						0.00m 9.00m	9.00m 12.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP208
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/03/2022 - 17/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387562.18 N400340.68
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 84.14m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC & MS	JC	MP	68%	15.45m

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		10.00 – 10.50	B					Recovered as soft to stiff, probably stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded of fine to coarse mixed natural lithologies. CGT	10
		10.50 – 11.50	B		10.50	73.64			
		10.50	SPT(S)	N=23 (2,3/4,5,7,7)				Medium dense, wet, brown, slightly gravelly SAND. Gravel is subrounded of fine mixed natural lithologies. GGT	11
		12.00	SPT(S)	N=12 (1,2/3,3,3,3)					12
		12.50 – 13.40	B		12.30	71.84		Recovered as soft to firm, probably stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	13
		13.40	SPT(S)	N=18 (2,2/3,5,5,5)				*13.50m : Recovered as firm to stiff from 13.50m.*	14
		15.00	SPT(S)	N=34 (3,4/7,7,10,10)				*15.00m : Recovered as stiff from 15.00m.*	15
					15.45	68.69		End of Borehole at 15.45m	16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	11.50m	200mm	12.30m	15.00m	02:30						0.00m 9.00m	9.00m 12.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP209
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 18/03/2022 - 21/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387246.39 N400130.44
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 75.89m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	68%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		0.00 – 1.00	B					Recovered as brown, very sandy GRAVEL with frequent cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick. Occasional nails. GMG	
	▽								
		1.00 – 2.00	B						1
					1.30	74.59			
		1.50	SPT(S)	N=2 (1,1/0,1,0,1)				Recovered as soft to firm, brown to black, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. CMG	
		2.00 – 3.00	B						2
					2.10	73.79			
								Recovered as soft to firm, probably firm to stiff as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	
		3.00 – 4.00	B						3
		3.00	SPT(S)	N=27 (3,4/5,6,7,9)					
		4.00 – 5.00	B					*4.00m - 5.00m : Occasional cobbles recovered between 4.00m and 5.00m.*	4
		4.50	SPT(S)	N=25 (2,3/4,5,8,8)					
	▽	5.00 – 6.00	B		5.00	70.89		Recovered as wet, brown, very gravelly, very clayey SAND. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. GGT	5
		6.00 – 7.00	B						6
		6.00	SPT(S)	N=13 (2,2/2,2,4,5)					
					6.30	69.59		Recovered as soft to stiff, probably firm as noted by drillers, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	
		7.00 – 8.00	B					*7.00m - 8.00m : Recovered as wet between 7.00m and 8.00m.*	7
		7.50	SPT(S)	N=18 (2,4/4,4,5,5)					
		8.00 – 9.00	B		8.00	67.89		Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT *8.00m - 8.45m : Recovered from the SPT tool as mottled orangish red between 8.00m and 8.45m.*	8
		9.00 – 10.00	B						9
		9.00	SPT(S)	N=22 (4,4/4,5,6,7)					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	7.40m	200mm	13.50m	15.00m	01:30						0.00m 5.00m	5.00m 7.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP209
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 18/03/2022 - 21/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387246.39 N400130.44
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 75.89m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	68%	15.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00 – 11.00	B		10.00	65.89		Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. CGT	10
		10.50	SPT(S)	N=26 (2,3/4,6,7,9)				Firm to stiff, wet, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse sandstone, mudstone, quartz and coal. CGT	
		11.00 – 12.00	B					*11.00m : No longer wet from 11.00m.*	11
		12.00 – 13.00	B						12
		12.00	SPT(S)	N=39 (10,12/13,10,8,8)					
					12.50	63.39		Driller notes SAND. GGT	
					12.50	63.39		Recovered as very soft, probably stiff as noted by drillers, wet, brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone, quartz and mixed lithologies. CGT	
		13.00 – 14.00	B		13.00	62.89		Driller notes stiff, brown CLAY. CGT	13
		13.50	SPT(S)	N=21 (2,3/4,5,5,7)					
									14
					15.00	60.89		End of Borehole at 15.00m	15
									16
									17
									18
									19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
15.00m	200mm	7.40m	200mm	13.50m	15.00m	01:30						0.00m 5.00m	5.00m 7.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP210
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 30/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387715.21 N400419.73
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 85.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	65%	19.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		0.00 – 0.50	B					Recovered as dark grey, mottled black, orange and green, very sandy, slightly clayey GRAVEL with occasional cobble sized fragments of red brick. Gravel is angular of fine to coarse red brick, concrete, fabric and glass. Occasional plastic bag fragments, roots and rootlets. GMG	
					0.90	85.00			
		1.00 – 1.50	B					Recovered as soft, dark brown, sandy / ashy, gravelly CLAY with occasional cobble sized metal fragments. Gravel is angular to subrounded of fine to coarse red brick , metal, plastic, glass and mixed lithologies. Occasional roots and rootlets. CMG	1
					1.20	84.70			
		1.50	SPT(S)	N=10 (2,4/2,2,3,3)					
								Recovered as dark brown, mottled reddish brown, very sandy / ashy, clayey, angular, fine to coarse GRAVEL of red brick, concrete, sandstone and mudstone. Driller notes large compacted red bricks. CW	
		2.00 – 3.00	B		1.95	83.95			2
								Recovered as soft to firm, dark brown to dark grey, mottled orange and red, sandy, gravelly CLAY with rare cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, concrete, sandstone, mudstone and mixed lithologies. CMG	
		3.00	SPT(S)	N=6 (1,1/2,2,1,1)					3
		3.50 – 4.20	B						
									4
		4.50	SPT(S)	N=8 (1,1/2,2,2,2)					
									5
		5.50 – 6.00	B		5.50	80.40			
		6.00	SPT(S)	N=12 (1,2/2,2,4,4)				Recovered as (medium dense) brown SAND with occasional cobble sized inclusions of firm, dark grey, mottled greenish grey, slightly gravelly, sandy clay. Gravel is angular to subrounded of fine to coarse sandstone, mudstone and mixed natural lithologies. GGT	6
		6.50 – 7.00	B						
					6.70	79.20			
	▽							Recovered as soft to firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of medium to coarse mixed natural lithologies. CGT	7
		7.50	SPT(S)	N=21 (1,4/4,4,6,7)	7.50	78.40			
	▼							Firm to stiff, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of medium to coarse mixed natural lithologies. CGT	
		8.00 – 9.00	B						8
	▽								
		9.00	SPT(S)	50 (4,8/25 for 0mm)	9.10	76.80		*9.00m - 9.45m : Recovered as reddish brown and orangish brown between 9.00m and 9.45m.*	9
		9.30 – 10.00	B					Dense, yellowish brown, slightly clayey, medium to coarse SAND. Driller notes blowing sands. GGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.00m	200mm	17.50m	200mm	8.50m 9.30m 9.00m 15.50m 16.00m 18.00m	9.00m 10.00m 12.00m 16.00m 17.00m 19.00m	00:40 01:00 03:10 01:00 01:00 01:15						0.00m 10.00m	10.00m 17.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Cable Percussive Borehole Log

BOREHOLE REFERENCE
CP210
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/03/2022 - 30/03/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387715.21 N400419.73
Project No. : LD10385	Drilling Equipment: Dando 2500	Level : 85.90m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	65%	19.00m

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		10.00	B					Dense, yellowish brown, slightly clayey, medium to coarse SAND. Driller notes blowing sands. GGT	10
		10.50	SPT(S)	N=43 (6,8/10,9,10,14)					
	▽								11
		12.00	SPT(S)	N=60 (6,7/10,15,25,10)					12
		12.50 – 13.00	B						
									13
		13.50	SPT(S)	N=47 (6,7/10,15,10,12)					
									14
	▽	15.00	SPT(S)	N=48 (5,15/12,16,10,10)					15
									16
		16.50	SPT(S)	N=23 (6,5/4,8,5,6)					
					16.75	69.15		Driller notes soft, brown, sandy CLAY with hints of coal. CGT	
		17.00 – 17.50	B		17.00	68.90		Driller notes stiff, dark brown, sandy CLAY. CGT	17
		17.50 – 18.00	B		17.50	68.40		Driller notes very stiff boulder CLAY. CGT	
		18.00	SPT(S)	15 (25,35/15 for 22.5mm)					18
					19.00	66.90		End of Borehole at 19.00m	19

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
19.00m	200mm	17.50m	200mm	8.50m 9.30m 9.00m 15.50m 16.00m 18.00m	9.00m 10.00m 12.00m 16.00m 17.00m 19.00m	00:40 01:00 03:10 01:00 01:00 01:15						0.00m 10.00m	10.00m 17.00m	PLAIN SLOTTED	

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Borehole terminated as target depth achieved and / or no significant sand lenses encountered at depth.

Log printed on 13/09/2022 at 13:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS101
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387525.00 N400419.00
Project No. : LD10385	Drilling Equipment:	Level : 83.57m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as soft, dark grey, mottled orange brown, slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded of fine to coarse red brick, plastic, suspected clinker, sandstone and mixed lithologies. TF	
					0.35	83.22			
		0.50 – 0.60	ES					Recovered as stiff, orangish brown and light grey mottled, slightly gravelly CLAY with occasional rootlets. Gravel is subangular to subrounded of fine to coarse coal, sandstone, grit stone, mudstone and crystalline rock. CMG	
		0.50		0.00ppmv					
		0.70	HSV	80kPa					
		0.70	HSV	85kPa					
		0.70	HSV	88kPa					
		1.00	SPT()	N=20 (4,4/4,5,5,6)					1
					1.10	82.47			
		1.40	HSV	110kPa				Minimal recovery. Recovered material comprises stiff to very stiff, brown, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine to coarse red mottled and grey mudstone, sandstones, gritstone and coal. CMG	
		1.40	HSV	80kPa					
		1.40	HSV	95kPa					
		2.00	SPT()	N=37 (5,7/9,8,9,11)	2.00	81.57		Firm, slightly wet, brown, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. Sand is fine to medium. CGT	2
					2.65	80.92		Brown (occasionally multicoloured) SAND. GGT	
		3.00	SPT()	N=9 (3,4/3,2,2,2)	3.00	80.57		Soft, brown, slightly sandy, silty CLAY. Sand is fine. CGT	3
		3.00		0.00ppmv					
		3.40 – 3.42	ES		3.42	80.15		Partial recovery. Recovered material comprises dark brown, slightly gravelly, slightly clayey SAND. Gravel is subangular to subrounded of fine to medium mixed lithologies. GGT	
		4.00	SPT()	N=17 (2,3/4,4,4,5)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS101
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387525.00 N400419.00
Project No. : LD10385	Drilling Equipment:	Level : 83.57m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=17 (3,3/3,4,5,5)	5.00	78.57		Partial recovery. Recovered material comprises dark brown, slightly gravelly, slightly clayey SAND. Gravel is subangular to subrounded of fine to medium mixed lithologies. GGT End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS102
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387864.77 N400331.94
Project No. : LD10385	Drilling Equipment: WS rig	Level : 84.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as brown, very sandy/ashy, very clayey, angular to subrounded, fine to coarse GRAVEL of red brick and sandstone. GMG	
					0.60	84.10		Recovered as firm, dark brown, slightly gravelly sandy CLAY. Gravel is angular to subrounded of fine to medium red brick, concrete and mixed lithologies. CMG	
		1.00	SPT()	N=3 (1,1/1,1,0,1)	1.00	83.70		Recovered as firm, brown and grey mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. Slight hydrocarbon odour. CMG	1
					1.80	82.90		Recovered as reddish brown, angular, fine to coarse GRAVEL of red brick. Possible smashed brick. GMG	
		2.00	SPT()	N=1 (1,1/1,0,0,0)	2.00	82.70		Firm to stiff, brown and grey mottled, slightly gravelly, silty CLAY. Gravel is subangular to subrounded of fine to medium mixed lithologies. CGT	2
					2.10	82.60		Soft, wet, black CLAY. Strong hydrocarbon odour. CGT	
		2.50		1.00ppmv					
		2.80 2.80 – 2.90	ES		2.90	81.80		Firm to stiff, brown and grey mottled, slightly gravelly, silty CLAY. Gravel is subangular to subrounded fine to medium mixed lithologies. CGT	
		3.00	SPT()	N=23 (3,4/5,5,6,7)					3
					3.50	81.20		Partial recovery. Recovered material comprises soft, wet, black CLAY. Strong hydrocarbon odour. CGT	
		4.00	SPT()	N=20 (2,3/4,4,6,6)					4
					4.40	80.30		Minimal recovery. Recovered material comprises soft, wet, black CLAY. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS102
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387864.77 N400331.94
Project No. : LD10385	Drilling Equipment: WS rig	Level : 84.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=11 (4,4/2,3,3,3)	5.00	79.70		Minimal recovery. Recovered material comprises soft, wet, black CLAY. CGT End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS103
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387291.28 N400150.68
Project No. : LD10385	Drilling Equipment: WS rig	Level : 77.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	76.85		Soft, dark brown, slightly gravelly, sandy CLAY with abundant roots and rootlets. Sand is fine to medium. Gravel is subangular to subrounded of fine to medium red mudstone and black shale. TF	
					0.40	76.60		Black, sandy, subangular to subrounded, fine to coarse GRAVEL of suspected clinker and slag. CW	
					0.55	76.45		Recovered as 80% gravel to cobble sized fragments of medium strong, orangish brown, fine to coarse grained sandstone, and 20% dark brown, stained black in places, sandy, slightly clayey, subangular to subrounded, fine to coarse GRAVEL of suspected clinker, red brick, brown coarse grained sandstone and orangish brown, fine to coarse sandstone. Hydrocarbon odour.	
		0.85 – 0.87	ES		0.85	76.15		GMG	
		1.00	SPT()	N=5 (2,2/2,1,1,1)	1.00	76.00		*0.41m - 0.43m : Singular cobble sized fragment of suspected slag.*	1
					1.30	75.70		Recovered as 80% gravel to cobble sized fragments of red brick; 10% gravel to cobble sized inclusions of soft to firm, black, slightly sandy, very gravelly CLAY; and 10% black, sandy, subangular to subrounded, fine to coarse GRAVEL of suspected clinker and red brick. GMG	
					1.50	75.50		Minimal recovery. Recovered material comprises 50% purplish red to black, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of suspected slag; 40% gravel sized inclusions of firm, purplish red CLAY; and 10% gravel sized inclusions of soft, white CLAY. CW	
		2.00	SPT()	N=0 (0,1/0,0,0,0)				Recovered as 70% wet, black, sandy, slightly clayey GRAVEL; 20% cobble sized fragments of suspected clinker and 10% gravel sized inclusions of soft brown CLAY. Gravel is subangular to subrounded of fine to coarse suspected clinker and slag (90%), ceramics (5%) and mixed lithologies (5%). Hydrocarbon odour. CW	2
								Very soft, wet, brown, slightly sandy, gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded of fine to coarse suspected clinker and slag, timber and mixed lithologies. Slight hydrocarbon odour. GMG	
					2.90	74.10		Minimal recovery. Recovered material comprises dark brown, stained black in places, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of suspected slag, suspected clinker, red mudstone, gritstone, shell and concrete. Hydrocarbon odour. CW	
		3.00	SPT()	N=0 (1,0/0,0,0,0)	3.00	74.00		Soft, wet, brown, slightly gravelly, sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded of fine to medium suspected clinker, mudstone and pebbles. GMG	3
		3.40 – 3.45 3.41 – 3.45	ES		3.40	73.60		Dark brown, stained black in places, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of suspected slag, suspected clinker, red mudstone, grit stone, shell, concrete. Hydrocarbon odour. CW	
								Firm to stiff, wet, brown, stained dark grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Hydrocarbon odour. CGT	
		4.00	SPT()	N=31 (4,6/7,7,8,9)				*3.72m - 5.00m : No longer wet and stiff.* *4.00m - 4.50m : Gravel lens, possibly material dropped down from above.*	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS103
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387291.28 N400150.68
Project No. : LD10385	Drilling Equipment: WS rig	Level : 77.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=50 (4,6/7,11,20,12)	5.00	72.00		Firm to stiff, wet, brown, stained dark grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Hydrocarbon odour. CGT End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS104
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387725.75 N400184.91
Project No. : LD10385	Drilling Equipment:	Level : 81.09m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	80.99		Recovered as 70% soft, organic, dark brown, slightly gravelly, sandy CLAY; 30% roots and rootlets (up to 5cm diameter). Sand is fine to medium. Gravel is angular to subrounded of fine to coarse pebbles, glass, red brick, gritstone and quartz. TF	
					0.35	80.74		Recovered as 25% wood fragments (tree branches, fence fragments); 25% soft, orangish brown, slightly sandy, slightly gravelly CLAY; 20% paper; 15% dark brown, slightly gravelly fine to medium SAND; 10% cobble sized glass fragments; 5% plastic (wrappers); 5% roots and rootlets. Gravel is subangular to subrounded of fine to coarse gritstone, suspected slag, wood, paper, red brick, plastic and grey fabric. Sand is fine to medium. DW	
		1.00	SPT()	N=12 (4,4/3,4,3,2)					1
					1.20	79.89		Partial recovery. Recovered material comprises 65% multicoloured GRAVEL; 20% dark brown, fine to medium SAND; 15% cobble sized red brick fragments. Gravel is subangular to subrounded of fine to coarse red brick (55%), slate (30%), mudstone (10%) and sandstone (5%). GMG	
					1.70	79.39		Recovered as soft, dark brown and dark grey in places, slightly sandy, very gravelly CLAY. Gravel is subangular of fine to coarse orangish brown sandstone (20%), red brick (15%), glass (15%), wood (15%), grey gritstone (15%), coarse grained sandstone (10%) and mixed lithologies (10%). Sand is fine to medium. CMG	
					1.85	79.24		Recovered as subangular to subrounded, fine to coarse GRAVEL of greyish green sandstone. GMG	
		2.00	SPT()	N=4 (2,1/1,1,1,1)	2.00	79.09		Recovered as soft, dark brown stained black in places, slightly sandy, gravelly CLAY. Sand is fine. Gravel is subangular to subrounded of fine to coarse mixed lithologies (75%), mudstone (15%) and suspected clinker (10%). CMG	2
					2.60	78.49		Recovered as very soft, wet, brown, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded of fine to coarse shell, coal, crystalline rocks, siltstone, sandstone and red brick. CMG	
		3.00	SPT()	N=5 (1,2/1,1,1,2)				Recovered as brown, slightly sandy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of glass (20%), orangish brown, coarse grained sandstone (10%), red brick (10%), greenish grey, fine grained sandstone (10%) and concrete (5%). GMG	3
								3.31m - 3.33m : No longer sandy but becoming silty.	
								3.54m - 3.60m : Slightly sandy lens.	
					3.80	77.29		Recovered as soft, brown, slightly sandy, slightly gravelly, CLAY. Gravel is subangular to subrounded of fine to coarse glass (10%), wood (10%) and mixed natural lithologies (80%). CMG	
		4.00	SPT()	N=8 (2,1/2,2,2,2)	4.00	77.09		Recovered as brown, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of red brick, timber fragments and rounded pebbles of mixed lithologies. GMG	4
					4.35	76.74		Minimal recovery. Recovered material comprises soft, brown, slightly sandy (in places), slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse glass (10%), wood (10%), red brick (10%), suspected clinker (5%) and mixed natural lithologies (65%). Sand is fine to medium. CMG	
		4.72 – 5.00	ES					*4.72m - 5.00m : Stained dark grey and black with a slight hydrocarbon odour.*	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS104
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387725.75 N400184.91
Project No. : LD10385	Drilling Equipment:	Level : 81.09m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00 5.00	SPT()	N=10 (2,2/3,2,2,3) 0.10ppmv	5.00	76.09		Minimal recovery. Recovered material comprises soft, brown, slightly sandy (in places), slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse glass (10%), wood (10%), red brick (10%), suspected clinker (5%) and mixed natural lithologies (65%). Sand is fine to medium. CMG End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS105
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387629.00 N400147.00
Project No. : LD10385	Drilling Equipment: WS rig	Level : 81.34m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 80% brown, slightly sandy, clayey GRAVEL; 15% roots and rootlets; 5% cobble sized timber fragments. Gravel is subrounded to subangular of fine to coarse red brick, suspected clinker, timber, sandstone, gritstone and glass GMG	
					0.35	80.99			
					0.50	80.84		Stiff, black, mottled grey and light grey in places, gravelly CLAY. Gravel is angular to subrounded of fine to coarse quartz, timber, red brick, plastic sheeting, ceramic and sandstone. Acrid odour. CMG	
					0.60	80.74			
					0.80	80.54		Recovered as a single cobble sized timber fragment. GMG	
		1.00	SPT()	N=4 (2,1/2,2,0,0)	1.00	80.34		Recovered as 45% black, very clayey SAND; 25% cobble sized concrete fragments; 25% cobble sized red brick fragments; 5% cobble sized timber fragments. Slight hydrocarbon odour. GMG	1
								Soft, brown, mottled light grey and stained black in places, slightly gravelly, sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded of fine to medium crystalline rock, mudstone and mixed lithologies CMG	
								Minimal recovery. Recovered material comprises 80% very soft, wet, black, slightly sandy, slightly gravelly CLAY; 10% cobble sized timber fragments; 10% cobble sized plastic fragments. Gravel is fine to medium of mixed lithologies. Slight hydrocarbon odour with oil staining. CMG	
		2.00	SPT()	N=18 (1,0/2,6,4,6)	2.00	79.34		Minimal recovery. Recovered material comprises wet, black, slightly gravelly, slightly clayey, fine to medium SAND. Gravel is fine of mixed lithologies. Slight hydrocarbon odour with oil staining. GMG	2
					2.35	78.99		Recovered as 70% wet, black, sandy, slightly clayey GRAVEL; 20% plastic (bags and sheeting); 10% cobble sized timber fragments. Gravel is subangular to subrounded of fine to coarse red brick, concrete, suspected clinker/slag, sandstone, mudstone and an unknown hard, white substance white and hard substance. Oil staining. GMG	
		2.50 2.50 – 2.60	ES						
		3.00	SPT()	N=7 (0,1/2,1,2,2)					3
								3.40m - 3.60m : Sand lens.	
		4.00	SPT()	N=6 (2,2/2,1,1,2)				*4.00m - 4.40m : Oil stained and hydrocarbon odour.*	4
					4.45	76.89		Recovered as 60% soft, brown, slightly gravelly, sandy CLAY; 20% cobble sized red brick fragments; 10% cobble sized timber fragments; 10% cobble sized plastic fragments. Sand is fine to medium. Gravel is angular to subrounded of fine to coarse timber, glass, red brick, white sandstone, purple slate, mudstone and gritstone. Hydrocarbon odour. CMG	
		4.60 – 4.70	ES						

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS105
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387629.00 N400147.00
Project No. : LD10385	Drilling Equipment: WS rig	Level : 81.34m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=6 (1,1/1,1,2,2)	5.00	76.34		Recovered as 60% soft, brown, slightly gravelly, sandy CLAY; 20% cobble sized red brick fragments; 10% cobble sized timber fragments; 10% cobble sized plastic fragments. Sand is fine to medium. Gravel is angular to subrounded of fine to coarse timber, glass, red brick, white sandstone, purple slate, mudstone and gritstone. Hydrocarbon odour. CMG End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS106
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387526.00 N400076.00
Project No. : LD10385	Drilling Equipment:	Level : 79.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	79.60		Soft, brown, slightly sandy, CLAY with frequent roots and rootlets. Sand is fine. TF	
					0.50	79.20		Damp, organic, brown, slightly gravelly, fine to coarse SAND with coarse gravel size inclusions of firm, brown, slightly gravelly, clay. Gravel is subangular to subrounded of fine to coarse gritstone, grey sandstone, mudstone and mixed lithologies. GGT	
								Soft to firm, brown, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed lithologies. CGT	
					0.90	78.80			
		1.00	SPT()	N=5 (0,0/1,1,1,2)				Minimal recovery. Recovered material comprises wet, brown, clayey, fine to medium SAND. GGT	1
					1.55	78.15		Partial recovery. Recovered material comprises soft to firm, brown, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CGT	
		2.00	SPT()	N=5 (1,1/1,1,1,2)	2.00	77.70		Wet, brown, slightly gravelly, slightly clayey to clayey, fine to coarse SAND. Gravel is subangular to subrounded of fine to coarse mixed lithologies. GGT	2
		2.72 – 2.78 2.72	ES	0.00ppmv	2.70 2.80	77.00 76.90		Wet, brownish grey, slightly gravelly, very sandy CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologiesSlight odour. CGT	
		3.00	SPT()	N=15 (2,2/3,3,4,5)				Multicoloured, gravelly, fine to coarse SAND. Gravel is subangular to subrounded of fine to coarse sandstone, crystalline rock and mudstone. GGT	3
					3.70	76.00		Partial recovery. Recovered material comprises multicoloured, slightly gravelly, slightly clayey, fine to coarse SAND. Gravel is subangular to rounded of fine to coarse mixed lithologies. GGT	
		4.00 4.00	SPT()	N=13 (2,2/2,3,4,4) 0.10ppmv					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS106
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387526.00 N400076.00
Project No. : LD10385	Drilling Equipment:	Level : 79.70m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=13 (1,2/3,3,3,4)	5.00	74.70		Partial recovery. Recovered material comprises multicoloured, slightly gravelly, slightly clayey, fine to coarse SAND. Gravel is subangular to rounded of fine to coarse mixed lithologies. GGT End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS107
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387855.53 N400468.07
Project No. : LD10385	Drilling Equipment: WS rig	Level : 85.69m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
								Recovered as soft, dark brown, sandy CLAY with abundant tree roots (10mm diameter) and rootlets. TF	
					0.20	85.49			
					0.30	85.39		Recovered as brown and dark reddish brown, sandy, clayey, angular, fine to coarse GRAVEL of red brick. GMG	
								Recovered as stiff, brown, slightly gravelly SILT. Gravel is angular to rounded of fine to medium red brick, coal and sandstone. CMG	
					0.70	84.99		Minimal recovery. Recovered material comprises soft, dark brown, orange brown and grey mottled, slightly gravelly, silty CLAY. Gravel is angular to subrounded of fine to medium red brick and mixed lithologies. CMG	
		1.00	SPT()	N=3 (0,0/1,0,1,1)					1
					1.20	84.49		Recovered as very soft, dark brown, gravelly CLAY. Gravel is angular to subrounded of fine to medium red brick. Slight hydrocarbon staining and odour. CMG	
		1.40 1.40 – 1.50 1.40	ES	1.50ppmv					
					1.70	83.99		Recovered as firm, light green mottled grey CLAY. CMG	
		2.00	SPT()	N=16 (1,2/3,4,4,5)	2.00	83.69		Minimal recovery. Recovered material comprises wet, slightly gravelly, fine to medium SAND. Gravel is angular of fine red brick. GMG	2
					2.80	82.89		Partial recovery. Recovered material comprises firm to stiff, dark brown mottled grey, slightly gravelly, silty CLAY. Gravel is angular to subrounded of fine to medium mixed lithologies. CGT	
		3.00	SPT()	N=36 (4,6/7,7,10,12)					3
					3.80	81.89		Recovery is of stronger materials, weaker materials not recovered. Recovered material comprises firm to stiff, brown, slightly gravelly, silty CLAY. Gravel is angular to subrounded of fine mudstone and mixed lithologies. CGT	
		4.00	SPT()	N=31 (4,6/6,7,8,10)					4
					4.20	81.49		Firm to stiff, wet, brown, slightly gravelly, silty CLAY. Gravel is angular to subrounded of fine mudstone and mixed lithologies. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS107
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387855.53 N400468.07
Project No. : LD10385	Drilling Equipment: WS rig	Level : 85.69m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=21 (3,3/4,5,6,6)	5.00	80.69		Firm to stiff, wet, brown, slightly gravelly, silty CLAY. Gravel is angular to subrounded of fine mudstone and mixed lithologies. CGT	5
								End of Borehole at 5.00m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS108
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387829.99 N400456.96
Project No. : LD10385	Drilling Equipment: WS RIG	Level : 85.29m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	84.99		Recovered as soft, dark brown, slightly sandy, slightly gravelly CLAY with tree roots and rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
					0.70	84.59		Recovered as dark brown, clayey, very gravelly, medium SAND. Gravel is angular of fine to coarse red brick. GMG	
		0.80 – 0.90 0.80	ES	5.40ppmv	0.90	84.39		Recovered as black, clayey, gravelly SAND/ASH. Gravel is angular to rounded of fine coal. CW	
		1.00	SPT()	N=4 (0,0/1,1,1,1)	1.00	84.29		Recovered as cobble sized fragments of brick. Possible smashed brick. GMG	1
					1.40	83.89		Recovered as soft, slightly gravelly, sandy CLAY. Gravel is angular of fine to coarse red brick, concrete and mixed lithologies. CMG	
		2.00	SPT()	N=12 (1,2/2,2,4,4)				Recovered as firm, dark brown, mottled grey, slightly gravelly, silty CLAY with occasional roots (10mm diameter). Gravel is angular to subrounded of fine to medium red brick and mixed lithologies. CMG	2
					2.30	82.99		Firm, dark brown mottled grey, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine mixed lithologies. CGT	
					2.60	82.69		Stiff, dark brown mottled grey, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded of fine mixed lithologies. CGT	
		3.00	SPT()	N=15 (1,3/2,4,4,5)	3.00	82.29		Soft, wet, dark brown mottled light orange brown, sandy CLAY. CGT	3
					3.40	81.89		Stiff, dark brown mottled, slightly silty, slightly gravelly CLAY. Gravel is angular to rounded of fine to medium mixed lithologies. CGT	
		4.00	SPT()	N=31 (5,6/6,7,9,9)	4.00	81.29		Soft to firm, wet, greenish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to medium mixed lithologies. CGT	4
					4.60	80.69		Stiff, dark brown mottled, slightly gravelly, silty CLAY. Gravel is angular to rounded of fine to medium mixed lithologies. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS108
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387829.99 N400456.96
Project No. : LD10385	Drilling Equipment: WS RIG	Level : 85.29m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=39 (6,8/8,9,10,12)	5.00	80.29		Stiff, dark brown mottled, slightly gravelly, silty CLAY. Gravel is angular to rounded of fine to medium mixed lithologies. CGT	5
								End of Borehole at 5.00m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS109
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387283.25 N400277.24
Project No. : LD10385	Drilling Equipment:	Level : 77.95m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.10	77.85		Firm, brown, gravelly CLAY with occasional rootlets. Gravel is angular to subrounded of fine to coarse suspected clinker (20%), mudstone (20%), red brick (10%) and mixed lithologies. TF	
								Recovered as 90% brown and black, sandy, angular to subrounded GRAVEL of suspected slag and clinker; and 10% cobble sized fragments of suspected clinker. CW	
		0.90		0.00ppmv					
		1.00	SPT()	N=24 (1,2/8,6,4,6)					1
					1.20	76.75		Stiff, brown and grey mottled, stained black, slightly sandy/ ashy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse red brick (25%), suspected clinker (20%), timber (10%) and mixed lithologies (45%). CMG *1.36m - 1.48m : Singular cobble sized fragment of red brick.*	
					1.70	76.25		Partial recovery. Recovered material comprises black, subangular to subrounded, fine to coarse GRAVEL of suspected clinker. CW	
		2.00	SPT()	N=11 (1,1/2,2,3,4)	2.00	75.95		Stiff, brown, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CMG	2
					2.20	75.75		*2.00m - 2.21m : Hydrocarbon odour.*	
		2.35		0.80ppmv				Black, sandy, subangular, fine to coarse GRAVEL of mixed lithologies. Hydrocarbon staining. GMG	
					2.45	75.50		*2.40m - 2.45m : Strong hydrocarbon odour.*	
		2.60 – 2.70	ES		2.65	75.30		Stiff, brown, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CMG	
		3.00	SPT()	N=32 (5,6/6,7,9,10)				Brown, stained black in places, sandy, slightly clayey, subangular to rounded, fine to coarse GRAVEL of suspected clinker (20%), metal (10%), timber (10%) and mixed lithologies (60%). CW	3
		3.40		0.70ppmv	3.40	74.55		Stiff, wet, brown, heavily stained black, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. CMG	
		3.65 – 3.75	ES		3.70	74.25		Wet, black, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of mixed lithologies. Hydrocarbon odour. GMG	
		4.00	SPT()	N=17 (4,5/5,4,4,4)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS109
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 28/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387283.25 N400277.24
Project No. : LD10385	Drilling Equipment:	Level : 77.95m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=15 (3,3/4,3,4,4)	5.00	72.95		Wet, black, slightly sandy, subangular to subrounded, fine to coarse GRAVEL of mixed lithologies. Hydrocarbon odour. GMG End of Borehole at 5.00m	5 6 7 8 9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS111
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387430.53 N400122.02
Project No. : LD10385	Drilling Equipment: WS rig	Level : 79.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as orangish brown, sandy, angular to subangular, fine to coarse GRAVEL of suspected slag and clinker. CW	
		0.35 0.35 – 0.40	ES		0.30	78.90		Recovered as black, sandy/ashy, angular to subangular, fine to coarse GRAVEL of suspected clinker and slag. White spirit and hydrocarbon odour. CW	
					0.50	78.70		*0.30m - 0.35m : Cemented.*	
					0.60	78.60		Soft, dark grey and light grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular of fine to coarse red brick and concrete. Slight hydrocarbon odour. CMG	
		0.80 0.80 0.80 1.00	HSV HSV HSV SPT()	48kPa 52kPa 56kPa N=11 (1,2/2,2,3,4)				Firm to stiff, grey and yellowish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to medium mixed lithologies. CGT	1
								1.00m - 2.30m : Becoming firm reddish brown mottled grey with occasional grey fine to medium sand lenses (>1cm thick).	
		2.00	SPT()	N=5 (1,1/0,1,2,2)					2
					2.30	76.90		Grey, clayey, fine to medium SAND. GGT	
								2.60m - 2.70m : Becoming very clayey.	
					2.70	76.50		Minimal recovery. Recovered material comprises soft, greyish brown, sandy CLAY. CGT	
		3.00	SPT()	N=14 (2,2/3,3,4,4)					3
		4.00	SPT()	N=16 (2,3/3,4,4,5)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS111
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387430.53 N400122.02
Project No. : LD10385	Drilling Equipment: WS rig	Level : 79.20m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=16 (3,3/3,4,4,5)	5.00	74.20		Minimal recovery. Recovered material comprises soft, greyish brown, sandy CLAY. CGT	5
								End of Borehole at 5.00m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS112
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387380.00 N400349.00
Project No. : LD10385	Drilling Equipment: WS rig	Level : 79.80m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	4.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.90 0.90 – 0.95 1.00	ES SPT()	N=8 (4,3/2,2,2,2)				MADE GROUND: Recovered as grey and orangish brown, slightly sandy, angular to subrounded, fine to coarse GRAVEL of suspected slag, suspected clinker, brick, concrete, sandstone. Sand is fine to coarse of ash. GMG	1
		2.00	SPT()	N=1 (1,0/0,1,0,0)	2.00	77.80		Soft, dark brown, sandy CLAY. Sand is fine. CGT	2
		2.90 2.90 2.90 3.00	HSV HSV HSV SPT()	102kPa 110kPa 98kPa N=35 (5,5/7,8,9,11)	2.75	77.05		Firm occasionally stiff, reddish brown and grey, slightly gravelly, slightly sandy CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies including sandstone and mudstone. Sand is fine to coarse. CGT	3
		3.80 3.80 3.80 4.00	HSV HSV HSV SPT()	110kPa 112kPa 120kPa N=20 (3,3/3,5,6,6)	4.00	75.80		End of Borehole at 4.00m	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS113
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387912.00 N400392.00
Project No. : LD10385	Drilling Equipment:	Level : 85.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
ZH	JC	MP	65%	4.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	84.85		Recovered as 50% roots and rootlets; 25% soft, brown, slightly sandy CLAY; 10% glass fragments; 5% plastic (wrapper); 5% ceramic; 5% wood fragments (twigs and branches). Sand is fine to medium. TF	
					0.60	84.40		Recovered as 70% compact dark brown and grey, slightly clayey, sandy, fine to coarse GRAVEL of red brick, suspected clinker/ slag and mudstone; 20% cobble sized fragments of red brick, suspected clinker/ slag and mudstone. Sand is fine to medium. CW	
		0.85 0.85 – 0.90 1.00	ES SPT()	N=12 (1,2/2,3,3,4)				Recovered as 70% soft to firm, brown mottled light grey and orange brown, slightly sandy, silty CLAY; 20% old roots and rootlets and 10% subrounded cobbles of sandstone. CMG	1
					1.80	83.20		Recovered as stiff, brown mottled light grey and pink, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse red mudstone/ marl, gritstone, red sandstone) CMG	
		2.00	SPT()	N=22 (5,5/5,5,6,6)					2
		2.50	HSV	95kPa					
		2.75	HSV	65kPa					
		3.00 3.00	HSV SPT()	130kPa N=24 (5,6/5,5,6,8)					3
								3.40m - 3.60m : Soft wet very sandy CLAY.	
		3.50	HSV	70kPa					
		3.75	HSV	75kPa					
		4.00 4.00	HSV SPT()	50kPa N=31 (4,4/6,9,9,7)	4.00	81.00		End of Borehole at 4.00m	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS119
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387933.06 N400343.71
Project No. : LD10385	Drilling Equipment: WS rig	Level : 84.66m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as firm to stiff, dark brown to brown, slightly gravelly, sandy CLAY with occasional tree roots (10mm) and rootlets. Gravel is angular to rounded of fine to medium red brick. TF *0.20m - 0.25m : Some cobble sized fragments of brick.*	
					0.40	84.26		Recovered as dark reddish brown to black, very sandy/ ashy, angular to rounded, fine to coarse GRAVEL of red brick, suspected slag and suspected clinker. CW	
		1.00	SPT()	N=3 (2,2/2,1,0,0)					1
		1.50 1.50 1.50	ES	8.40ppmv					
					1.90	82.76		Recovered as stiff to very stiff, dark brown mottled grey, slightly gravelly, silty CLAY. Gravel is subangular to subrounded of fine to medium mixed lithologies. CMG	
		2.00	SPT()	N=20 (2,3/4,4,6,6)					2
		3.00	SPT()	N=29 (4,5/6,6,8,9)	3.00	81.66		Minimal recovery. Recovered material comprises wet, very sandy, angular to subrounded, fine to coarse GRAVEL of red brick, concrete and mixed lithologies. GMG	3
					3.90	80.76		Stiff to very stiff, dark brown mottled grey, slightly gravelly, silty CLAY. Gravel is subangular to subrounded of fine to medium mixed lithologies. CGT	
		4.00	SPT()	N=24 (3,4/4,6,7,7)	4.00	80.66		Wet, sandy, subrounded, fine to medium GRAVEL of mixed lithologies. GGT	4
					4.90	79.76			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS119
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 23/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387933.06 N400343.71
Project No. : LD10385	Drilling Equipment: WS rig	Level : 84.66m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
JC	JC	MP	65%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT()	N=31 (5,6/7,8,8,8)	5.00	79.66		Minimal recovery. Recovered material comprises wet, brown, clayey SAND. GGT	5
								End of Borehole at 5.00m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS120
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387816.31 N400271.84
Project No. : LD10385	Drilling Equipment:	Level : 82.42m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as soft, brown, slightly sandy, slightly gravelly CLAY with frequent rootlets. Gravel is angular to subrounded of fine to coarse brick, concrete, suspected slag, and sandstone. TF	
					0.30	82.12			
								Recovered as dark grey to black, gravelly, clayey, fine to medium SAND. Gravel is angular to subrounded of fine to coarse of red brick, timber, coal, glass and sandstone. GMG	
					0.50	81.92		*0.48m - 0.95m : A single iron nail (4cm in length).*	
								Recovered as firm, grey, gravelly CLAY. Gravel is subangular of fine to coarse siltstone, mudstone and ironstone. CMG	
					0.95	81.47		Recovery is of stronger materials, weaker materials not recovered. Recovered material comprises stiff, brown, slightly sandy, slightly gravelly CLAY with occasional coarse gravel sized pockets of soft, sandy clay. Gravel is angular to subrounded of fine to coarse brick, coal, sandstone, mudstone and suspected clinker. Sand is fine to medium. CMG	1
								1.60m : Becoming soft.	
								1.90m - 1.95m : Band of slightly clayey, very sandy, angular to subangular GRAVEL of brick.	2
								2.80m : Becoming firm.	3
					3.80	78.62		Recovered as soft, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse suspected slag, red brick, suspected clinker, coal and crystalline rocks. Sand is fine to medium. CMG	4
								3.90m - 4.20m : Sandy. *4.00m : A single cobble of iron stone.*	
					4.20	78.22		Recovered as 40% subangular to subrounded, fine to medium GRAVEL of suspected clinker, mudstone and coal with frequent gravel sized inclusions of soft, white clay, soft, brown, slightly sandy, slightly gravelly CLAY and black, clayey, fine to medium SAND. Gravel is angular to rounded of fine to coarse suspected slag, red brick, suspected clinker, coal and crystalline rocks. GMG	
					4.50	77.92		Recovered as greyish white, slightly clayey, sandy, angular to subangular, fine to coarse GRAVEL of possible chalk/ lime (90%), brick (5%) and suspected clinker (5%). GMG	
					4.90	77.52			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS120
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387816.31 N400271.84
Project No. : LD10385	Drilling Equipment:	Level : 82.42m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
EG & ZH	JC	MP	%	5.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					5.00	77.42		Firm, light orangish brown, slightly sandy, gravelly CLAY. Gravel is subangular of fine to coarse light orangish brown mudstone/marl. CGT	5
								End of Borehole at 5.00m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
												0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	

Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS301
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387505.28 N400241.60
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 82.56m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	%	3.10

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as brown and orange mottled, sandy, clayey GRAVEL with occasional cobble sized fragments of red brick and concrete. Gravel is angular to subangular of fine to coarse red brick and concrete. GMG	
								1.00m - 2.00m : Minimal recovery between 1.00m and 2.00m.	1
								1.50m : Cloth fragments at 1.50m.	
									2
					2.40	80.16		Recovered as brown and orange mottled, gravelly SAND. Gravel is subangular of fine to coarse red brick. Hydrocarbon odour. GMG	
	▽	2.80 – 3.00	ES					*2.60m : Becoming wet from 2.60m.*	
								2.80m : Stained black with occasional rotten timber fragments and wire from 2.80m.	3
					3.10	79.46		End of Borehole at 3.10m	
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
3.10m	115mm	3.00m	115mm									0.00m 1.00m	1.00m 3.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated due to refusal at 3.1m.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS302
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387658.07 N400142.01
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.63m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.30	80.33		Recovered as soft, dark brown, sandy, gravelly CLAY with frequent roots / rootlets and rare cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
		0.50	ES					Recovered as dark grey, mottled reddish brown, sandy / ashy, angular to subrounded, fine to coarse GRAVEL of red brick, plastic, timber and mixed lithologies. GMG	
					0.70	79.93		*0.60m - 0.70m : Recovered with occasional cobble sized fragments of red brick between 0.60m and 0.70m.*	
		1.00	SPT(C)	N=11 (1,2/2,3,3,3)	1.00	79.63		Recovered as dark brown and grey mottled, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. RNG	1
								Firm, light brown and reddish brown mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	
		2.00	SPT(C)	N=18 (2,3/3,4,5,6)					2
		3.00	SPT(C)	N=31 (6,6/7,7,8,9)					3
	▽	4.00	SPT(C)	N=18 (3,6/3,5,4,6)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	2.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS302
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387658.07 N400142.01
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.63m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(C)	N=14 (1,1/2,3,4,5)	5.00	75.63		Firm, light brown and reddish brown mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	5
								No recovery due to the use of SPT cone. Possibly firm, light brown and reddish brown mottled, slightly sandy, slightly gravelly CLAY as above. CGT	
					5.45	75.18		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	2.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS303
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387598.84 N400193.38
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 82.44m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as soft, dark brown and grey mottled, sandy / ashy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. CMG	
					0.50	81.94		Recovered as dark grey, very gravelly, very clayey SAND / ASH with frequent cobble sized fragments of concrete. Gravel is angular to subangular of fine to coarse red brick, mudstone, plastic, glass and metal. GMG	
		1.00	SPT(C)	N=4 (1,3/2,0,1,1)					1
		2.00	SPT(C)	N=3 (4,2/0,1,1,1)	2.00	80.44		Recovered as dark grey and reddish brown mottled, sandy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of red brick and mixed lithologies. GMG	2
	▽	3.00	SPT(C)	N=4 (3,1/2,1,0,1)					3
					3.50	78.94		Recovered as soft, dark grey to black, sandy / ashy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, plastic, metal and mixed lithologies. Occasional plastic bag fragments. Strong hydrocarbon odour. CMG	
		4.00	SPT(C)	N=25 (3,1/3,8,7,7)					4
		4.50	ES						

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS303
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387598.84 N400193.38
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 82.44m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(C)	N=17 (3,4/3,5,4,5)	5.00	77.44		Recovered as soft, dark grey to black, sandy / ashy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, plastic, metal and mixed lithologies. Occasional plastic bag fragments. Strong hydrocarbon odour. CMG	5
					5.45	77.00		No recovery due to the use of the SPT cone. Possibly soft, dark grey to black, sandy / ashy, gravelly CLAY as above. CMG	
								End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS304
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387623.38 N400358.02
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 84.84m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	%	4.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as firm to stiff, brown and light brown mottled, slightly sandy, slightly gravelly CLAY. Gravel is subrounded of fine to coarse red brick and mixed lithologies. CMG	
					0.40	84.44			
								Recovered as dark grey, gravelly, clayey, fine to medium SAND / ASH. Gravel is subangular of fine to coarse red brick, glass, plastic and mixed lithologies. GMG	1
					1.30	83.54			
		1.50 – 2.00	ES					Recovered as dark grey, slightly gravelly SAND / ASH. Gravel is angular of medium glass and mixed lithologies. Slight hydrocarbon and putrid odour. GMG	2
					2.20	82.64			
								Recovered as firm, greyish brown, slightly sandy, gravelly CLAY. Gravel is subangular of fine to coarse red brick, sandstone and concrete. Sand is fine to medium. Slight hydrocarbon odour. CMG	
								2.80m : Cobble sized red brick fragment at 2.80m.	3
					3.45	81.39			
								Recovered as dark grey, slightly gravelly SAND / ASH. Gravel is subangular of fine to coarse glass. Hydrocarbon and putrid odour. GMG	
								3.80m : Cobble sized fragment of rotten wood at 3.80m.	
								3.90m : Cobble sized yellow sponge fragment at 3.90m.	
					4.00	80.84		End of Borehole at 4.00m	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS305
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387356.61 N400244.68
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 78.92m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	78.62		Recovered as dark grey, mottled red brown, sandy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of suspected slag, suspected clinker, sandstone, red brick and mudstone. CW	
								Recovered as dark grey to black, very sandy / ashy, angular to subrounded, fine to coarse GRAVEL of suspected slag, suspected clinker and occasional mixed natural lithologies and red brick. CW	
		1.00	SPT(S)	N=1 (1,0/0,0,0,1)					1
								1.20m - 2.45m : Ash content increases altering colour to a mottled cream.	
		2.00	SPT(S)	N=1 (1,0/0,0,0,1)					2
					2.45	76.47		Recovered as soft, dark grey to black, mottled white, sandy / ashy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of suspected slag, suspected clinker and occasional mixed natural lithologies. CMG	
	▽	3.00	SPT(S)	N=2 (1,0/0,0,1,1)	3.00	75.92		Recovered as soft, dark brown to reddish brown, slightly sandy, gravelly CLAY. Gravel is angular to subangular, fine to medium of sandstone, suspected clinker, mudstone and frequent red brick. CMG	3
					3.80	75.12		Recovered as dark grey to black, sandy / ashy, slightly clayey angular to subangular, fine to coarse GRAVEL of suspected clinker, suspected slag, red brick and occasional mixed natural lithologies. CW	
		4.00	SPT(S)	N=6 (1,0/1,2,3,0)					4
					4.60	74.32		Soft, dark grey to brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded, fine to coarse of mudstone and sandstone. CGT	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS305
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387356.61 N400244.68
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 78.92m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=21 (3,4/5,4,6,6)				Soft, dark grey to brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded, fine to coarse of mudstone and sandstone. CGT	5
					5.45	73.47		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS306
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387603.71 N400136.08
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 81.10m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as grey, mottled brown, red, green and orange, slightly sandy / ashy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of red brick, glass, potential asbestos containing material, concrete, wood and fabric. GMG *0.80m - 1.00m : Cobble sized fragments of grey concrete and red brick.*	
		1.00	SPT(C)	N=46 (4,12/26,11,4,5)	1.00	80.10		Recovered as soft, dark grey, mottled reddish brown, slightly sandy / ashy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse wood fragments, fabric, plastic sheets, red brick, plaster board. HW	1
	▽	2.00	SPT(C)	N=2 (4,0/0,1,0,1)	2.00	79.10		Recovered as dark brown to black, slightly sandy / ashy, angular to subrounded, fine to coarse GRAVEL of red brick, wood, fabric and plastic. HW *2.00m - 2.70m : No recovery.*	2
		3.00	SPT(C)	N=9 (1,1/1,2,2,4)					3
					3.60	77.50		Recovered as soft to firm, greyish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to medium mixed natural lithologies and red brick with rare wood and plastic. CMG	
		4.00	SPT(C)	N=1 (3,2/0,0,0,1)				*4.45m - 5.00m : Brown. Gravel of mixed natural lithologies.*	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
1.0m drilled at first location with SPT taken at 1.0m - Made ground so hard it broke the SPT Split Spoon. CPT used instead.
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS306
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387603.71 N400136.08
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 81.10m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(C)	N=9 (1,0/2,1,3,3)				Recovered as soft to firm, greyish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to medium mixed natural lithologies and red brick with rare wood and plastic. CMG *5.00m - 5.45m : No recovery from CPT.*	5
					5.45	75.65		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
1.0m drilled at first location with SPT taken at 1.0m - Made ground so hard it broke the SPT Split Spoon. CPT used instead.
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS307
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387569.18 N400107.93
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.99m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.10	80.89		Recovered as soft, dark brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone, sandstone, red brick, wood fragments and metal fragments. TF	
								Recovered as soft, dark brown to grey, mottled orange and brown, slightly sandy / ashy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse of suspected slag, suspected clinker, red brick and occasional mixed natural lithologies. CMG	
								0.80m - 1.00m : Cobbles of red brick and concrete.	
		1.00	SPT(S)	N=6 (3,3/2,1,2,1)	1.00	79.99		Recovered as dark grey, sandy, angular to subangular, fine to coarse GRAVEL of red brick, concrete and wood fragments with occasional cobble sized fragments of red brick and concrete. GMG	1
	▽							*1.90m - 2.00m : Gravel of chip board fragments.*	
		2.00	SPT(S)	N=10 (2,1/2,2,3,3)	2.00	78.99		Recovered as soft, dark grey to dark brown, slightly sandy / ashy, slightly gravelly CLAY with occasional pockets of fine to medium gravel. Gravel is angular to subrounded of fine to coarse red brick, suspected slag, suspected clinker and mixed natural lithologies. CGT	2
								2.00m - 2.45m : No recovery.	
		3.00	SPT(S)	N=12 (1,3/2,4,3,3)					3
					3.25	77.74		Soft, brown to grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of mixed natural lithologies. CGT	
		4.00	SPT(S)	N=10 (2,1/2,2,3,3)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 3.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS307
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387569.18 N400107.93
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.99m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=11 (2,1/2,3,3,3)				Soft, brown to grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of mixed natural lithologies. CGT	5
					5.45	75.54		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 3.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS308
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387815.34 N400316.82
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 84.80m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	4.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.45	84.35		Recovered as soft, dark grey, slightly sandy, slightly gravelly CLAY with a single cobble of red brick, rare plastic food wrappers and rope. Gravel is subangular, fine to coarse of red brick. CMG	
								Recovered as firm, brown and yellowish brown, slightly gravelly, sandy CLAY. Gravel is subangular of fine to coarse brick and sandstone. CMG	
								0.80m : Cobble sized red brick.	
		1.00	SPT(C)	N=3 (1,1/0,1,1,1)					1
					1.25	83.55		Recovered as brown, slightly gravelly, clayey, fine to medium SAND. Gravel is subangular of fine to coarse red brick. GMG	
		2.00	SPT(C)	N=0 (1,2/0,0,0,0)				*2.00m - 3.00m : Poor recovery. Wet.*	2
								2.20m : Cobble sized red brick.	
	▽	3.00	SPT(C)	N=4 (0,0/1,1,1,1)	3.00	81.80		Soft, grey, stained dark grey, sandy CLAY with slight hydrocarbon odour. Sand is fine. Odour and staining possibly associated with groundwater. CGT	3
		4.00	SPT(C)	N=7 (3,4/1,2,2,2)				*4.00m - 4.45m : No recovery from CPT.*	4
					4.45	80.35		End of Borehole at 4.45m	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated at 4.0m due to issues with the rig.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS309
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387410.52 N400217.64
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.01m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.10	79.91		Recovered as brown to orange, angular, coarse GRAVEL of wood chippings. GMG	
								Recovered as light brown, mottled yellow, reddish brown and grey, very sandy, angular to subrounded, fine to coarse GRAVEL of red brick and sandstone with occasional suspected slag and suspected clinker. CW	
					0.60	79.41		Recovered as soft, dark grey and dark brown, mottled reddish brown, slightly gravelly, sandy / ashy CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker with occasional red brick and mixed natural lithologies. CMG	
		1.00	SPT(S)	N=17 (7,5/3,5,5,4)					1
								1.70m - 1.90m : Black and grey colour.	
		2.00	SPT(S)	N=4 (1,0/0,1,1,2)				*2.00m : Slight hydrocarbon odour.*	2
	▽							*2.50m - 2.70m : Increased ash content altering colour to mottled cream and ashy white.*	
		3.00	SPT(S)	N=0 (3,1/0,0,0,0)					3
					3.20	76.81		Soft, dark brown to dark grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded of fine to coarse mixed natural lithologies. CGT	
		4.00	SPT(S)	N=13 (2,3/2,4,3,4)	4.00	76.01		Soft to firm, dark brown and grey to reddish brown, slightly sandy, slightly gravelly CLAY with occasional pockets of dark grey, sandy gravel of mudstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS309
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387410.52 N400217.64
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.01m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=24 (3,4/4,6,6,8)				Soft to firm, dark brown and grey to reddish brown, slightly sandy, slightly gravelly CLAY with occasional pockets of dark grey, sandy gravel of mudstone. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	5
					5.45	74.56		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS310
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387590.29 N400157.46
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 81.45m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	4.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	81.15		Recovered as dark brown to grey, sandy, gravelly CLAY. Gravel is angular to rounded of fine to coarse wood, red brick, plastic, tyres, metal and mixed natural lithologies. GMG	
		1.00	SPT(C)	N=1 (0,1/0,0,1,0)				Recovered as dark brown to grey, stained black, sandy, gravelly CLAY with frequent cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, wood and plastic bags. CMG	1
	▽	2.00	SPT(C)	N=32 (5,3/13,11,5,3)					2
					2.80	78.65		Dark grey to brown, sandy, gravelly CLAY. Gravel is angular to subrounded, medium to coarse of red brick, wood and plastic bags. CMG	
		3.00	SPT(C)	N=7 (4,7/0,1,0,6)					3
		4.00	SPT(S)	N=4 (3,2/2,1,0,1)				*4.00m - 4.45m : No recovery from CPT.*	4
					4.45	77.00		End of Borehole at 4.45m	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS311
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387576.27 N400181.47
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 82.21m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	2.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as dark grey to brown, mottled red, white and orange, slightly sandy / ashy, gravelly CLAY with occasional cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse mixed natural lithologies, red brick, wood, plastic bags and fibreglass. CMG	
								0.65m - 0.90m : Cobble of medium grained sandstone.	
					0.90	81.31			
		1.00	SPT(C)	N=13 (2,4/2,3,2,6)				Recovered as soft, reddish brown to grey, sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies, red brick and plastic. CMG	1
	▽							*1.60m : Frequent gravel sized fragments of glass.*	
		2.00	SPT(C)	N=3 (2,1/0,0,0,3)				*2.00m - 2.45m : No recovery from CPT.*	2
					2.45	79.76		End of Borehole at 2.45m	
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
2.00m	115mm	2.00m	115mm									0.00m 1.00m	1.00m 2.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated at 2.45m due to casing not being straight.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS312
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387677.19 N400199.80
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 86.73m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.30	86.43		Recovered as soft, dark brown, sandy, gravelly CLAY with frequent cobble sized fragments of red brick, concrete and plastic bags. Gravel is angular to subrounded of fine to coarse red brick, mixed natural lithologies, plastic, metal and ceramics. CMG	
								Recovered as soft grey to brown, mottled red, cream and black, sandy, gravelly CLAY with occasional cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, mixed natural lithologies, plastic and concrete. CMG	
		1.00	SPT(C)	N=2 (1,0/1,0,0,1)					1
		2.00	SPT(C)	N=23 (7,6/8,5,7,3)					2
					2.40	84.33		Recovered as soft, reddish brown, sandy CLAY with occasional cobble sized pockets of stiff, slightly gravelly, sandy clay. Gravel is angular to subrounded of fine to coarse sandstone and red brick. CMG	
	▽	3.00	SPT(C)	N=4 (2,2/1,1,1,1)	3.00	83.73		Recovered as soft to firm, reddish brown to grey, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies and red brick. CMG	3
		4.00	SPT(C)	N=1 (1,0/0,0,0,1)					4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS312
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387677.19 N400199.80
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 86.73m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=0 (1,1/0,0,0,0)				Recovered as soft to firm, reddish brown to grey, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies and red brick. CMG *5.00m - 5.45m : No recovery from CPT.*	5
					5.45	81.28		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS313
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387777.55 N400318.26
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 85.82m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	67%	4.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		1.00	SPT(C)	N=19 (1,1/2,2,7,8)				Recovered as firm, greyish brown, gravelly CLAY with occasional cobble sized fragments of red brick and concrete. Gravel is subangular of fine to coarse brick, sandstone and concrete. CMG	1
					1.60	84.22			
		2.00	SPT(C)	N=17 (3,5/4,5,4,4)				Recovered as stiff, brown and greyish brown, slightly sandy, gravelly CLAY with a single cobble sized fragment of red brick. Gravel is subangular of fine to coarse red brick, mixed natural lithologies and rare suspected clinker. CMG	2
					2.70	83.12			
		3.00	SPT(C)	N=8 (4,3/2,2,2,2)				Recovered as grey and dark grey, slightly sandy, angular to subangular, fine to coarse GRAVEL of mudstone and coal. CS	3
								3.50m : Reddish brown gravel of burnt shale.	
		4.00	SPT(C)	N=11 (3,2/2,2,2,5)					4
					4.45	81.36		End of Borehole at 4.45m	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated at 4.0m due to issues with the rig.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS314
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387616.54 N400341.16
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 84.79m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
	JC	MP	67%	4.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
								Driller notes very hard Made Ground.	
					0.30	84.49			
								Driller notes very hard Made Ground.	
		1.00	SPT(C)	N=46 (2,2/9,20,10,7)	1.00	83.79			1
								Driller notes very hard Made Ground.	
		2.00	SPT(C)	N=12 (2,3/5,3,2,2)	2.00	82.79			2
								Driller notes Made Ground.	
		3.00	SPT(C)	N=4 (1,2/1,1,1,1)	3.00	81.79			3
								Driller notes Made Ground.	
		4.00	SPT(C)	N=9 (2,1/3,2,2,2)					4
					4.45	80.34		End of Borehole at 4.45m	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS315
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387532.69 N400293.02
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 83.41m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
LT	JC	MP	%	4.00

Install. / Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as firm, dark brown, slightly sandy, gravelly CLAY with occasional cobble sized fragments of brick, sandstone, concrete and mudstone. Gravel is subangular of fine to coarse brick, concrete and sandstone. CMG	
								0.50m : Frequent cobble sized fragments of the above.	1
					1.80	81.61		Recovered as dark grey and brown, slightly gravelly SAND with occasional ashy horizons. Gravel is subangular of fine to coarse brick and glass. GMG	
								2.00m - 3.00m : Poor recovery due to sandstone cobble.	2
					2.40	81.01		Recovered as brown and orange, sandy, angular to subangular COBBLES of brick and sandstone with occasional glass and plastic fragments. Sand is fine. DW	
								3.00m - 4.00m : Poor recovery.	3
	▽				4.00	79.41		End of Borehole at 4.00m	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
4.00m	115mm	4.00m	115mm									0.00m 1.00m	1.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS316
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387410.00 N400290.62
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.09m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	79.99		Recovered as soft, dark grey to brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies, red brick and suspected slag. TF	
								Recovered as dark grey to black, mottled orangish brown, gravelly, slightly clayey SAND / ASH. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker with occasional red brick and mixed natural lithologies. CW	
		1.00	SPT(S)	N=1 (1,0/0,0,0,1)					1
					1.45	78.64		Recovered as soft, red to reddish brown, mottled ashy cream and dark grey, slightly sandy / ashy, gravelly CLAY. Gravel is angular to subangular of fine to coarse suspected slag, suspected clinker and occasional red brick. CMG	
					1.70	78.39		Recovered as soft, dark grey to brown, sandy/ ashy, gravelly CLAY. Gravel is angular to subangular of fine to coarse suspected slag, suspected clinker with occasional red brick and glass. CMG	
		2.00	SPT(S)	N=1 (1,0/0,0,1,0)					2
	▽							*2.80m - 2.90m : Band of firm, dark brown to reddish brown, slightly sandy / ashy, slightly gravelly clay.*	
		3.00	SPT(S)	N=1 (1,0/1,0,0,0)	3.00	77.09		Recovered as reddish brown, mottled grey and brown, sandy, angular to subangular, fine to coarse GRAVEL of mudstone and sandstone with occasional suspected slag. CW *3.00m : Lense of dark grey, damp, sandy, slightly clayey angular to subrounded, fine to coarse gravel of suspected slag and suspected clinker.* *3.00m - 3.45m : No recovery from CPT.*	3
					3.80	76.29		Recovered as soft to firm, dark brown to grey, sandy, gravelly CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker. CMG	
		4.00	SPT(S)	N=13 (1,2/3,3,3,4)				*4.20m - 4.45m : Reddish brown. Gravel is angular to subrounded of fine to coarse mixed natural lithologies.* *4.45m - 5.00m : Mottled reddish brown. Occasional gravel of red brick and mixed natural lithologies.*	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS316
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387410.00 N400290.62
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 80.09m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=23 (4,4/4,6,6,7)				Recovered as soft to firm, dark brown to grey, sandy, gravelly CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker. CMG	5
					5.45	74.64		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 4.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS317
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387376.44 N400295.16
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 79.44m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	79.34		Recovered as soft, dark brown to dark grey, sandy, gravelly CLAY with frequent roots and rootlets. Gravel is angular to rounded of fine to coarse sandstone and mudstone. TF	
								Recovered as dark brown to dark grey, sandy / ashy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of suspected slag and suspected clinker with occasional sandstone, mudstone and brick. CW *0.30m - 1.50m : Mottled orange and red.*	
		1.00	SPT(S)	N=3 (1,0/0,1,1,1)					1
					1.50	77.94		Recovered as soft, dark brown to dark grey, slightly gravelly, slightly sandy / ashy CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker with occasional mixed natural lithologies. CMG *1.80m - 1.90m : Dark grey to black, mottled ashy white, sandy / ashy, angular to subangular, fine to coarse gravel of suspected slag and suspected clinker.* *1.90m - 2.25m : Gravel includes occasional red brick and glass.*	
		2.00	SPT(S)	N=1 (1,0/1,0,0,0)					2
	▽				2.50	76.94		Recovered as dark grey to black, mottled reddish brown, slightly sandy / ashy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of suspected slag and suspected clinker with occasional mixed natural lithologies and red brick. Occasional coarse gravel sized pockets of medium to coarse, reddish brown weathered suspected slag. CW	
		3.00	SPT(S)	N=6 (0,0/1,1,2,2)					3
								3.45m - 3.95m : Much of material washed out.	
		4.00	SPT(S)	N=15 (2,2/3,3,4,5)	3.95	75.49		Soft, reddish brown to brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 3.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS317
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387376.44 N400295.16
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 79.44m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=16 (3,3/3,4,4,5)				Soft, reddish brown to brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed natural lithologies. CGT	5
					5.45	73.99		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 1.00m	1.00m 3.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS318
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.25 N400209.53
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 78.64m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	78.54		Recovered as soft, dark brown to dark grey, sandy, gravelly CLAY with frequent roots and rootlets. Gravel is angular to rounded of fine to coarse sandstone and mudstone. TF	
								Recovered as soft to firm, dark grey to black, slightly gravelly, sandy / ashy CLAY. Gravel is angular to subrounded of fine to coarse suspected slag and suspected clinker with occasional brick. CMG	
		1.00	SPT(S)	N=24 (1,1/1,1,7,15)					1
								1.90m : Strong hydrocarbon odour and slight oily sheen.	
		2.00	SPT(S)	N=0 (1,0/0,0,0,0)	2.00	76.64		Recovered as soft to firm, dark grey, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse suspected slag and suspected clinker with occasional mixed natural lithologies. CMG	2
								2.50m - 2.80m : Mottled light grey and ashy.	
					2.80	75.84		Recovered as dark brown, mottled reddish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse sandstone and mudstone. CMG	
		3.00	SPT(S)	N=0 (1,0/0,0,0,0)				*2.80m - 5.00m : Frequent lenses of dark grey, medium gravel of suspected slag and suspected clinker.*	3
	▽							*3.30m : Water has oily sheen with strong hydrocarbon odour.*	
		4.00	SPT(S)	N=3 (1,0/1,1,0,1)					4
					4.45	74.19		Recovered as dark grey, slightly gravelly, sandy / ashy CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker with occasional mudstone and red brick. CMG	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS318
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387363.25 N400209.53
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 78.64m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=18 (0,0/0,7,7,4)	5.00	73.64		Recovered as dark grey, slightly gravelly, sandy / ashy CLAY. Gravel is angular to subangular of fine to coarse suspected slag and suspected clinker with occasional mudstone and red brick. CMG	5
					5.45	73.19		Dark grey to reddish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CMG	
								End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm									0.00m 2.00m	2.00m 5.00m	PLAIN SLOTTED	50mm 50mm

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS319
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387349.80 N400260.00
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 79.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	78.70		Recovered as dark grey to black, sandy / ashy, angular to subrounded, fine to coarse GRAVEL of suspected clinker, suspected slag and mudstone with occasional roots and rootlets. TF	
					0.70	78.30		Recovered as dark grey, mottled reddish brown and light grey, sandy / ashy, angular to subrounded, fine to coarse GRAVEL of suspected clinker, suspected slag and mudstone. CW	
		1.00	SPT(S)	N=5 (1,1/0,0,3,2)				Recovered as soft to firm, dark grey to black, mottled reddish brown, slightly gravelly, slightly sandy / ashy, CLAY. Gravel is angular to subrounded of fine to coarse suspected clinker, suspected slag and glass. CMG	1
		2.00	SPT(S)	N=0 (1,0/0,0,0,0)				*1.80m - 1.90m : Horizon of dark grey, mottled orangish brown, sandy / ashy, angular to subrounded, fine to coarse gravel of suspected slag and suspected clinker with occasional mudstone and red brick.*	2
	▽				2.50	76.50		Recovered as wet, light grey to cream, slightly gravelly, slightly clayey SAND / ASH. Gravel is angular to subrounded of fine to coarse suspected clinker and suspected slag. CW *2.80m - 3.45m : Dark grey, mottled dark brown.*	
		3.00	SPT(S)	N=1 (1,0/0,0,0,1)					3
		4.00	SPT(S)	N=13 (3,2/3,3,3,4)					4
					4.20	74.80		Recovered as soft to firm, wet, grey to brown, mottled reddish brown, slightly gravelly, slightly sandy / ashy CLAY. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker and sandstone. CMG *4.45m - 4.75m : Material washed out.*	
					4.75	74.25		Recovered as brown to dark grey, sandy, slightly clayey / silty, angular to subrounded, fine to coarse GRAVEL of red brick, suspected slag, suspected clinker and occasional mudstone. CW	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm												

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Windowless Sample Borehole Log

BOREHOLE REFERENCE
WS319
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 11/04/2022
Location: Newton Heath	Contractor: Geotron Ltd	Co-ords: E387349.80 N400260.00
Project No. : LD10385	Drilling Equipment: Competitor Dart	Level : 79.00m AoD

Logged By	Checked By	Approved By	SPT Energy Ratio	Final Depth
MS	JC	MP	67%	5.45

Install. / Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		5.00	SPT(S)	N=14 (1,3/2,4,3,5)				Recovered as brown to dark grey, sandy, slightly clayey / silty, angular to subrounded, fine to coarse GRAVEL of red brick, suspected slag, suspected clinker and occasional mudstone. CW	5
								5.00m - 5.20m : Soft, reddish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to medium sandstone and mudstone.	
					5.45	73.55		End of Borehole at 5.45m	6
									7
									8
									9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Installation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Top	Base	Inclination	Orientation	Top	Base	Pipe Type	Diameter
5.00m	115mm	5.00m	115mm												

Remarks

Inspection pit hand dug to 1.20m bgl.
Approximate percentage by volume quantifiers as follows; rare (<5%), occasional (5-20%), frequent (20-40%) and abundant (>40%).
Terminated as target depth achieved.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP101
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387604.00 N400160.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.40m x 1.30m — Final Depth: 3.20m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 81.96m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Dark brown, silty, very clayey, fine SAND. TF	
					0.20	81.76			
		0.50	ES					Recovered as 60% cobble sized red brick fragments (some cemented together); 30% brown, gravelly, clayey, fine to coarse SAND; 5% plastic material including sheeting; 5% timber beams (up to 2m long). Gravel is subangular to subrounded fine to coarse brick and concrete. DW	
					1.00	80.96		Recovered as 60% grey, very sandy, very clayey GRAVEL; 25% whole and half red bricks and cobble sized concrete paving slab fragments; 5% cobble to boulder sized suspected slag fragments; 5% metal and plastic pipes; 5% cloth and other plastic items including rubbish bags. Gravel is angular to subangular of fine to coarse brick, concrete and mixed lithologies HW *1.00m : 1 No. Concrete block (1.0m x 0.6m x 0.5m).*	1
		1.50	ES					*1.90m : Fast ingress of water with strong odour of white spirit and rotten egg.*	2
								2.20m : Plastic items include tubes, polystyrene boxes, and food wrappers.	
					3.20	78.76		Base of Excavation at 3.20m	3
									4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable		

Pumping Data

Date	Rate	Remarks

General Remarks

Terminated due to water in excavation. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP102
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387592.30 N400197.24
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 1.70m x 5.20m / Final Depth: 3.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 82.60m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
								Firm, dark brown, slightly sandy, silty CLAY. Sand is fine. TF
					0.20	82.40		
		0.50	ES					Recovered as 80% firm, brown, slightly sandy, gravelly CLAY; 10% whole and half red bricks; 10% cobble sized concrete slabs fragments. Gravel is subangular to subrounded of fine to coarse of mixed lithologies. CMG
					1.00	81.60		Recovered as 45% light brown, very sandy, very clayey GRAVEL; 35% cobble sized fragments of red brick; 10% metal sheets, bars and tools, 5% plastic bags, pipes and cables; 5% timber pieces (up to 2m length). Gravel is angular to subangular of fine to coarse mixed lithologies. DW
		1.60	ES					
	▽							*2.40m : Vitreous sheen on water surface with strong rotten egg odour and weak white spirit odour.*
					2.50	80.10		Recovered as 40% whole and half red bricks; 20% metal sheets, bars and tools; 20% timber pieces (up to 2m length); 10% plastic bags, pipes and cables; 5% light brown, very sandy, very clayey GRAVEL; and 5% wooden boards. Gravel is angular to subangular of fine to coarse mixed lithologies. DW
					3.30	79.30		Base of Excavation at 3.30m

Scale: 1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to multiple collapses of the excavation walls. Unstable from 1.5m. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP103
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387898.72 N400401.14
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.70m x 3.00m — Final Depth: 5.30m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.72m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	84.57		Recovered as soft, dark brown, slightly sandy, slightly gravelly CLAY with abundant roots and rootlets. Gravel is angular to subrounded of fine to coarse red brick and plastic. Sand is fine. TF	
		0.60 – 1.80	B					Recovered as 45% cobble to boulder sized inclusions of soft to stiff, light brown mottled orangish brown and light grey, slightly sandy, slightly gravelly CLAY; 40% whole and half red brick; 10% roots and rootlets; and 5% plastic and rubber fragments. Gravel is angular to rounded of fine to coarse red brick, mudstone, crystalline rocks and rounded pebbles. DW	
		0.60	HSV	67kPa				*0.50m - 0.96m : In the northern side of the excavation clay comes in at 0.5m. In the southwestern side of the excavation clay comes in at 0.96m.*	
▽					0.95	83.77		Firm to stiff, light brown mottled light grey and orangish brown in places, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse gritstone, white sandstone, mudstone, coal, red sandstone and crystalline rocks. Sand is fine. CGT	1
								0.96m : Fast ingress of water from rounded brick structure, in the southwestern side of the excavation.	
		1.80	HSV	68kPa					2
									3
▽									
									4
		4.50 – 5.30	B					*4.50m - 5.30m : Become very stiff to hard and no longer mottled orangish brown and light grey.*	
		4.60	HSV	110kPa					

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP103
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387898.72 N400401.14
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.70m x 3.00m — Final Depth: 5.30m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.72m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.30	79.42		Firm to stiff, light brown mottled light grey and orangish brown in places, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse gritstone, white sandstone, mudstone, coal, red sandstone and crystalline rocks. Sand is fine. CGT	6, 7, 8, 9
								Base of Excavation at 5.30m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP104
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387525.00 N400404.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.30m x 1.30m; Final Depth: 3.50m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.88m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	83.58		Recovered as 60% cobble to boulder sized inclusions of soft, brown, slightly sandy, gravelly CLAY; 10% cobble sized red brick and concrete fragments; 10% cobble sized ceramic fragments; 10% tree roots; and 10% other materials including glass, timber and plastic. Gravel is angular to subrounded fine to coarse red brick, slate, concrete, sandstone and mixed lithologies. TF	
								Recovered as 40% cobble to boulder sized fragments of red brick, concrete and paving slabs; 20% brown, sandy, angular to rounded, fine to coarse GRAVEL of mixed lithologies; 15% cobble sized inclusions of stiff, brown CLAY; 10% wooden fencing; 10% metal pipes; 5% other materials including fabric, glass and nails. DW	1
	▽				1.20	82.68		Recovered as 40% cobble to boulder sized inclusions of soft, wet, grey, gravelly CLAY; 20% cobble sized timber fragments; 10% cobble sized metal fragments; 10% cobble sized red brick and concrete fragments; 10% cobble sized inclusions of damp, light grey, slightly clayey, fine to coarse SAND; 10% cobble to boulder sized inclusions of soft, orangish brown, slightly gravelly CLAY. DW *1.20m : Water seeping from southern edge of pit.* *1.80m - 2.20m : Collapse of eastern face of the excavation.*	
		1.80 1.80	ES						2
	▽				2.10	81.78		Wet, light brown, slightly clayey, fine to medium SAND. GGT *2.10m : Rapid ingress of water from NNW corner of the excavation.*	
					2.90	80.98		Firm, brown, slightly sandy CLAY. CGT	3
					3.50	80.38		Base of Excavation at 3.50m	
									4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable at 3.5m bgl.		

Pumping Data

Date	Rate	Remarks

General Remarks

Terminated due to instability. Unstable from 3.5m.
Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP105
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387476.10 N400327.90
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.20m x 1.20m; Final Depth: 3.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.01m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.00 – 0.60	ES					Recovered as 40% soft, orangish brown, slightly sandy, gravelly CLAY; 30% whole and half red bricks; 10% cobble and boulder sized concrete, paving slab and chimney pot fragments; 10% metal bars and ceramic bowls; 5% plastic pipes and black bin bags; and 5% roots and rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. HW	
								0.50m - 2.00m : Collapse of the eastern face of the excavation.	
		0.60	ES		0.60	82.41		Recovered as 40% firm, dark grey, slightly sandy, gravelly CLAY; 20% whole and half red bricks; 10% boulders sized concrete fragments (0.49m x 0.2m x 0.3m); 10% plastic cement bags, pipes and wrappers; 10% metal pieces including old engine parts, drinks cans, hooks; 10% timber including laths and fencing panels. Gravel is subangular to rounded fine to coarse red brick, suspected clinker and mixed lithologies. DW	1
					0.90	82.11			
					1.20	81.81		Recovered as 50% reddish brown, sandy GRAVEL; 20% whole and half red bricks, 15% plastic fragments including crates; 10% metal bars; and 5% wooden fencing fragments. Gravel is angular to subangular of fine to coarse mudstone, suspected clinker and mixed lithologies. DW	
					1.40	81.61		Recovered as 60% damp, light brown, fine to coarse SAND; 20% cobbles sized sandstone and concrete fragments; 20% gravel to boulder sized inclusions of soft, orangish brown, slightly gravelly CLAY. Gravel is subrounded of fine to coarse mixed lithologies. GMG	
								Brown, fine to coarse SAND. GGT	2
					3.00	80.01		Base of Excavation at 3.00m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP106
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387566.00 N400320.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 1.30m — Final Depth: 3.60m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.40m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	84.20		Firm, dark brown, slightly sandy, slightly gravelly CLAY with abundant roots and rootlets. Gravel is subangular to subrounded fine to medium red brick and mixed lithologies. TF	
					0.40	84.00		Recovered as 90% boulder sized concrete fragments (2.0m x 0.5m x 0.2m); and 10% light greyish brown, sandy, clayey, angular to rounded fine to coarse GRAVEL of red brick and mixed lithologies. GMG	
					0.80	83.60		Recovered as 25% light greyish brown, sandy, clayey GRAVEL; 20% whole and half red brick and cobble to boulder sized tarmac and concrete fragments; 15% wooden fencing fragments; 15% plastic sheeting, bags, pipes; 10% pieces of corrugated metal sheet and metal pipes. Gravel is angular to rounded of fine to coarse concrete, red brick and mixed lithologies. DW	1
		1.30	ES					Recovered as 25% light greyish brown, slightly sandy slightly clayey GRAVEL; 20% whole and half red bricks; 20% cobbles sized fragments of concrete, reinforced concrete, orange sandstone and ceramic; 10% wooden fencing/posts; 10% plastic bags and sheeting; 5% sponge and polystyrene; 5% glass bottles; and 5% metal pipes and bars. Gravel is angular to subrounded of fine to coarse mixed lithologies DW	2
									3
					3.60	80.80		Base of Excavation at 3.60m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Terminated due to space constraints. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP107
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387524.00 N400340.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.10m x 1.40m — Final Depth: 4.70m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 83.91m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	83.71		Recovered as 40% tree roots; 30% stiff, orangish brown CLAY; 30% cobble sized red brick and concrete fragments. TF	
					0.70	83.21		Recovered as 50% cobble to boulder sized fragments of red brick, concrete and paving slabs; 20% brown, slightly sandy, slightly clayey GRAVEL; 10% plastic sheeting; 10% metal including paint cans and tins; 5% fabric materials; 5% cobble sized ceramic fragments. Gravel is angular to subrounded of fine to coarse mixed lithologies. DW	
								0.50m - 1.70m : Multiple collapses of excavation.	
					1.70	82.21		Recovered as 25% cobbles to boulder sized fragments of red brick and concrete, 20% cobble sized metal fragments (including pipe; 3m long x 50mm diameter); 20% cobble sized ceramic fragments; 20% miscellaneous objects including shoes, polystyrene, plastic sheeting, fabric, foam; and 5% dark brown, slightly clayey, angular to subrounded, fine to coarse GRAVEL of mixed lithologies. HW	1
					3.20	80.71		Recovered as 70% firm, dark brown CLAY; 20% miscellaneous items including glass, plastic, red brick and concrete; 10% cobble to boulder sized timber fragments (including large pieces in-situ). CMG	2
					4.00	79.91		Recovered as 70% damp, black, gravelly, slightly clayey, fine to coarse SAND; 20% cobble to boulder sized fragments of red brick, concrete, plastic and metal; 10% miscellaneous items including metal rods and plastic sheeting. Gravel is subangular to subrounded of fine to coarse concrete, slate, suspected slag, suspected clinker and mixed lithologies. Slight odour. DW	3
					4.70	79.21		Recovered as 40% boulders sized concrete fragments; 30% timber fragments (up to 1.2m in length); 20% wet, black, slightly sandy, slightly clayey GRAVEL of red brick, ceramic and mixed lithologies. Black staining noted. DW	4
								Base of Excavation at 4.70m	

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable		

Pumping Data

Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP108
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E897373.10 N400339.60
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.80m x 1.40m — Final Depth: 3.50m
Logged By: LT	Checked By: JC	Approved By: MP	Level: 79.50m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Firm, dark brown, slightly sandy, silty CLAY with frequent rootlets. TF	
					0.20	79.30		Recovered as 80% firm, dark brown, slightly sandy, slightly gravelly CLAY; 15% whole and half red bricks and cobble sized concrete fragments; 5% cobble sized ceramic fragments. Gravel is subangular of fine to coarse red brick and coal. CMG	
		1.00	ES						1
		1.20	HSV	29kPa					
		1.20	HSV	40kPa					
		1.20	HSV	56kPa					
					1.50	78.00		Recovered as 80% soft, dark grey, slightly gravelly, silty CLAY; 10% cobble sized timber fragments; 5% metal tins; 5% whole and half red bricks. Gravel is subangular of fine to coarse coal. Slight hydrocarbon odour. CMG *1.50m : Slight seepage of water on southern face of the excavation.*	
		2.00	ES						2
	▽	2.20	HSV	10kPa				*2.20m : Water ingress from northern face of the excavation. Strong hydrocarbon (tar) odour.*	
		2.20	HSV	12kPa					
		2.20	HSV	24kPa					
		2.30	ES						3
		3.20	HSV	100kPa					
		3.20	HSV	120kPa					
		3.20	HSV	120kPa					
					3.50	76.00		Base of Excavation at 3.50m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP109
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387416.00 N400271.00
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.90m x 3.10m — Final Depth: 1.20m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 80.06m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.20	79.86		Brown, slightly gravelly, slightly clayey SAND with abundant rootlets. Gravel is angular to subangular of fine to medium mixed lithologies. TF
					0.60	79.46		Recovered as 50% black, slightly sandy, slightly clayey GRAVEL; 20% boulders sized orangish brown sandstone fragments fused with thin plastic sheet; 10% whole and half red brick; 10% plastic; and 10% cobble sized hard, white, suspected chalk fragments. Gravel is angular to subrounded of suspected clinker, red brick and suspected white chalk. CW
					0.80	79.26		Recovered as 70% soft, white, slightly sandy, slightly gravelly CLAY; and 30% cobble sized inclusions of hard, white, suspected chalk. Gravel is subangular to subrounded of fine to medium suspected chalk. CMG
		1.10 1.10	ES	0.00ppmv	1.20	78.86		Recovered as 30% light grey, slightly sandy, slightly clayey, angular to rounded, fine to coarse GRAVEL of suspected clinker; 30% light grey, slightly sandy, slightly clayey GRAVEL; 20% cobble to boulder sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY; and 20% cobble to boulder sized red brick and concrete fragments. Gravel is subangular to subrounded of fine to coarse metal (30%), plastic (20%), wood (10%), and mixed lithologies (40%). CW
								Base of Excavation at 1.20m

Scale: 1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP110
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387503.81 N400237.16
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.80m x 2.80m — Final Depth: 3.80m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 82.83m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.00	82.83		Black, silty, clayey fine to medium SAND with frequent rootlets. TF *0.00m - 1.20m : Collapse of northern wall.*	
		0.60 – 2.20	ES		0.60	82.23		Recovered as 30% reinforced concrete pillars (2.0m x 0.2m x 0.2m) and slabs (1.2m x 0.6m x 0.2m); 15% whole and half red brick; 15% cobble sized inclusions of dark brown, slightly gravelly, sandy CLAY; 10% roots and rootlets; 5% cobble sized plastic fragments; 5% rubber soles; 5% cobble sized ceramic fragments; 5% cobble sized glass fragments; 5% cobbles sized metal fragments; 5% cobbles sized grey pumice fragments. Sand is fine to medium. Gravel is subangular to subrounded of fine to coarse red brick, concrete, timber and suspected clinker. DW *0.80m : Slight putrid odour.*	1
		1.20		1.80ppmv	1.00	81.83		Recovered as 20% metal (old fridge and cooker, wire, fencing, tinfoil); 20% plastic (strips, wrappers, toys, sheeting, bags); 15% wood (fence posts and fragments); 15% loose, brown, slightly sandy, clayey GRAVEL; 10% cobble to boulders sized black, tarmacadam fragments; 5% rubber (piping); 5% fabric; 5% roots and rootlets; and 5% cobbles to boulder sized concrete fragments. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, wood, tarmac, slate and sandstone. HW	2
					2.20	80.63		Recovered as 20% metal (pipes, sheets, bars); 15% wooden planks; 15% tyres; 10% sandstone boulders (1.2m x 0.6m x 0.7m); 10% whole and half red brick; 10% cobbles to boulder sized concrete fragments; 10% tree fragments (branches and twigs); 10% wet, stained black, slightly sandy, very clayey GRAVEL; 5% glass bottles; and 5% polystyrene. Gravel is subangular to subrounded of fine to coarse mixed lithologies. DW *2.20m : Singular metal drum-like object, stained black with hydrocarbon odour.* *2.20m - 2.22m : Hard digging; layer of red bricks.* *2.20m - 3.80m : All stained black with oily sheen. Multiple collapses of excavation walls.*	3
	▽	3.10 – 3.40	ES					*3.10m : Fast ingress of water. Water is dark grey with oily sheen and brown froffy scum. Hydrocarbon odour.*	
		3.30		13.80ppmv				*3.50m - 3.55m : Increase in paving slabs.* *3.60m - 3.65m : Increase in metal sheets.*	
					3.80	79.03		Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to multiple collapses of excavation walls.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Dimensions given in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP111
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387581.00 N400151.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.80m x 1.60m / Final Depth: 3.10m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 81.91m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	81.76		Firm, dark brown, slightly sandy silty CLAY. TF	
		0.60	ES					Recovered as 80% whole and half red bricks, cobble sized breeze blocks and concrete; 15% brown, sandy clayey, angular to subangular, fine to coarse GRAVEL of concrete and red brick; 5% cobble sized timber fragments. DW *0.40m - 4.10m : Unstable.*	1
		1.50	ES					*1.60m : 2 No. 2m long pieces of reinforced concrete.* *1.70m : 2 No. 2m long pieces of reinforced concrete with re-bar.* *1.80m : 1 No. metal box (1m x 2m x 1m), broken with white spirit odour.*	
	▽				1.90	80.01		Recovered as 50% boulder sized concrete and slag fragments; 25% cobble to boulder sized inclusions of brown, slightly gravelly sandy CLAY; 10% timbers beams (up to 1m length); 10% whole and half red brick and cobble sized paving slab fragments; 5% polystyrene and plastic sheeting. Gravel is subangular of fine to coarse red brick. DW *1.90m - 3.10m : Hard digging.* *2.30m : Ingress of water with strong odour of rotten egg.*	2
					3.10	78.81		Base of Excavation at 3.10m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 0.4m bgl.					

General Remarks

Terminated due to multiple collapses of excavation walls. Unstable from 2.5m bgl.
Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP112
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387604.00 N400190.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 5.10m x 1.70m / Final Depth: 4.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 82.32m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	82.12		Firm, dark brown, slightly sandy, silty CLAY with frequent rootlets. Sand is fine. TF	
		0.50	ES					Firm, brown, slightly sandy, slightly gravelly CLAY with frequent roots. Gravel is subangular to subrounded fine to coarse of mixed lithology. Sand is fine to coarse. TF	
					0.65	81.67		Recovered as 40% brown, very gravelly, clayey SAND; 10% whole and half red house bricks; 10% glass window fragments and bottles; 10% plastic and metal pipes ; 10% sheet metal and pipes; 10% concrete blocks; 5% plastic bags and tubs; 5% wooden timbers (up to 2m in length). Gravel is subangular to subrounded fine to coarse brick and concrete. DW	1
		1.80	ES						2
	▼				2.60	79.72		Recovered as 35% whole and broken red house bricks; 10% glass window fragments and bottles; 10% plastic and metal pipes; 10% sheet metal and pipes; 5% concrete blocks; 5% plastic bags and tubs; 5% wooden timbers (up to 2m in length) in a matrix of 20% brown, clayey SAND. DW *2.70m : Water strike with strong rotten egg and slight white spirit odour. Vitreous sheen on surface.* *3.10m - 4.30m : Frequent large boulders of concrete.*	3
					4.30	78.02		Base of Excavation at 4.30m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to multiple collapses of excavation walls. Unstable from 2.5m bgl.
Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP113
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387649.80 N400236.30
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.40m x 1.50m; Final Depth: 4.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.90m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	83.70		Very soft, dark brown, slightly sandy, sightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded of fine to coarse of mixed lithologies. TF	
		0.40	ES					Recovered as 45% brown, slightly sandy, slightly clayey GRAVEL; 15% wet, brown, slightly sandy, slightly gravelly CLAY; 15% plastic (including wrapping, bags and panels); 15% whole and half brick; 5% boulders sized concrete fragments; and 5% boulders sized red brick wall fragments. Gravel is angular to subrounded fine to coarse red brick, glass, wood, metal and sandstone. Rotten egg odour. DW *0.40m : Concrete obstruction in SW face of the excavation.*	1
					1.40	82.50		Recovered as 80% orange, medium to coarse SAND; 10% whole and half red brick; 10% boulders sized sandstone fragments. GMG	
					1.60	82.30		Recovered as 25% plastic drums (0.7m x 0.4m), bags of 'sternite' (chemical product), pipes, wrapping; 15% dark brown, slightly sandy, clayey GRAVEL; 15% whole and half red brick; 10% cobbles sized sandstone fragments (stained black); 10% cobble sized timber fragments; 10% metal bars and rods; 5% pieces of fabric; 5% glass bottles; 5% polystyrene. Gravel is subangular to subrounded of fine to coarse red brick, glass, wood, concrete and sandstone. DW	2
		3.60 – 4.00	B		3.60	80.30		Stiff to very stiff, slightly sandy, slightly gravelly CLAY with medium cobble content. Cobbles are subrounded of mixed natural lithologies. Gravel is angular to subrounded of fine to medium mixed natural lithologies. CGT	3
		3.70	HSV	120kPa					
		3.70	HSV	90kPa					
		3.70	HSV	98kPa					
					4.00	79.90		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP114
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: John Cooper	Co-ords: E387695.68 N400262.66
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 5.10m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 84.50m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 55% boulder sized concrete fragments (0.9mx2.3x1.2m); 20% cobble to boulder sized inclusions of very soft, dark brown, slightly gravelly, silty CLAY; 10% cobble sized red brick, concrete, slate and sandstone fragments; 10% roots and rootlets; 5% plastic, string and cobble sized suspected slag and timber fragments. Gravel is subangular to subrounded of fine to coarse suspected slag, red brick, timber and mixed lithologies. DW	
		0.65 – 0.70	ES						
		0.90		0.50ppmv	0.90	83.60		Recovered as 50% cobble to boulder sized red brick wall and concrete fragments; 15% metal (wires); 15% plastic (including bottles, plastic sheeting, rubber and HDPE fragments); 10% cobble sized inclusions of firm, brown, slightly gravelly CLAY; 10% cobble sized inclusions of firm, brown, slightly sandy, very gravelly CLAY; 5% cobble sized glass fragments; 5% timber planks. Gravel is subangular to subrounded of fine of coarse red brick, ceramic, glass, timber, suspected slag and sandstone DW *0.90m : Foul odour.*	1
					1.80	82.70		Recovered as 40% cobble sized fragments of red brick; 30% cobble sized fragments of purple slate; 15% cobble to boulder sized pockets of brown, silty slightly clayey GRAVEL; 5% plastic (sheeting); 5% timber (planks); and 5% ceramic. Gravel is angular to subrounded of fine to coarse red brick, purple slate, glass, wood and ceramic. DW *1.80m - 2.20m : Hard digging.*	2
					2.10	82.40		Recovered as 20% whole and half red bricks; 20% cobble to boulder sized inclusions of stiff to very stiff, brown, slightly gravelly CLAY; 20% brown, slightly clayey, silty, subangular to subrounded, fine to coarse GRAVEL of red brick, ceramic, glass, timber and mixed lithologies; 10% timber planks; 10% plastic (bottles, bags, sheeting and HDPE fragments); 5% cobble sized slate fragments; 5% paper; 5% cobble sized glass fragments; 5% cobble sized ceramic fragments; 5% cobbles to boulder sized concrete fragments. Gravel is angular to rounded of fine to coarse mixed lithologies. DW	
					2.80	81.70		Recovered as 35% cobbles to boulder sized sandstone fragments; 10% soft brown CLAY; 30% orangish brown, black and white in places, fine to coarse SAND; 10% white, coarse SAND; 5% cobble sized slate fragments; 5% timber planks; and 5% plastic (sheets). DW	3
		3.35 – 3.40 3.40	ES		3.40	81.10		Soft to firm, brown, stained black, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed lithologies. CGT *3.40m : Hydrocarbon odour.*	
		3.55 – 3.60 3.60 3.60 3.60 3.60	ES HSV HSV HSV	38kPa 45kPa 52kPa 0.40ppmv					4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP114
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: John Cooper	Co-ords: E387695.68 N400262.66
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m / Final Depth: 5.10m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.50m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.10	79.40		Soft to firm, brown, stained black, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to coarse mixed lithologies. CGT	
								Base of Excavation at 5.10m	

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Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP115
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387680.00 N400222.00
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 2.70m x 3.80m / Final Depth: 5.20m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.20m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.40 0.40 0.40	ES	0.20ppmv				Recovered as 40% brown, slightly sandy, very clayey GRAVEL; 15% roots and rootlets; 15% cobble sized red brick fragments; 10% plastic sheeting; 10% cobble sized timber fragments; and 10% fabric. Gravel is subangular to subrounded of fine to coarse red brick and slate. GMG	
					0.80	82.40		Recovered as 30% copper wires with rubber covering (20mm diameter); 30% whole and half red bricks; 10% cobble sized slate and sandstone fragments; 10% loose, brown, slightly sandy, slightly clayey GRAVEL; 5% cobble sized timber fragments; 5% cobble sized glass fragments; 5% cobble sized ceramic fragments; and 5% roots. Gravel is subangular to subrounded of fine to coarse glass, ceramic, red brick and concrete. DW	1
					2.20	81.00		Recovered as 20% brown, slightly sandy GRAVEL; 15% cobble to boulder sized metal fragments (corrugated pipes up to 2m length); 15% whole and half red bricks; 10% boulders sized red brick wall, concrete and sandstone fragments; 10% cobble sized timber fragments; 10% fabric (cloths and clothing); 10% plastic (sheeting and containers); 5% cobble sized ceramic fragments; 5% cobble sized polystyrene and glass fragments. Gravel is angular to rounded of fine to coarse mixed lithologies. HW	2
		3.20	HSV	74kPa	3.00	80.20		Firm to stiff, brown, mottled grey, slightly sandy, slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to rounded of mixed natural lithologies. CGT	3
		4.80	B						4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP115
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387680.00 N400222.00
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 2.70m x 3.80m / Final Depth: 5.20m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.20m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.20	78.00		Firm to stiff, brown, mottled grey, slightly sandy, slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to rounded of mixed natural lithologies. CGT	
								Base of Excavation at 5.20m	

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Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP116
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387661.00 N400258.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.30m x 1.30m; Final Depth: 4.90m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.30m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 40% soft, reddish brown, sandy CLAY; 30% multicoloured, subangular to rounded GRAVEL of mixed natural lithologies; 20% cobbles of mixed natural lithologies; 10% boulders sized crystalline rock fragments. Sand is fine to medium. GMG	
					0.35	83.95		Recovered as 40% soft, brown, slightly sandy, gravelly CLAY; 20% boulders sized red brick wall fragments; 15% multicoloured, subangular to subrounded, fine to coarse GRAVEL of coal, red brick, wood, ceramic, sandstone, mudstone and mixed lithologies; 5% plastic sheeting and wrapping; 5% metal objects; 5% cobble sized inclusions of soft to firm, brown, mottled light grey, slightly sandy, slightly gravelly CLAY; 5% glass fragments and bottles; 5% fabric; 5% polystyrene. Gravel is angular to subrounded of fine to medium siltstone and mixed lithologies. Sand is fine to medium. DW *0.35m - 0.45m : 3 No large boulders (3m x 2.5m x 0.25m), (3.5m x 2.5m x 0.7m), (1.5m x 1m x 0.4m).*	1
					1.60	82.70		Recovered as 20% metal objects including frames, chains and pipes; 15% brown, slightly sandy slightly clayey GRAVEL; Sand is fine to medium; 15% whole and half red brick; 15% plastic sheeting, wrapping and containers; 15% boulder sized concrete red brick fragments; 10% cobble sized timber fragments; 5% cobble sized glass fragments and 5% cobble sized ceramic fragments. Gravel is angular to rounded of fine to coarse slate, timber, coal, red brick, concrete, ceramic and sandstone. DW	
		2.20 2.20	ES		2.00	82.30		Recovered as 15% brown, slightly sandy, slightly clayey GRAVEL; 15% tyres; 15% boulder sized concrete fragments (1m x 0.2m x 0.5m); 15% metal objects including car parts, bars and pipes; 10% plastic sheeting, crates and wrapping; 10% cobbles and boulder sized sandstone fragments; 10% wooden planks and fragments; 10% cobble sized glass and ceramic fragments. Gravel is angular to rounded of fine to coarse slate, wood, coal, red brick, concrete, ceramic and sandstone. Sand is fine to medium. DW	2 3
	▽	4.70 4.70 4.70 4.80 4.80	HSV HSV HSV B B	110kPa 90kPa 98kPa	4.70 4.90	79.60 79.40		Stiff to very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to medium of mixed lithologies. Sand is fine to medium. CGT *4.70m : Slight water ingress from base of made ground.*	4
								Base of Excavation at 4.90m	

Trench Support and Comment

Pit Stability	Shoring Used	Remarks

Pumping Data

Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP117
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387808.49 N400448.33
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 4.30m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.46m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	85.26		Recovered as 55% cobble to boulder sized inclusions of soft to stiff, dark brown, slightly sandy, gravelly CLAY; 10% tree roots; 10% whole and half red brick; 10% plastics (sheeting and bags); 10% cobble sized timber fragments; and 5% boulder sized fragments of concrete (0.5mx0.4mx0.3m). Gravel is angular to rounded of fine to coarse red brick, crystalline rock, wire, wood and mixed lithologies. TF	
					0.60	84.86		Recovered as 60% cobble to boulder sized inclusions of very soft to soft, brown, slightly sandy, slightly gravelly CLAY; 15% roots; 10% rounded cobbles of mixed natural lithologies; 5% whole and half red brick; 5% laminate flooring; and 5% cobble sized ceramic fragments. Gravel is angular to rounded of fine to coarse ceramic, red sandstone, crystalline rocks, rounded pebbles and mixed lithologies. CMG	
					0.90	84.56		Recovered as 65% multicoloured, sandy GRAVEL; 20% whole and half red brick; 10% cobble sized inclusions of firm, brown CLAY; and 5% roots and rootlets. Gravel is angular to subrounded of fine to coarse red mudstone, red brick and shale. CS	1
▽		1.70 – 1.75 1.70	ES	0.40ppmv				Recovered as 55% cobble to boulder sized inclusions of soft to very soft, wet, reddish brown, stained black, slightly sandy, gravelly CLAY; 15% cobble sized timber fragments; 15% whole and half red brick; 10% roots and rootlets; and 5% cobble sized glass fragments. Gravel is angular to subrounded of fine to coarse glass, wood suspected clinker, red brick, concrete and ceramics. Hydrocarbon odour CMG *1.70m : Hydrocarbon odour.*	2
▽		3.60		5.00ppmv					3
		4.20 4.20 – 4.25	ES		4.10 4.30	81.36 81.16		Recovered 40% cobble and boulder size inclusions of soft to firm, wet, black and dark grey CLAY; 15% cobble sized metal fragments; 10% glass fragments (bottles); 10% cobble sized timber fragments; 10% whole and half red brick; 10% straw; and 5% cobble sized plastic fragments. Very strong hydrocarbon odour. DW *4.10m : Fast ingress of water from the western face of the excavation. Hydrocarbon odour.*	4
								Base of Excavation at 4.30m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to multiple collapse and water ingress.

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Resting water level.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP118
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387737.04 N400362.57
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 4.50m
Logged By: ZH	Checked By: JC	Approved By: MP	Level: 85.85m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	85.55		Recovered as 45% cobble to boulder sized inclusions of dark brown, slightly sandy, slightly gravelly CLAY; 25% boulder sized PVC door fragments; 20% rootlets and roots (up to 60mm diameter); 5% plastic bin bags; 5% whole and half red brick. Gravel is angular of fine to coarse red brick, shale and mixed lithologies. HW	
		0.50 – 0.55 0.50	ES	0.20ppmv	0.50	85.35		Recovered as 45% multicoloured, slightly sandy GRAVEL; 35% whole and half red bricks; and 20% cobble sized ceramic fragments. Gravel is angular to subangular red brick, ceramic, glass, plastic and mixed lithologies. DW *0.30m : Two large boulders (1.2m x 0.2m x 0.7m).*	
					1.60	84.25		Recovered as 25% black and green, sandy, slightly clayey GRAVEL; 35% cobble sized fragments of sandstone, red brick and light/bright crystalline rock; 5% cobble sized metal fragments; 5% plastic cups; 5% cobble sized ceramic pipe fragments; 5% cobble sized glass fragments; 5% white fabric; 5% cobble sized timber fragments; and 10% cobble size inclusions of stiff, brown, slightly sandy CLAY. Gravel is subangular to subrounded of fine to coarse concrete, red brick, mudstone, glass, ceramics and mixed lithologies. DW	1
		1.80 1.80 1.80 1.80	ES	0.60ppmv 0.60ppmv				Recovered as 50% cobbles to boulder sized inclusions of firm, greenish grey and orangish brown, stained dark grey and black, slightly sandy slightly gravelly CLAY; 25% cobble sized inclusions of dark brown CLAY; 10% whole and half red brick; 5% cobble sized hard white and black fragments; 5% cobble size fragments of light weight weak and friable white material; 5% cobble size fragments of angular black friable material with fabric welded to it. Gravel is angular to rounded of fine to coarse red brick, black crystalline rock and mixed lithologies. CMG *2.40m : Hydrocarbon odour.*	2
					3.00	82.85		Recovered as 40% reddish brown, very gravelly, slightly clayey, fine to coarse SAND; 30% whole and half red bricks; 10% cobble sized inclusions of soft, orangish brown CLAY; 10% boulder sized fragments of timber and red brick wall; 5% plastic; 5% cobble sized fragments of sandstone. Gravel is angular to subrounded of fine to coarse red brick, ceramic and shale. DW	3
					4.00	81.85		Recovered as 50% reddish brown, very gravelly, slightly clayey, fine to coarse SAND and GRAVEL; 20% whole and half red brick; 15% boulder sized fragments of concrete and red brick wall; 10% cobble sized inclusions of soft, orangish brown CLAY; 5% cobble sized brown sandstone fragments; and 5% plastic. Gravel is angular to subrounded of fine to coarse red brick, ceramic and shale. DW	4
					4.50	81.35		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to hard digging and lack of room for spoil. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP119
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387612.00 N400342.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 2.80m; Final Depth: 4.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.88m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	84.68		Firm, dark brown, slightly sandy, slightly gravelly CLAY with abundant roots and rootlets. Gravel is subangular to subrounded of fine mixed lithologies. TF	
					0.90	83.98		Recovered as 40% whole and half red brick; 30% cobble to boulder sized inclusions of very soft, brown, slightly sandy, gravelly CLAY; 10% boulder sized fragments of red brick wall, concrete (1.1m x 0.4m x 0.1m), and ceramic; 5% plastic (bags, bucket handles, wrappers, wipes); 5% fabric (carpet and clothes); 5% tree roots; and 5% painted wooden flooring. Gravel is angular to subrounded of fine to coarse ceramics, red brick, plastic, wood and round pebbles. HW	
					1.20	83.68		Recovered as 60% cobble to boulder sized inclusions of very soft to firm, friable, brown to dark brown, slightly sandy, gravelly CLAY; 30% whole and half red brick; and 10% plastic (foam, warpers). Gravel is subrounded to subangular of fine to coarse ceramics, red brick and purple slate. Sand is fine to medium. CMG	1
▽					1.40	83.48		Recovered as 30% whole and half red brick; 25% boulder sized concrete fragments; 25% cobble to boulder sized inclusions of firm, friable, brown, slightly gravelly, sandy CLAY; and 20% timber planks. Gravel is angular to subrounded of fine to coarse mixed lithologies. DW	
		1.70 1.70	ES					Recovered as 60% black, slightly gravelly, clayey SAND; 10% cobble sized timber fragments; 10% boulder sized fragments of orangish brown sandstone, red brick wall and concrete; 10% rubber and plastic (tubing, bags, sheeting); and 10% cobble sized inclusions of very soft, black, slightly sandy CLAY. Gravel is angular to subrounded of fine to coarse black glassy rock (40%), ceramic (10%), red brick (5%) and mixed lithologies (45%). Slight organic and hydrocarbon odour. DW	2
								1.40m : Slow ingress of water from the top of the concrete obstruction.	
								1.40m - 1.43m : Concrete obstruction in the northern side of the excavation.	3
					4.00	80.88		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Achieved target depth.

Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP120
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387647.40 N40371.10
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.30m x 1.50m / Final Depth: 4.50m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 85.35m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 0.30 0.20 – 0.30	B B		0.20	85.15		Recovered as firm, dark brown, slightly sandy, slightly gravelly CLAY with frequent roots and rootlets. Gravel is angular to subangular fine to coarse ceramic, red brick, purple slate and mixed lithologies. Sand is fine to medium. TF	
					0.65	84.70		Recovered as 50% cobble to boulder sized inclusions of soft, brown, slightly sandy, slightly gravelly CLAY; 20% multicoloured, slightly sandy, very clayey, angular to subrounded, fine to coarse GRAVEL of red brick, ceramic, timber, slate, glass and mixed lithologies; 10% glass fragments and bottles; 10% whole and half red brick; 5% plastic sheeting; 5% tree roots. Gravel is angular to rounded of fine to coarse mixed natural lithologies. CMG	
								Recovered as cobble to boulder sized concrete fragments. DW	1
								1.35m : In N,E and W edge of pit beneath concrete; Recovered as: 50% loose brown slightly clayey subangular slightly clayey GRAVEL of mixed lithologies including ceramic, metal, slag, clinker, slate, red brick and glass; 20% cobbles and boulders of red brick and concrete; 10% pieces of wood and timber; 10% plastic sheeting and wrapping; 10% metal rope, wire and pipes.	2
		3.10 3.10	ES		3.10	82.25		Recovered as 60% cobble to boulder sized inclusions of soft, wet, dark grey, stained black, slightly sandy, gravelly CLAY; 10% cobble sized fragments of suspected slag; 5% fabrics including clothing; 5% cardboard; 5% wooden planks; 5% plastic sheeting; 5% cobble sized glass fragments; 5% cobble sized ceramic fragments. Gravel is angular to subrounded of fine to coarse sandstone, suspected slag, red brick, slate, suspected clinker and mixed lithologies. Strong hydrocarbon odour. HW	3
					3.40	81.95		Recovered as 25% wooden planks; 20% brown, slightly sandy slightly clayey GRAVEL; 20% cobble sized red brick and concrete fragments; 10% glass bottles and fragments; 10% plastic sheeting; 10% metal sheets and pipes; and 5% fabric material. Gravel is angular to subrounded of fine to coarse red brick, concrete, sandstone and mixed lithologies. DW	4
					4.30	81.05		Recovered as cobbles and boulder sized fragments of strong, light pinkish brown, coarse grained SANDSTONE. Difficult to excavate. DW	
					4.50	80.85		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to obstruction. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP121
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387570.70 N400435.70
Project No. : LD10385	Excavator:	Dimensions : 4.10m x 1.30m — Final Depth: 3.30m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.72m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	83.42		Recovered as 60% brown, slightly sandy, clayey GRAVEL; 20% cobble sized ceramic fragments; 10% cobble sized timber fragments; 10% whole and half red brick fragments. Gravel is angular to subangular of fine to coarse mixed lithologies. GMG	
					1.00	82.72		Recovered as 50% whole and half red brick; 20% reddish brown, sandy GRAVEL; 20% cobble to boulder sized concrete fragments (up to 1.4m x 0.3m x 0.2m) 5% metal bars; 5% cobble sized suspected slag fragments. Gravel is angular to subrounded of fine to coarse glass, timber, sandstone, red brick and concrete. DW *0.80m : Boulder sized plastic sheeting.*	1
		2.00	B					Firm to stiff, light brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY with medium cobble content. Cobbles are rounded of mixed lithologies. Gravel is angular to subrounded of fine to coarse of mixed lithologies. CGT	2
		2.20 2.20	ES						
					3.10	80.62			3
					3.30	80.42		Stiff, grey and brown, sightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. CGT	
								Base of Excavation at 3.30m	4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable		

Pumping Data

Date	Rate	Remarks

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP122
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387424.70 N400355.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.60m x 1.30m / Final Depth: 2.60m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 80.10m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.25	79.85		Recovered as firm, dark brown, slightly sandy, silty CLAY. TF	
		0.50	HSV	74kPa				Stiff, light brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mudstone, sandstone and coal. CGT	
		0.50	HSV	80kPa					
		0.50	HSV	82kPa					
								0.80m - 2.60m : Reddish brown gleyed grey.	
		1.00	ES						1
		1.40	HSV	80kPa					
		1.40	HSV	80kPa					
		1.40	HSV	92kPa					
		1.70	HSV	72kPa					
		1.70	HSV	92kPa					
		1.70	HSV	98kPa					
		2.00	ES						2
		2.50	HSV	120kPa					
		2.50	HSV	120kPa					
		2.50	HSV	120kPa	2.60	77.50		Base of Excavation at 2.60m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Achieved target depth.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP123
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387288.34 N400213.30
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 1.40m — Final Depth: 3.80m
Logged By: JC	Checked By: JC	Approved By: MP — Level: 77.54m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	77.24		Recovered as dark grey, slightly clayey, silty, fine to medium SAND with frequent rootlets. TF	
		0.80	ES		1.10	76.44		Recovered as 80% dark grey to black, very sandy/ashy GRAVEL; 15% cobble to boulder sized suspected slag fragments; 5% cobble to boulder sized paving slab fragments. Gravel is angular to rounded of fine to coarse suspected clinker and suspected slag. CW	1
		1.30	ES		1.80	75.74		Recovered as 80% dark grey to black, very sandy/ashy GRAVEL; 10% boulder sized suspected slag fragments; 10% cobble to boulder sized inclusions of firm to stiff, brown, slightly sandy CLAY with red dye surround. Gravel is angular to rounded of fine to coarse suspected slag, suspected clinker and glass. CW *1.40m - 1.80m : Frequent cobble sized inclusions of firm light brown, greyish brown and reddish brown mottled slightly gravelly slightly sandy CLAY. Gravel is subangular to subrounded fine to medium of mixed natural lithologies.*	
	▽	1.90	ES		2.00	75.54		Recovered as 70% wet, red, clayey GRAVEL; 10% cobble sized fragments of red brick; 10% cobble sized suspected slag fragments; 10% cobble to boulder sized paving slab fragments. Gravel is angular to rounded of fine to coarse suspected slag and suspected clinker. CW *1.80m : Large boulder sized pocket of wet red die (wet, reddish brown clayey gravel).* *1.90m : Red dye.*	2
					2.30	75.24		Recovered as wet, red, clayey, angular to rounded, fine to coarse GRAVEL of suspected slag and suspected clinker. CW *2.00m : North eastern face of the excavation. Excavation full of water.*	
					3.80	73.74		Recovered as 70% wet, sandy GRAVEL; 15% whole and half red brick; 10% boulder sized inclusions of firm to stiff, brown, slightly sandy, slightly gravelly CLAY; 5% cobble to boulder sized paving slab fragments. Gravel is angular to rounded of medium to coarse suspected clinker and suspected slag. CW *2.60m : Leather shoe.* *2.80m : Oil stain on water.* *3.00m : Heavy oil staining on water, and areas of oil upwelling.*	3
								Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to collapse and water in excavation. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP124
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387212.28 N400174.38
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m; Final Depth: 5.20m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 76.87m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.25 – 1.45	B		0.21	76.66		Recovered as very soft to soft, brown, slightly gravelly, sandy CLAY with abundant roots and rootlets. Gravel is subangular of fine to medium mixed lithologies. TF	
								Recovered as 60% black, sandy GRAVEL; 15% cobble sized suspected clinker fragments; 10% cobble sized slate fragments; 5% cobble sized timber fragments; 5% cobble sized ceramic fragments; and 5% cobble sized glass fragments. Gravel is angular to subrounded of fine to coarse suspected slag and suspected clinker. CW	1
					1.50	75.37		Recovered as 50% wet, brown, sandy, very clayey GRAVEL; 15% cobble sized suspected slag and clinker fragments; 10% cobble to boulder sized ceramic fragments; 10% cobble sized slate fragments; 10% cobble sized fragments of red brick; 5% cobble sized glass fragments. Gravel is subangular to subrounded of fine to coarse suspected clinker, red brick, glass and timber. CW	2
	▽							*2.25m : Hard digging.* *2.30m - 2.60m : Multiple collapse of walls due to water ingress.*	
					2.60	74.27		Recovered as 70% soft, brown, mottled grey and orangish brown, slightly sandy, slightly gravelly CLAY; 20% cobble sized fragments of red brick; 10% cobble sized glass and ceramic fragments. Gravel is angular to subrounded of fine to coarse black, conchoidal, shiny rock; red sandstone and grit stone. CMG	3
	▽							*2.60m : Fast ingress of water from all sides of the ecavation.* *3.00m : Water is a brown clayey colour with no odour.*	
								3.80m : Becoming very stiff.	4
		4.90	HSV	115kPa					
		4.90	HSV	135kPa					

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to water ingress. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Water resting at 3.6m.
Ingress from base of the pit at 2.3m.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP124
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387212.28 N400174.38
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m / Final Depth: 5.20m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 76.87m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		4.90	HSV	140kPa	5.20	71.67		Recovered as 70% soft, brown, mottled grey and orangish brown, slightly sandy, slightly gravelly CLAY; 20% cobble sized fragments of red brick; 10% cobble sized glass and ceramic fragments. Gravel is angular to subrounded of fine to coarse black, conchoidal, shiny rock; red sandstone and grit stone. CMG Base of Excavation at 5.20m	6 7 8 9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to water ingress. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Water resting at 3.6m.
Ingress from base of the pit at 2.3m.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP125
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387233.36 N400187.66
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 2.90m x 3.80m / Final Depth: 4.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 76.85m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	76.65		Recovered as 60% firm, dark brownish grey, slightly gravelly CLAY; 20% roots and rootlets; 10% fabric (rugs); 5% cobble sized ceramic fragments; 2.5% cobble sized plastic fragments; and 2.5% cobble sized glass fragments. Gravel is subangular to subrounded of suspected clinker, sandstone, red brick, mudstone, glass, wood and plastic. HW	
					0.40	76.45		Recovered as 40% black, subangular to subrounded, fine to coarse GRAVEL of suspected clinker; 25% cobble sized sandstone fragments; 20% cobble sized inclusions of soft, yellowish brown CLAY; 10% whole and half red brick; and 5% cobble sized ceramic fragments. CW	
					1.20	75.65		Recovered as 55% black, sandy, subangular to subrounded, fine to coarse GRAVEL of suspected clinker; 10% firm, dark brown, slightly gravelly, sandy, organic CLAY; 10% cobble sized metal fragments; 5% cobble sized glass fragments; 5% roots and rootlets; 5% whole and half red brick; 5% cobble sized inclusions of soft, yellowish brown CLAY; 2.5% plastic (sheeting); and 2.5% cobble sized ceramic fragments. CW	1
					1.40	75.45		Recovered as stiff, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse mixed lithologies. CMG	
					1.70	75.15		Recovered as 50% cobble sized fragments of red brick; and 40% red, sandy, angular to subrounded, fine to coarse GRAVEL of red brick. DW	
		2.30						Recovered as 40% cobble sized fragments of red brick; 35% brown, slightly sandy GRAVEL; 20% cobbles sized fragments of suspected clinker and slag; and 5% cobble sized plastic fragments. Gravel is angular to subrounded, fine to coarse red brick, coal, mudstone and shale. DW	2
		2.30 – 2.50	ES					*1.70m : Hard digging.*	
		2.40		0.30ppmv				*1.70m - 2.40m : Multiple collapses of excavation walls.*	
								1.80m : Slight seepage from southern face of the excavation.	
								1.90m : Very hard digging.	3
								2.00m : Seepage increased to fast from the base of excavation.	
								2.30m : Seepage of black fluid from the northern face of the excavation. Hydrocarbon odour and brown foamy scum.	
		3.20 – 3.50	ES		3.20	73.65		Firm to stiff, slightly sandy to sandy in places, slightly gravelly CLAY. Sand is fine. Gravel is fine to medium of shale, red mudstone and red sandstone. Hydrocarbon odour. CGT	
		3.30		0.30ppmv					
					4.00	72.85		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to water ingress.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP126
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387457.60 N400129.30
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 1.40m / Final Depth: 3.60m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 79.92m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	79.72		Recovered as firm, dark brown, slightly sandy, silty CLAY. TF	
		0.50	ES					Recovered as: 80% dark grey, sandy clayey GRAVEL; 10% cobbles to boulder sized slag fragments; 5% cobble sized glass and ceramic fragments; 5% cobble sized timber and metal fragments. Gravel is angular to subangular of fine to coarse suspected slag, suspected clinker and red brick. CW	
					0.70	79.22		Firm, brown and orangish brown, slightly sandy CLAY. CGT	
		0.90	HSV	68kPa					1
		0.90	HSV	72kPa					
		0.90	HSV	78kPa					
					1.10	78.82		Stiff, orangish and grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone and mudstone. CGT	
		1.50	ES						
	▽							*1.80m - 2.40m : Occasional grey sand laminations.*	
		1.90 – 2.10	B					*1.80m - 3.60m : Water seepage.*	2
		2.20	HSV	78kPa					
		2.20	HSV	82kPa					
		2.20	HSV	94kPa					
		2.60	HSV	82kPa					
		2.60	HSV	84kPa					
		2.60	HSV	90kPa				*2.70m - 3.60m : Brown gleyed grey.*	3
		2.70	ES						
					3.60	76.32		Base of Excavation at 3.60m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Achieved target depth.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP127
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387369.17 N400198.81
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.70m x 3.00m — Final Depth: 4.80m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 78.63m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	78.33		Recovered as 80% soft, dark greyish brown, slightly sandy, slightly gravelly CLAY; 10% cobble sized concrete and ceramic fragments; and 10% roots and rootlets. Sand is fine. Gravel is subrounded to subangular of fine to medium mudstone, coal, shale, red brick, concrete and suspected clinker. TF	
					0.70	77.93		Recovered as 70% light greyish brown, slightly sandy, slightly clayey GRAVEL; 20% cobble sized inclusions of stiff, grey and orangish brown mottled, gravelly CLAY; and 10% roots and rootlets. Gravel is angular to subrounded of red brick, glass, wood, plastic, sandstone, concrete and gritstone. GMG	
					1.00	77.63		Recovered as 45% dark brown, slightly sandy, clayey GRAVEL; 20% cobble sized fragments of red brick; 15% cobble sized inclusions of stiff, grey and orangish brown mottled, gravelly CLAY; 10% cobbles to boulder sized concrete fragments; 10% roots and rootlets. Gravel is subangular to subrounded of fine to coarse red brick, glass, coal, suspected clinker and sandstone. GMG	1
		1.20 1.20 1.20	ES	0.30ppmv				Recovered as 80% cobbles to boulder sized inclusions of firm, light grey and orangish brown mottled, slightly sandy, slightly gravelly CLAY; 10% cobble sized fragments of red brick; and 10% wet, black, very soft, very gravelly CLAY. Sand is fine. Gravel is fine to coarse of red brick, weathered sandstone, suspected slag, weathered mudstone and crystalline rocks. Hydrocarbon odour. CMG	2
								2.50m : Slight ingress of water from the eastern face of the excavation. Water is dark grey to black in colour.	
					2.90	75.73			
		3.00	HSV	3kPa	2.92	75.71		Recovered as soft, wet, light brown, very sandy CLAY. CMG *2.91m : Ingress of water increases.*	3
					3.20	75.43		Recovered as very soft, light brown, slightly sandy to very sandy in places, slightly gravelly CLAY. Sand is fine. Gravel is subangular to rounded of fine to coarse pebbles, red sandstone and gritstone. CMG	
								Recovered as 80% very soft, light brown, stained black, slightly sandy to very sandy in places, slightly gravelly CLAY; 10% cobble sized fragments of red brick; and 10% cobble sized fragments of glass, plastic and ceramic. Sand is fine. Gravel is subangular to rounded of fine to coarse pebbles, red sandstone and gritstone. CMG	4
		4.30 – 4.80 4.35 4.35 4.50	B ES HSV	 0.30ppmv 97kPa	4.30	74.33		Stiff to very stiff, brown, slightly sandy in places, slightly gravelly CLAY. Sand is fine. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. CGT	
					4.80	73.83		Base of Excavation at 4.80m	

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Terminated due to maximum reach of the machine.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP128
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387810.54 N400261.16
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 4.00m x 3.00m — Final Depth: 5.10m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 82.58m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.40 – 1.00	B		0.40	82.18		Recovered as 40% dark brown, slightly sandy, clayey GRAVEL; 20% roots and rootlets; 15% cobble sized inclusions of soft, dark brown, slightly gravelly, sandy CLAY; 10% cobble sized fragments of red brick and sandstone; 5% cobble sized fabric cuts; 5% cobble sized timber fragments; and 5% cobble sized plastic fragments. Gravel is angular to subrounded of fine to medium mudstone, red brick and coal. GMG	
	▽							*0.00m - 0.70m : Slight seepage from the south eastern face of the excavation.*	
					1.00	81.58		Recovered as 65% black, angular to subangular, fine to coarse GRAVEL of suspected clinker; 20% cobble sized fragments of suspected clinker; 10% cobble sized fragments of sandstone and red brick; and 5% cobble sized timber fragments. Sand is fine. CW	1
								Recovered as 90% cobble sized inclusions of soft to firm, slightly gravelly, sandy CLAY; and 10% cobble to boulder fragments of red brick and concrete. Gravel is angular to rounded of fine to coarse mixed lithologies. CMG	2
									3
					3.40	79.18		Recovered as 75% wet, white and black, slightly clayey, sandy GRAVEL; 15% cobble and boulder sized inclusions of hard, friable, weathered to soft, light whitish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse weathered chalk material. CW	
		3.60 3.60 3.60 3.60	B ES	0.10ppmv					4
	▽							*4.80m : Slow ingress of water from the base of the excavation.*	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP128
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387810.54 N400261.16
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 4.00m x 3.00m / Final Depth: 5.10m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 82.58m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.10	77.48		Recovered as 75% wet, white and black, slightly clayey, sandy GRAVEL; 15% cobble and boulder sized inclusions of hard, friable, weathered to soft, light whitish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse weathered chalk material. CW Base of Excavation at 5.10m	6 7 8 9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP129
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387883.02 N400311.01
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 4.00m x 1.20m / Final Depth: 4.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.35m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 3.50	B		0.20	83.15		Recovered as firm, dark brown, slightly sandy, gravelly CLAY with frequent roots and rootlets. Gravel is angular to subrounded of fine to coarse of glass, plastics, sandstone and suspected clinker. Sand is fine to medium. TF	
								Recovered as 75% black, slightly sandy GRAVEL; 15% cobble sized fragments of suspected slag and clinker; 5% glass; and 5% metal. Gravel is angular to subrounded of fine to coarse suspected clinker and slag. CW	1
									2
									3
	▼							*3.60m : Moderate ingress of water.*	
					3.95	79.40		Soft, wet, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded of fine to medium mixed lithologies. Sand is fine. CGT	4
					4.00	79.35		Base of Excavation at 4.00m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to multiple collapses and ingress of water.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP130
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387830.94 N400405.79
Project No. : LD10385	Excavator:	Dimensions : 4.00m × 1.80m — Final Depth: 1.30m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.46m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.30 0.30 – 0.40 0.30	ES	0.10ppmv	0.15	85.31		Recovered as 50% cobble sized inclusions of stiff, dark brown, slightly sandy, slightly gravelly CLAY; 20% tree roots and rootlets; 15% cobble sized fragments of red brick; 10% cobble sized pockets of orangish brown, gravelly, coarse SAND; 5% plastic wraps. Gravel is subangular to subrounded of glass, red brick, ceramic and mixed lithologies. Sand is fine to medium. TF Recovered as 20% cobble sized fragments of red brick; 20% plastic (wrappers, NPK fertiliser bags); 20% dark brown, sandy, slightly clayey GRAVEL; 15% cobble to boulder sized fragments of concrete (blocks, corners with ceramic tiles from mantle); 15% cobble sized metal fragments; 5% roots; 5% cobble sized bundles of coil. Gravel is angular to subrounded of fine to coarse ceramic, plastic, glass, red brick, concrete and mixed lithologies. DW	1
					1.30	84.16		Base of Excavation at 1.30m	2 3 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP131
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387814.82 N400410.94
Project No. : LD10385	Excavator:	Dimensions : 4.00m × 1.80m — Final Depth: 5.00m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.35m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 70% light grey, fine to coarse GRAVEL; 25% cobble sized fragments aggregate; 5% cobble sized fragments of ceramic and red brick. Gravel is angular to subrounded of fine to coarse aggregate, red brick, ceramic and mixed lithologies. GMG	
					0.35	85.00		Recovered as 50% reddish brown, sandy GRAVEL; 25% cobble sized fragments of black, pyritic blocky, shiny MUDSTONE; 20% cobble sized fragments of red brick; 5% cobble sized sandstone fragments. Gravel is angular to subrounded of fine to coarse mudstone, concrete, red brick, suspected clinker and mixed lithologies. CS	1
					1.45	83.90			
					1.50	83.85		Recovered as stiff, grey, slightly sandy, gravelly CLAY. Gravel is fine to coarse of subangular to subrounded red brick and sandstone. CMG	
		2.00 – 5.00	B					Recovered as 70% reddish brown, sandy GRAVEL; and 30% cobble sized fragments of reddish brown to black, burnt in places, blocky, thinly bedded mudstone, shale and coal. Gravel is angular to subangular of fine to coarse mudstone, shale and coal. CS	2
		2.50 – 2.55	ES					*2.00m : Frequent suspected slag and clinker, where the pit appears to split into two sections.*	
									3
									4
					5.00	80.35			

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	none				

General Remarks

Terminated due to maximum reach of machinery achieved.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP131
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387814.82 N400410.94
Project No. : LD10385	Excavator:	Dimensions : 4.00m × 1.80m / Final Depth: 5.00m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 85.35m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Base of Excavation at 5.00m	6 7 8 9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	none				

General Remarks

Terminated due to maximum reach of machinery achieved.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP132
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387844.63 N400373.29
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.10m x 3.20m / Final Depth: 4.10m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 85.83m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	85.63		Recovered as 55% cobble to boulder sized inclusions of soft, dark brown, slightly sandy, gravelly CLAY; 30% root and rootlets; 10% cobble sized fragments of red brick; and 5% boulder sized concrete fragments. Gravel is subangular to subrounded of fine to coarse mixed lithologies. Sand is fine to medium.	
		0.30 0.30	ES	0.40ppmv				TF	
					0.70	85.13		Recovered as 40% brown, slightly sandy, very clayey GRAVEL; 20% cobble to boulder sized pockets of damp, orangish brown, gravelly SAND; 15% cobble to boulder sized inclusions of stiff, brown, slightly sandy, slightly gravelly CLAY; 10% cobble sized fragments of red brick; 10% cobble sized sandstone fragments; and 5% cobble sized concrete fragments. Sand is fine to medium. Gravel is subangular to subrounded of fine to coarse red brick, concrete, sandstone, shells and mudstone.	
					0.90	84.93		GMG	1
								Recovered as 50% red, subangular to subrounded, fine to coarse, slightly sandy GRAVEL of red brick; 40% cobble sized fragments of red brick; and 10% cobble sized inclusions of stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies.	
								DW	
								Recovered as 60% grey, slightly sandy GRAVEL; 25% cobble sized fragments of mudstone and siltstone; 10% boulder sized fragments of siltstone and mudstone; and 5% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse mudstone siltstone, coal and shale.	
								CS	2
					2.30	83.53		Recovered as 50% dark grey to reddish brown, slightly sandy GRAVEL; 15% cobble sized fragments of siltstone and mudstone; 15% cobble sized fragments of red brick; 15% cobble sized inclusions of soft, brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY; and 5% boulder sized fragments of mudstone and siltstone. Gravel is subangular to subrounded of fine to coarse mudstone, siltstone, coal and sandstone	
		2.60 2.60	ES	0.40ppmv	2.60	83.23		CS	
								2.30m - 2.60m : Collapse of northwestern face of the excavation.	
								Recovered as 50% cobble sized inclusions of firm, light brown, mottled orangish brown and light grey, slightly gravelly CLAY; 15% cobble sized fragments of siltstone and mudstone; 15% whole and half red brick; 15% cobble sized inclusions of soft, brown, mottled orangish brown, slightly sandy, slightly gravelly CLAY; and 5% boulder sized fragments of mudstone and siltstone. Gravel is subrounded to subangular of fine to coarse metal (melted soldering iron), red brick, coal, gritstone and siltstone.	3
								CS	
								3.50m : Hard digging	
		3.80 – 4.10 3.80	B HSV	140kPa					4
					4.10	81.73		Base of Excavation at 4.10m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to hard digging. Strata all dipping approximately 20 degrees north west. HSV test max is 140, therefore the HSV result is 140+. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP133
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387781.35 N400390.45
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.00m x 2.00m — Final Depth: 5.30m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 86.08m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.25	85.83		Recovered as 30% dark brown, slightly gravelly, very clayey SAND; 25% roots and rootlets; 20% boulder sized concrete fragments (1.10m x 1.66m x 0.16m); 10% cobble sized fragments of red brick; 10% cobble sized plastic fragments; and 5% cobble sized ceramic fragments. Gravel is angular to subrounded of fine to coarse concrete, red brick, ceramic and mudstone. TF	
		0.50 – 0.70 0.60	ES	0.20ppmv	0.50	85.58		Recovered as 50% light brown, very sandy GRAVEL; 15% cobble sized fragments of red brick; 15% cobble sized plastic fragments; 10% cobble sized ceramic fragments; 5% cobble sized inclusions of stiff, friable, greyish brown, slightly sandy, gravelly CLAY; and 5% roots and rootlets. Gravel is subangular to subrounded of fine to coarse concrete, red brick and sandstone. DW	1
								Recovered as 55% dark brownish grey to black GRAVEL; 20% cobble to boulder sized fragments of mudstone, siltstone and shale; 15% cobble sized inclusions of stiff, friable, grey, mottled orangish brown, grey, silty CLAY; 5% cobble sized fragments of red brick; and 5% roots and rootlets. Gravel is angular to subrounded of fine to coarse of mudstone, siltstone, sandstone and coal. CS *0.50m - 4.20m : Multiple collapses if excavation walls.*	2
		2.40 – 3.20	B						3
					4.20	81.88		Recovered as 65% damp, weathered, slightly clayey GRAVEL; 20% cobble sized fragments of siltstone, mudstone and shale; 10% boulder sized blocky siltstone fragments; and 5% cobble sized fragments of red brick. Gravel is subangular to subrounded of medium to coarse suspected slag, siltstone, mudstone and shale. CS	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.

Dimensions given in length x width x depth.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP133
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387781.35 N400390.45
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.00m x 2.00m — Final Depth: 5.30m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 86.08m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.30	80.78		Recovered as 65% damp, weathered, slightly clayey GRAVEL; 20% cobble sized fragments of siltstone, mudstone and shale; 10% boulder sized blocky siltstone fragments; and 5% cobble sized fragments of red brick. Gravel is subangular to subrounded of medium to coarse suspected slag, siltstone, mudstone and shale. CS	6
								Base of Excavation at 5.30m	7
									8
									9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.

Dimensions given in length x width x depth.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP134
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 16/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387900.85 N400365.09
Project No. : LD10385	Excavator: Hitatchi 123 12T	Dimensions : 3.80m x 1.10m / Final Depth: 4.80m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 84.61m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 0.20		0.20ppmv	0.20	84.41		Recovered as large boulder sized fragments of whitish brown CONCRETE. CONC	
					0.65	83.96		Recovered as 20% cobble sized fragments of red brick; 20% greyish brown and black in places, slightly sandy, clayey GRAVEL; 15% cobble sized inclusions of soft to stiff, brown mottled light grey and orangish brown in places, slightly sandy, gravelly CLAY; 10% cobble sized fragments of weathered mudstone and coal; 10% fabric (shoes); 5% metal bars; and 5% plastic bags. Gravel is angular to subrounded of fine to coarse red brick, wood, concrete, coal, glass, mudstone, and sandstone. DW	
		0.75 – 3.50	ES		0.75	83.86		Recovered as 80% yellowish brown, coarse SAND; and 20% cobble sized inclusions of soft, yellowish brown, sandy CLAY. GMG	1
		1.20	HSV	49kPa				Recovered as 85% cobble to boulder sized inclusions of firm, reddish brown, slightly sandy, slightly gravelly CLAY; and 15% cobble sized fragments of red brick. Gravel is subangular to subrounded of fine to coarse coal, red brick and weathered mudstone. Sand is fine to medium. CMG	2
					3.50	81.11		Damp, light brown, slightly clayey, slightly gravelly, fine to coarse SAND. Gravel is angular to subrounded of fine mixed natural lithologies. GGT	3
					3.60	81.01		Very stiff, brown, slightly sandy, slightly gravelly CLAY with medium cobble content. Cobbles are rounded of a mixed natural lithologies. Gravel is angular to rounded of fine to coarse mixed natural lithologies. Sand is fine. CGT	4
		4.20	HSV	110kPa					
					4.80	79.81		Base of Excavation at 4.80m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Achieved target depth.
various constituents present.

Logging has been undertaken to provide an approximate volumetric percentage of the

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP135
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387857.79 N400361.01
Project No. : LD10385	Excavator:	Dimensions : 4.00m × 1.80m — Final Depth: 1.25m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.12m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 0.25	ES		0.25	84.87		Recovered as 60% cobble to boulder sized inclusions of soft to firm, dark brown, slightly sandy, slightly gravelly CLAY; 30% abundant rootlets and roots (up to 5cm diameter); and 10% cobble sized fragments of mudstone and red brick. Gravel is subangular to subrounded of fine to coarse red brick, concrete and mixed lithologies. TF	
		1.20		0.20ppmv	1.20	83.92		Recovered as 40% reddish brown, slightly sandy, clayey GRAVEL; 20% cobble sized fragments of red brick; 10% cobble size fragments of concrete; 5% cobbles sized fragments of sandstone; 10% cobble to boulder size inclusions of firm, orangish brown, mottled light grey and dark grey in places, gravelly CLAY; 5% tree roots and rootlets; 5% plastic (sheeting and fragments); 5% wire; 5% cobble sized fragments of slate. Gravel is angular to rounded of fine to coarse red brick, concrete, slate, glass, wood, mudstone and siltstone. DW	1
					1.25	83.87		Hard CONCRETE obstruction across entire excavation - could not dig through. CONC	
								Base of Excavation at 1.25m	2
									3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	none				

General Remarks

Terminated due to concrete obstruction along the entire base of the excavation. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP136
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387510.10 N400123.70
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 1.40m / Final Depth: 3.70m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 81.01m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	80.81		Recovered as soft, dark brown, slightly gravelly, sandy/ ashy CLAY with frequent rootlets. Gravel is angular to subrounded fine to medium glass (10%), ceramic (10%) and mixed lithologies (80%). TF	
					0.50	80.51		Recovered as 80% dark greyish brown, very sandy/ashy, very clayey GRAVEL; 10% cobble sized timber fragments; 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to medium suspected slag (20%), suspected clinker (20%), timber (20%), glass (10%) and mixed lithologies (30%). CW	
		0.80	ES						
		0.80	HSV	66kPa					
		0.80	HSV	70kPa					
		0.80	HSV	74kPa	1.00	80.01		Firm to stiff, light brown and orangish brown mottled, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to medium mixed lithologies. CGT	1
		1.60	HSV	102kPa				Stiff to very stiff, fissured, brown, mottled grey, slightly sandy, slightly gravelly CLAY. Gravel is subrounded of fine to medium mixed lithologies. Fissures are randomly orientated, extremely close to closely spaced, undulating to stepped smooth, partially open and infilled with firm grey clay. CGT	
		1.60	HSV	82kPa					
		1.60	HSV	88kPa					
					2.00	79.01		Dark greyish brown, slightly gravelly, medium SAND. Gravel is subangular to rounded fine to medium coal and mixed lithologies. GGT *2.00m : Boulder sized sand pocket in centre of the excavation.* *2.10m : Running sand in southern face of the excavation.*	2
		2.10	ES						
		2.30	B						
		2.30	B						
					2.70	78.31		Firm, dark brown CLAY with closely spaced thin beds of firm dark brown silty clay with rare plant remains. CGT *2.80m : Running sand in southern face of the excavation.*	3
		2.90	HSV	60kPa					
		2.90	HSV	66kPa					
		2.90	HSV	68kPa					
		3.50	HSV	70kPa					
		3.50	HSV	74kPa					
		3.50	HSV	86kPa					
					3.70	77.31		Base of Excavation at 3.70m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth.
of the various constituents present.

Logging has been undertaken to provide an approximate volumetric percentage

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP137
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 06/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387341.40 N400286.70
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 3.90m x 1.30m; Final Depth: 3.70m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 79.07m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	78.87		Recovered as brown, slightly clayey, gravelly, silty coarse SAND with frequent rootlets. Gravel is angular to subrounded fine to medium suspected slag and suspected clinker. TF	
		0.60	B					Recovered as brown and grey, very sandy/ashy, angular to rounded, fine to coarse GRAVEL of suspected slag (40%), suspected clinker (40%), glass (10%) and brick (10%). CW	
					0.80	78.27		Recovered as 40% brown and grey, very sandy/ashy GRAVEL; 30% cobble to boulder sized inclusions of grey, clayey, gravelly SAND/ASH; 20% boulder sized inclusions of firm, brown, mottled light brown, slightly sandy, slightly gravelly CLAY; 10% cobble sized inclusions of soft to hard mortar/paste. Gravel is angular to rounded of fine to coarse, suspected slag (40%), clinker (40%), glass (10%) and brick (10%). CW	1
		1.20 1.20	ES ES						
					1.50	77.57		Recovered as 40% brown and grey, very sandy GRAVEL; 30% cobble to boulder sized inclusions of dark reddish brown, very sandy/ashy GRAVEL; and 30% cobble to boulder sized inclusions of very soft to firm, white paste. Gravel is angular to rounded of fine to coarse suspected slag (30%), suspected clinker (30%), glass (10%), red brick (10%), slate (10%) and acetate fragments (10%). CW	
					2.00	77.07		Recovered as 40% grey, gravelly, slightly clayey SAND/ ASH; 30% cobble to boulder sized inclusions of soft to firm, white paste; 10% cobble sized timber fragments; 10% cobble sized slate fragments; 10% boulder sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse suspected slag (35%), suspected clinker (35%), acetate fragments (20%) and timber (10%) Putrid odour. CW	2
					2.60	76.47		Recovered as 70% grey, gravelly, slightly clayey SAND/ ASH; 30% cobble sized slate fragments; and 10% boulder sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse suspected slag (35%), suspected clinker (35%), acetate fragments (20%) and timber (10%). Putrid odour. CW	
▽					3.00	76.07		Recovered as 60% wet, dark grey, sandy, clayey GRAVEL; 20% boulder sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY; 10% cobble sized timber fragments; and 10% cobble sized slate fragments. Gravel is angular to subrounded fine to coarse suspected slag (35%), suspected clinker (35%), acetate fragments (20%), timber (10%). CW	3
								3.00m - 3.70m : Multiple collapses of the sides of the excavation.	
					3.70	75.37		Base of Excavation at 3.70m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 3.0m					

General Remarks

Terminated due to instability. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP138
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387512.92 N400282.26
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.70m x 1.30m; Final Depth: 3.50m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.30m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	83.00		Recovered as 75% roots and rootlets (up to 20mm diameter); and 25% brown, slightly gravelly, slightly clayey, fine to medium SAND. Gravel is fine to coarse of mixed lithologies. TF	
					0.80	82.50		Recovered as 40% brown, slightly sandy, clayey GRAVEL; 15% cobble sized fragments of red brick; 15% boulder sized red brick and concrete fragments; 10% wooden flooring; 10% roots; and 10% glass fragments (bottles and reinforced window). Gravel is fine to coarse angular to rounded pebbles, red brick, ceramic, glass and nails. Sand is fine to medium. DW	
		1.60						Recovered as 30% wooden floor joists with nails; 20% cobble sized fragments of red brick; 10% boulder sized sandstone fragments; 10% metal fragments (temporary bus stop sign); 10% plastic (sheeting, wrappers, bags); 10% dark brown, slightly sandy, very clayey GRAVEL; and 10% cobbles sized fragments of ceramic and mudstone. Gravel is angular subrounded fine to coarse glass, ceramic, red brick and mudstone. DW	1
					2.10	81.20		Recovered as 55% plastic bags; 20% painted timber floor boards; 10% cobble sized timber fragments; 10% cobble sized fragments of red brick; 5% brown, angular to subangular, fine to coarse slightly sandy slightly clayey GRAVEL of mixed lithologies. HW	2
					2.70	80.60		Recovered as 25% brown, slightly sandy, slightly clayey GRAVEL; 30% plastic (piping, bottles, containers, bags); 15% cobble sized fragments of red brick; 10% glass (windows, bottles); 10% foam; and 10% fabric (insulation)). Gravel is angular to subrounded fine to coarse red brick, glass and timber. HW	
	▽	3.30 3.30	ES	0.10ppmv	3.00 3.20	80.30 80.10		Recovered as 30% plastic sheeting; 20% wooden fencing/ floor boards; 20% boulder sized concrete fragments (1.5m x 0.5m x 0.3m); 20% metal (corrugated, bars); and 10% brown, slightly sandy, slightly clayey, angular to subrounded, fine to coarse GRAVEL of red brick, glass and wood. DW	3
					3.50	79.80		Recovered as 45% very soft, wet, dark greyish brown, slightly sandy, very gravelly CLAY; 20% cobble sized inclusions of soft to firm, brown, slightly sandy CLAY; 10% wooden fence fragments; 10% cobble sized glass fragments; 10% fabric; 5% cobble sized metal fragments. Gravel is angular to subrounded of fine to coarse of mixed lithologies. Sand is fine. Slight odour. DW *3.20m : Slow ingress of water from the base of the excavation.* Base of Excavation at 3.50m	4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable		

Pumping Data

Date	Rate	Remarks

General Remarks

Terminated due to multiple collapses of the excavation walls. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP139
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387266.18 N400178.30
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.10m x 1.40m / Final Depth: 3.50m
Logged By: JC / Checked By: JC	Approved By: MP / Level: 77.16m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as brown, slightly gravelly, silty clayey, fine to medium SAND with frequent rootlets. Gravel is angular to rounded of mixed lithologies. TF	
					0.30	76.86			
		0.50	ES					Recovered as 80% black, very sandy/ashy GRAVEL; and 20% cobble sized fragments of red brick. Gravel is angular to rounded of fine to coarse suspected slag (40%), suspected clinker (40%) and mixed lithologies (20%). CW	
								0.80m : Brick obstruction in western face of the excavation.	
					1.00	76.16		Recovered as 50% black very sandy/ashy GRAVEL; 30% boulder sized inclusions of brown, silty SAND with frequent rootlets; and 20% whole and half red bricks. Gravel is angular to rounded of fine to coarse suspected slag (40%), clinker (40%) and mixed lithologies (20%); CW	1
					1.40	75.76		Recovered as soft to hard, white, suspected mortar paste. CMG	
		1.50	ES		1.60	75.56		Recovered as black, very sandy/ashy angular to rounded, fine to coarse GRAVEL of suspected slag (40%), clinker (40%) and mixed lithologies (20%). CW	2
	▽				2.20	74.96			
					2.30	74.86		Recovered as firm, black, slightly sandy CLAY with rare plant remains. Very strong hydrocarbon odour. CMG	
		2.40	ES		2.50	74.66		Recovered as wet, black, very clayey GRAVEL of suspected slag and suspected clinker. Very strong hydrocarbon odour and heavy iridescent oil staining. CW	
								Recovered as 80% wet, clayey GRAVEL; and 20% cobble sized inclusions of firm, light brown, mottled grey, silty CLAY. Gravel is angular to subrounded of medium to coarse suspected slag (40%), suspected clinker (40%), red brick (10%) and timber (10%). Strong hydrocarbon odour and staining. CW	3
					3.20	73.96		Firm, fissured, light grey and brown, silty CLAY. Fissures are randomly orientated, extremely close to close spaced, undulating to stepped smooth, tight to party open and infilled with firm, grey clay. CGT	
					3.50	73.66		Base of Excavation at 3.50m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP140
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387538.92 N400291.54
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 2.40m x 1.40m / Final Depth: 3.70m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 83.80m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	83.50		Recovered as 65% brown, slightly sandy, very clayey GRAVEL; 15% cobble sized fragments of red brick; 10% roots and rootlets; 5% cobble sized plastic fragments; and 5% cloth fragments. Gravel is subangular to subrounded of fine to coarse red brick, red mudstone, purple slate and siltstone. GMG	
		0.50 – 1.60	ES		0.50	83.30		Recovered as 90% damp, brown, slightly gravelly SAND; and 10% cobble sized inclusions of soft to firm, grey CLAY. Gravel is angular to subrounded of medium to coarse purple slate, red ceramic and glass. Sand is fine to coarse. GMG	
		1.00		0.10ppmv				Recovered as 40% brown, slightly sandy, very clayey GRAVEL; 20% plastic (sheeting, wrappers, pipe); 10% cobble sized fragments of red brick and concrete; 10% boulder sized concrete fragments; 10% metal (bucket, poles, bars, strips); and 10% fabric (carpet, clothing). Gravel is angular to subrounded of fine to coarse red brick, glass, small nails, burnt wood, mudstone and purple slate. DW	1
								1.70m : A single large concrete boulder (1.3m x 1.2m x 0.5m).	
								1.90m : A single tyre.	
					2.00	81.80		Recovered as 35% brown, sandy, slightly clayey GRAVEL; 15% wooden fencing; 15% cobble sized red brick and suspected slag fragments; 10% cobbles to boulder sized concrete paving fragments (up to 0.9m length). Gravel is subangular to subrounded of fine to coarse mixed lithologies. DW	2
	▽							*3.40m : Slow ingress of water from the base of the excavation. The water is clear with no odour.*	3
					3.60	80.20		Recovered as 30% wooden fencing; 25% wet, dark grey to black, slightly sandy, very clayey GRAVEL;15% whole and half red brick; 10% boulder sized concrete paving fragments; 10% metal (cans, sheeting, rods); 5% cardboard; 5% plastic (blinds). Gravel is subangular to subrounded of fine to coarse mixed lithologies. Hydrocarbon odour. HW	4
					3.70	80.10		*3.60m : Water is dark grey with an oily sheen, hydrocarbon odour with a foam layer.*	
								Base of Excavation at 3.70m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Terminated due to water in pit.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP141
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387412.40 N400312.10
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.10m x 1.60m — Final Depth: 2.60m
Logged By: ZH	Checked By: JC	Approved By: MP	Level: 80.44m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.25	80.19		Recovered as dark brown, silty, very clayey, fine SAND with frequent rootlets. TF	
		0.50	ES					Recovered as 80% dark grey, gravelly, clayey SAND/ASH; and 20% cobble to boulder sized suspected slag fragments. Gravel is subangular of fine to coarse suspected slag, suspected clinker and concrete. CW	1
		1.50	ES						
					1.80	78.64		Stiff, friable, greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse sandstone. CGT	2
		2.10	HSV	120kPa					
		2.10	HSV	120kPa					
		2.10	HSV	120kPa					
		2.50	ES						3
					2.60	77.84		Base of Excavation at 2.60m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Achieved target depth. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP142
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387672.00 N400190.00
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.80m x 2.90m — Final Depth: 3.80m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 82.50m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.40	82.10		Recovered as 70% firm, dark brown, slightly sandy, slightly gravelly CLAY; 20% roots and rootlets; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramic, glass, purple slate and pebbles. TF	
					0.80	81.70		Recovered as 55% cobble sized fragments of red brick; 20% dark brown, slightly sandy, slightly clayey GRAVEL; 15% cobble to boulder sized concrete fragments; and 10% plastic, glass and fabric fragments. Gravel is subangular to subrounded of fine to coarse red brick, ceramic and mixed lithologies. Organic odour. DW	
								Recovered as 20% plastic sheeting; 20% damp, brown, sandy, clayey GRAVEL; 10% boulder sized concrete fragments; 10% cobble sized metal fragments; 5% fabric; 5% glass; 5% whole and half red brick; 5% cobble sized ceramic fragments; 5% sponge; and 5% cobble sized fragments of orangish brown, stained black, coarse grained sandstone. Gravel is subangular to subrounded of fine to coarse red brick, wood, plastic and glass. DW *1.20m : Singular pram (1.5m x 0.5m x 0.2m).* *1.90m : Single large boulder (1.8m x 0.7m x 0.4m).* *2.60m : Hard digging due to thin layer of red brick and concrete cobbles.*	1 2
	▽	2.70 2.70 2.70	ES	0.00ppmv	2.70	79.80		Soft to stiff, wet, slightly sandy, slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to rounded of fine to coarse pebbles, gritstone and red sandstone. CGT *2.70m : Slow ingress of water.* *2.70m - 3.80m : Occasional very sandy lenses.* *3.00m : Fast ingress of water.*	3
					3.80	78.70		Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable	None				

General Remarks

Terminated due to multiple collapses of the excavation walls.
Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP143
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387771.85 N400434.42
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 5.40m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.42m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	85.32		Recovered as very soft, dark brown, slightly gravelly, sandy CLAY with frequent roots and rootlets and occasional cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. TF	
					0.70	84.72		Recovered as 40% brown, slightly sandy, very clayey GRAVEL; 20% cobble to boulder sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY; 15% plastic (large plastic tubes 5cm in diameter, plastic cards, needles, gloves); 10% whole and half red bricks; 5% cobble sized fragments of hard, black, rough stone; 5% cobble to boulder sized fragments of concrete; 5% glass fragments; and 5% tree roots. Gravel is angular to rounded of fine to coarse red brick, concrete, slate, sandstone, grit stone, shale, timber and mixed lithologies. Sand is fine. HW *0.21m : Singular pipe with tap.*	1
					1.15	84.27		Recovered as 60% reddish brown, sandy GRAVEL; 25% whole and half red brick; 10% cobble sized inclusions of stiff, brown, slightly sandy, slightly gravelly CLAY; and 5% roots. Gravel is subrounded to subangular of fine to coarse red brick, timber, concrete, aggregate and mixed lithologies. GMG *0.90m : Hard digging.* *0.90m - 1.00m : Large hard yellow plastic object in the southern end of excavation.*	
								Recovered as 55% grey (sometimes multicoloured), angular to subrounded, fine to coarse GRAVEL of red brick, shale, coal, mudstone, siltstone, suspected clinker; 20% cobble to boulder size inclusions of stiff to very stiff, grey mottled orangish brown, very gravelly, subrounded to subangular CLAY; 10% whole and half red brick; 10% cobble sized fragments of concrete; and 5% tree roots. Gravel is angular to subrounded of fine to coarse coal, shale, ironstone, siltstone and mixed lithologies. CS	2
		2.90 – 5.40 2.90 – 5.40	B B		2.90	82.52		Recovered as 60% reddish brown, sandy angular to subangular GRAVEL; 40% cobbles to boulder sized boulders brownish grey, weathered red or orangish brown, siltstone. Gravel is angular of fine to coarse red brick, weathered siltstone and slate. CS	3 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP143
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/10/2020
Location: Newton Heath	Contractor: Geotron UK	Co-ords: E387771.85 N400434.42
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 5.40m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.42m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.40	80.02		Recovered as 60% reddish brown, sandy angular to subangular GRAVEL; 40% cobbles to boulder sized boulders brownish grey, weathered red or orangish brown, siltstone. Gravel is angular of fine to coarse red brick, weathered siltstone and slate. CS	6
								Base of Excavation at 5.40m	7
									8
									9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to maximum reach of the machine.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP144
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurts Plant Hire	Co-ords: E387482.60 N400181.10
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.70m x 1.70m — Final Depth: 3.10m
Logged By: LT	Checked By: JC	Approved By: MP — Level: 81.59m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	81.44		Recovered as firm, dark brown, slightly sandy, silty CLAY. Sand is fine. TF	
		0.40	ES					Recovered as 50% dark grey, gravelly, clayey, fine SAND; 25% cobble sized fragments of red brick; 15% cobble to boulders sized concrete fragments; 10% cobble sized timber, plastic and metal fragments. Gravel is subangular fine to coarse suspected clinker, suspected slag and red brick. Slight eggy odour. CW *1.30m : Broken metal box (0.6m x 0.8m x 0.6m) filled with roof slates and timbers. Slight eggy and white spirit odour.* *1.40m : Sides collapsing.*	1
	▽				1.80	79.79		Recovered as 40% cobble sized fragments of red brick; 15% cobble sized timber fragments; 10% cobble sized roof slate and felt fragments; 10% metal including pipes, cables and empty metal drums; 10% plastic sheeting; 5% cloth material; 5% plastic wheels, mats and drums; 5% cobble to boulder sized concrete fragments. HW *1.80m - 2.90m : Northern side of pit: Stiff brown slightly gravelly slightly sandy CLAY.* *1.90m : Moderate ingress of water causing instability of sides. Creosote and white spirit odour with vitreous sheen.*	2
					2.90	78.69		Firm, brown, silty CLAY. CGT	3
					3.10	78.49		Base of Excavation at 3.10m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 1.3m bgl.					

General Remarks

Unstable from 1.3m bgl. Dimensions given in length x width x depth. Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP145
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 14/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire Ltd	Co-ords: E387858.14 N400301.89
Project No. : LD10385	Excavator: Hitatchi 12T	Dimensions : 3.70m x 2.80m — Final Depth: 4.10m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 83.18m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	82.98		Recovered as 50% dark brown, slightly sandy, clayey GRAVEL; 15% cobble sized fragments of red brick; 15% cobble sized inclusions of firm, brown, slightly sandy, slightly gravelly CLAY; 10% laminate flooring; 10% fabric (clothing); and 5% metal (nails). Gravel is angular to subrounded of fine to coarse red brick, glass, plastic, wood and sandstone. HW	
					0.80	82.38		Recovered as 35% damp, brown, gravelly, slightly clayey SAND; 20% cobble to boulder sized inclusions of stiff, slightly sandy, slightly gravelly CLAY; 10% cobbles to boulders sized fragments of sandstone and concrete; 10% cobble sized fragments of red brick; 10% cobble sized ceramic fragments; 5% roots and rootlets; 5% metal (wires); 5% glass. Gravel is subangular to subrounded of mixed lithologies. Sand is fine to medium. DW	1
								Recovered as 45% cobble to boulder sized inclusions of stiff, brown, slightly gravelly, sandy CLAY; 20% cobble sized timber fragments; 20% cobble sized fragments of cement brick and red brick; 10% metal (large metal pipe); 5% cobble sized slate fragments. Gravel is angular to rounded of fine to coarse concrete, pebbles, gritstone and sandstone. Hydrocarbon odour. DW *0.80m - 2.80m : Large collapse of north eastern face of the excavation.*	
	▽	2.20 2.20 2.30	ES	0.60ppmv	2.30	80.88		Recovered as 40% black sludge; 30% glass (bottles); and 30% cobble sized inclusions of soft, white, gravelly CLAY. Gravel is subangular of fine to coarse lime/chalk. DW *2.30m : Slight to moderate seepage of water from the base and south western face of the excavation.*	2
					2.60	80.58		*2.30m - 4.10m : Water is dark grey to black, shiny/oily with a hydrocarbon odour.* Recovered as 20% boulder sized inclusions of stiff, brown CLAY; 20% cobble to boulder sized pockets of black, very clayey GRAVEL; 15% cobbles and boulder sized pockets of brown, fine to medium SAND; 15% cobble sized fragments of red brick; 10% wood (fragments and planks); 10% metal (pipes and bars); 5% cobble sized sandstone fragments; and 5% glass (bottles). Gravel is angular to subrounded of fine to coarse mixed lithologies. DW *2.60m - 4.10m : Wet and stained black.*	3
	▽	3.80 3.80 3.80 3.90 3.90	ES W ES	2.10ppmv				*3.80m : Fast ingress of water from the northwestern wall.*	
					4.10	79.08		Base of Excavation at 4.10m	4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Terminated due to multiple collapses of excavation walls.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP146
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 13/10/2020
Location: Newton Heath	Contractor: John Cooper	Co-ords: E387642.07 N400312.31
Project No. : LD10385	Excavator:	Dimensions : 4.00m x 1.80m — Final Depth: 4.50m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.11m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.40	84.71		Recovered as 30% cobble to boulder sized inclusions of very soft, dark brown, slightly sandy, gravelly CLAY; 15% roots and rootlets; 10% whole and half red brick; 5% cobble sized concrete fragments; 5% timber fragments (up to 15cm in length, 2cm wide); 30% cobble to boulder size inclusions of firm, brown, mottled orange and grey sightly gravelly CLAY; and 5% plastic. Gravel is fine to course, subangular to subrounded, fine to coarse of mixed lithologies (slate, sandstones and other) and red brick.	
					0.60	84.51		CMG	
		0.80 0.80	ES	0.20ppmv				Recovered as 25% brown, stained black, very sandy GRAVEL; 20% cobble sized fragments of suspected clinker; 15% cobble sized fragments of red brick; 15% boulder sized fragments of red brick wall and sandstone; 15% cobble sized inclusions of firm, brown, slightly gravelly CLAY; 5% cobble sized timber fragments; 5% cobble sized ceramic fragments. Gravel is subangular to subrounded of fine to coarse sandstone, red brick, ceramic, concrete and mixed lithologies.	1
								DW	
								Recovered as 30% black, slightly gravelly SAND; 20% boulders sized fragments of reinforced concrete (rebar 10mm diameter); 10% whole and half red brick; 15% cobble sized yellowish brown, stained black sandstone fragments; 20% cobble sized inclusions of firm, brown, gravelly CLAY; and 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to medium of red bric, concrete and mixed lithologies.	
								DW	
					1.90	83.21		Recovered as 60% cobble sized fragments of red brick; 30% cobble to boulder sized concrete fragments; and 10% reddish brown, angular to subangular, fine to coarse GRAVEL of red brick and concrete.	2
								DW	
					2.20	82.91		*1.90m - 2.20m : Very hard digging.*	
								Recovered as 35% damp, black, very gravelly SAND; 10% cobble sized plastic fragments (hard plastic lining, sheeting, wrapping, polystyrene); 10% cobble sized fragments of siltstone and slate; 10% cobble sized inclusions of soft brown, mottled grey and orange CLAY; 10% cobble sized ceramic fragments; 10% cobbles to boulder sized fragments of suspected slag; 5% fabric (cloth/ clothing); 5% cobble sized fragments of glass and bottles; 5% cobble sized timber fragments. Gravel is angular to subangular of fine to coarse mixed lithologies.	3
								DW	
								4.20m - 4.30m : Slightly stagnant odour.	4
		4.30 4.30 4.30	ES	1.10ppmv					
					4.50	80.61		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Terminated due to concrete obstruction.

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP147
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387673.10 N400332.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.30m x 1.30m — Final Depth: 4.30m
Logged By: ZH	Checked By: JC	Approved By: MP — Level: 85.28m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 75% cobble to boulder sized inclusions of soft to firm, brown, slightly sandy, gravelly CLAY; 5% roots and rootlets; 5% rounded cobbles; 5% plastic sheeting; 5% various metal objects. Gravel is subangular to subrounded of fine to coarse red brick, siltstone, slate, metal, ceramic and mixed lithologies. CMG	
					0.70	84.58		Recovered as 80% cobble sized fragments of red brick; 10% concrete boulder fragments; 10% cobble to boulder sized inclusions of firm, slightly sandy, gravelly CLAY. DW	1
					1.20	84.08		Recovered as 40% multicoloured, slightly sandy slightly clayey GRAVEL; 15% cobble sized fragments of red brick; 15% wooden planks; 10% boulders sized sandstone fragments; 10% cobble sized ceramic fragments; 10% metal bars. Gravel is subangular of fine to coarse red brick, mudstone and mixed lithologies. DW	2
								2.20m : Red brick wall (1.6m x 0.4m x 0.6m). *2.30m : A singlular 0.5m diameter x1.0m long ceramic pipe.*	
								2.90m - 3.10m : Layer of plastic sheeting.	
					3.00	82.28		Recovered as 50% cobble to boulder sized inclusions of firm, brown, slightly sandy, gravelly CLAY; 15% cobble sized fragments of red brick; 10% plastic sheeting; 10% boulder sized concrete fragments; 10% cobble sized inclusions of firm, greenish brown, sandy CLAY; 5% glass fragments. Gravel is subangular to subrounded of fine to coarse of red brick, concrete, sandstone and ceramics. Slight hydrocarbon odour. DW	3
		3.30	ES					*3.30m : Singular metal spring.*	
					4.30	80.98		Base of Excavation at 4.30m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth.
volumetric percentage of the various constituents present.

Logging has been undertaken to provide an approximate

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP148
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 07/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387486.40 N400150.80
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.10m x 1.40m — Final Depth: 3.20m
Logged By: JC	Checked By: JC	Approved By: MP — Level: 81.17m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	80.97		Recovered as soft, dark brown, slightly sandy, silty CLAY with frequent rootlets and occasional gravel. Gravel is subangular to subrounded fine to medium red brick and mixed lithologies. TF	
		0.40	ES		0.50	80.67		Recovered as 90% black, very sandy/ash GRAVEL; and 10% whole bricks. Gravel is angular to rounded, fine to medium GRAVEL of suspected slag (40%), suspected clinker (40%), timber (10%) and red brick (10%). CW	
		1.00	ES					Firm, light brown mottled light grey, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to well rounded fine to medium of mixed lithologies CGT	1
		1.10	HSV	62kPa					
		1.10	HSV	70kPa					
		1.10	HSV	72kPa					
					1.40	79.77		Firm to stiff, fissured, brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded fine to medium coal, mudstone, sandstone and mixed lithologies. Fissures are randomly orientated, extremely closely spaced, undulating to stepped smooth, partially open and infilled with firm grey silty clay. CGT	
		1.60	B						
		1.60	B						
		1.70	HSV	70kPa					
		1.70	HSV	72kPa	1.80	79.37			
		1.70	HSV	82kPa				Stiff, dark brown mottled grey CLAY with rare gravel. Gravel is subangular to well rounded fine to medium of mixed lithologies. CGT	2
	▽							*2.20m - 2.50m : Boulder sized pocket of wet dark grey silty fine sand in eastern edge of pit.*	
		2.30	HSV	74kPa				*2.30m : Slight ingress of water from eastern edge of pit, with running sands falling into pit.*	
		2.30	HSV	88kPa					
		2.30	HSV	90kPa					
					3.00	78.17		Firm to stiff, dark brown CLAY. CGT	3
		3.20	HSV	50kPa	3.20	77.97		Base of Excavation at 3.20m	
		3.20	HSV	52kPa					
		3.20	HSV	62kPa					4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Achieved target depth.
volumetric percentage of the various constituents present.

Logging has been undertaken to provide an approximate

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP149
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/10/2020
Location: Newton Heath	Contractor: Hurt Plant Hire	Co-ords: E387404.10 N400162.80
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.30m x 1.40m / Final Depth: 3.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 79.36m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	79.21		Recovered as firm, dark greyish brown, slightly sandy, silty CLAY. TF	
		0.50	ES					Recovered as 60% grey and orangish brown, slightly sandy, clayey GRAVEL; 20% cobble to boulder sized suspected slag fragments; 10% cobbles sized timber fragments; 10% cobble sized fragments of red brick. Gravel is subangular to subrounded of fine to coarse suspected clinker and suspected slag. CW	
								0.50m : Water seepage from eastern face.	
					1.00	78.36		Soft to firm, grey and light brown, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded fine to coarse sandstone, mudstone and coal. CGT	1
		1.20	HSV	22kPa					
		1.20	HSV	26kPa					
		1.20	HSV	28kPa					
		1.40	HSV	62kPa					
		1.40	HSV	70kPa				*1.40m - 1.50m : Orange and grey, firm to stiff.*	
		1.40	HSV	72kPa	1.50	77.86		Grey and brown, gravelly, silty, very clayey, fine to coarse SAND. Gravel is subangular to subrounded of fine to coarse mudstone and sandstone. GGT	
		1.60	ES						2
		2.50	HSV	62kPa					
		2.50	HSV	76kPa					
		2.50	HSV	78kPa					
		2.70	ES						
		2.90	HSV	82kPa					3
		2.90	HSV	84kPa					
		2.90	HSV	88kPa					
		3.00	HSV	100kPa					
		3.00	HSV	108kPa					
		3.00	HSV	112kPa					
		3.30	HSV	110kPa	3.30	76.06		Base of Excavation at 3.30m	
		3.30	HSV	120kPa					
		3.30	HSV	120kPa					4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Achieved target depth.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP150
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 12/10/2020
Location: Newton Heath	Contractor: Geotron	Co-ords: E387646.00 N400422.00
Project No. : LD10385	Excavator: Hitachi 12T	Dimensions : 4.40m x 1.40m — Final Depth: 4.30m
Logged By: ZH	Checked By: JC	Approved By: MP
Level: 85.73m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	85.53		Recovered as very soft, wet, dark brown, slightly sandy, slightly gravelly CLAY with frequent rootlets. TF	
					0.50	85.23		Recovered as 40% cobble to boulder sized inclusions of soft, dark brown, slightly gravelly slightly sandy CLAY; 15% plastic bags filled with orangish brown, fine to coarse sand; 15% cobble sized fragments of red brick; 10% boulder sized concrete fragments; 10% tree roots; 10% black wire. Gravel is angular to subrounded of fine to coarse red brick, glass, ceramic, suspected slag and mixed lithologies. DW	
					1.70	84.03		Recovered as 50% dark brown, black and reddish brown slightly gravelly slightly clayey SAND; 15% boulder sized fragments of orangish brown sandstone; 10% cobble sized fragments of red brick; 10% cobble sized, greenish grey, suspected slag fragments; 10% pieces of metal; and 5% plastic items. Gravel is angular to subrounded of fine to coarse mixed lithologies. DW	1
		2.20 / 2.20	ES					Recovered as 60% damp, black and dark grey, very gravelly, slightly clayey SAND; 15% cobble sized inclusions of firm, brown and grey, sandy CLAY; 15% cobble sized orangish sandstone fragments; 10% cobble sized fragments of greenish black, crystalline suspected slag. Gravel is angular to subrounded of fine to coarse mixed lithologies. GMG	2
					4.30	81.43		Base of Excavation at 4.30m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

General Remarks

Terminated due to collapse.
Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP201
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387741.58 N400431.94
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 3.90m

Logged By	Checked By	Approved By	Level	Orientation
JP	JC	MP	85.75m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 55% soft, dark brown, slightly sandy, gravely CLAY; 40% cobble sized fragments of red brick, concrete, sandstone, ceramic and metal pipe; and 5% plastic bags. Gravel is angular to subrounded of fine to coarse red brick, slate, glass, suspected slag and mixed lithologies. CMG *0.20m : Metal bar (1.0m x 0.05m x 0.04m) at 0.20m.*	1
					2.20	83.55		Recovered as 90% dark grey, sandy / ashy, angular fine to coarse GRAVEL of burnt siltstone, coal and mudstone; and 10% cobble sized fragments of mudstone. CS	2
		2.60 – 3.00	B					*2.60m - 3.00m : Recovered as orange between 2.60m and 3.00m.*	3
					3.90	81.85		Base of Excavation at 3.90m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 2.60m	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP202
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387771.30 N400436.48
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m × m — Final Depth: 2.50m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 85.43m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.20	85.23		Recovered as soft, dark brown, slightly sandy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, macadam and concrete. TF
					0.85	84.58		Recovered as 70% stiff, dark brown, slightly sandy, gravelly CLAY; 20% cobble sized fragments of red brick, and 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete and macadam. CMG
					1.10	84.33		Recovered as 70% cobble sized fragments of red brick, and 30% soft, dark brown, sandy, gravelly CLAY. Gravel is angular to subangular of fine to coarse red brick. DW
		1.30	ES					Recovered as soft to firm, dark grey, slightly sandy CLAY with organic odour. RNG
					1.60	83.83		Recovered as firm, light brown, slightly sandy CLAY. Sand is fine. CGT
		2.00 2.00 – 2.50	B B					
					2.50	82.93		Base of Excavation at 2.50m

Scale: 1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP203
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/04/2022	
Location: Newton Heath	Contractor: Lomond	Co-ords: E387691.93 N400363.87	
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m	Final Depth: 5.50m
Logged By: MS	Checked By: JC	Approved By: MP	Level: 86.10m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.20	85.90		Recovered as 80% soft, brown to dark grey, slightly gravelly, sandy CLAY with frequent rootlets; 10% cobble sized fragments of red brick, and 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies TF	
		1.00	ES					Recovered as 65% dark brown to grey, mottled cream, orange and red, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick, 15% cobble sized fragments of concrete, and 5% cobble sized fragments of wooden boards. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. DW *0.20m - 1.80m : Difficult to excavate between 0.20m and 1.80m.* *0.60m : Plastic pipe (0.25m x 0.50m) at 0.60m.*	1
					1.80	84.30		Recovered as 60% dark grey to black, gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% cobble sized fragments of wooden board; 5% cobble sized fragments of plastic bags and pipes; 5% cobble sized fragments of metal sheeting; and 5% cobble sized fragments of metal pipes. Gravel is angular to subrounded of fine to coarse mixed lithologies. Hydrocarbon odour noted. DW *1.80m : Frequent collapses of long side walls at 1.80m.* *2.20m : Rare boulders of concrete (0.50m x 0.50m x 0.25m) at 2.20m.*	2
		2.90	ES						3
					3.20	82.90		Recovered as 65% dark grey to black, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick, 5% cobble sized fragments of concrete, 5% cobble sized fragments of wood, 5% cobble sized fragments of fibre glass sheeting, 5% cobble sized bundles of plastic and metal wire; and 5% fabrics. Gravel is angular to subrounded of fine to coarse red brick, plastic, timber and mixed lithologies. Hydrocarbon odour noted. DW *3.50m : Reinforced concrete boulder (1.00m x 0.25m x 0.25m) at 3.50m.*	4
		5.00	ES						

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable from 1.80m.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP203
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387691.93 N400363.87
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 5.50m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 86.10m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.50	80.60		Recovered as 65% dark grey to black, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick, 5% cobble sized fragments of concrete, 5% cobble sized fragments of wood, 5% cobble sized fragments of fibre glass sheeting, 5% cobble sized bundles of plastic and metal wire; and 5% fabrics. Gravel is angular to subrounded of fine to coarse red brick, plastic, timber and mixed lithologies. Hydrocarbon odour noted. DW Base of Excavation at 5.50m	6 7 8 9

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable from 1.80m.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP204
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387682.91 N400410.88
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m x m — Final Depth: 4.50m
Logged By	Checked By: JC / Approved By: MP / Level: 85.71m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	85.61		Recovered as dark grey to black, very gravelly, clayey SAND with frequent rootlets. Gravel is subangular to subrounded of fine to medium red brick, suspected clinker, ceramics and mixed lithologies. TF	
					0.80	84.91		Recovered as 85% reddish brown to dark grey, very sandy, clayey GRAVEL; and 15% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, concrete, ceramic and mixed lithologies. GMG	
		0.90	ES					Recovered as firm to stiff, light brown and grey mottled, stained dark grey and black, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to medium red brick and mixed lithologies. CMG	1
								0.80m : Large timber beam at 0.80m. Stained black with strong hydrocarbon odour.	
								1.50m : Frequent black bin liners and occasional cobble sized fragments of rubber matting and tubing at 1.50m. Stained black with strong hydrocarbon odour.	
								1.60m : Large concrete boulder (0.6m x 0.4m x 0.2m) at 1.60m.	
								1.80m : Frequent large cobble to boulder sized fragments of corrugated roofing at 1.80m.	
								2.00m : Occasional cobble sized fragments of rubber tyres at 2.00m.	2
								2.20m : Large timber beam (1.5m x0.2m x 0.2m) at 2.20m.	
								2.40m : Boulder sized bundle of rolled up mesh metal fencing at 2.40m.	
	▽	2.50 2.50 2.50	B B ES					*2.60m : Large boulder sized tree stump at 2.60m.*	
								2.70m : Groundwater seepage at 2.70m.	3
									4
					4.50	81.21		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP205
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387721.78 N400404.37
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 5.20m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 85.90m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.40	85.50		Recovered as 75% dark grey to dark brown, slightly gravelly, sandy CLAY; 10% cobble sized fragments of red brick, 10% cobble sized fragments of wood, and 5% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. CMG	
	▽				0.90	85.00		Recovered as 70% dark grey to dark brown, very gravelly, very clayey SAND / ASH; 10% cobbles sized fragments of red brick, 10% cobble sized fragments of plastic sheeting, 5% cobble sized fragments of tiles, and 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick, porcelain, concrete, and mixed natural lithologies. GMG	
								Recovered as 65% dark grey, mottled red and cream, very gravelly, very clayey SAND / ASH; 20% cobble sized fragments of red brick, 10% cobble sized fragments of timber, 5% cobble sized fragments of metal sheeting and bundles of wire. Gravel is subangular to subrounded of fine to coarse red brick, timber, plastic and mixed lithologies. GMG	1
									2
					3.00	82.90		Recovered as 65% grey, reddish brown and black, very gravelly, very clayey SAND / ASH with frequent bands of yellowish brown fine to medium sand; 10% cobble sized fragments of red brick, 10% boulders sized bundles of wire, 5% cobble sized fragments of wood, 5% rubber tubing, and 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick, metal and mixed lithologies. GMG	3
		4.90	ES						4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP205
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 05/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387721.78 N400404.37
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 5.20m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 85.90m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					5.20	80.70		Recovered as 65% grey, reddish brown and black, very gravelly, very clayey SAND / ASH with frequent bands of yellowish brown fine to medium sand; 10% cobble sized fragments of red brick, 10% boulders sized bundles of wire, 5% cobble sized fragments of wood, 5% rubber tubing, and 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick, metal and mixed lithologies. GMG	6
								Base of Excavation at 5.20m	7
									8
									9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP206
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022	
Location: Newton Heath	Contractor: TPH	Co-ords: E387770.94 N400232.92	
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m	Final Depth: 2.00m
Logged By: JC	Checked By: JC	Approved By: MP	Level: 82.26m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					0.10	82.16		Recovered as dark grey, gravelly, very clayey SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
								Recovered as 60% dark grey to reddish brown, very gravelly, slightly clayey, fine to medium SAND; 20% cobble sized red brick fragments; 5% plastic bags / sheeting; 5% glass bottles; 5% cobble sized fabric fragments; 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to coarse red brick, timber, ceramic, slate, glass and mixed lithologies. HW *0.50m : Plastic bag full of cobble sized fragments of glass fibre insulation matting at 0.50m.* *0.60m : Plastic standpipe (50mm diameter) at 0.60m.* *0.70m : Bag of ammonium nitrate fertilizer, a single paint can and occasional cobble sized crumpled metal fragments at 0.70m.*	
		1.00 1.00 1.00	B B ES						1
								1.20m : Large concrete boulder (0.8m x 0.4m x 0.2m) at 1.20m. *1.30m : A single par of rubber boots and occasional boulder sized bundles of fabric threads at 1.30m.* *1.40m : Broken ceramic sink at 1.40m.*	
					1.50	80.76		Firm, light brown and grey mottled, stained black, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed natural lithologies. Hydrocarbon odour. RNG	
					1.70	80.56		Soft to firm, light brown and grey mottled, slightly sandy CLAY. CGT	
					2.00	80.26		Base of Excavation at 2.00m	2
									3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP207
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387705.61 N400304.19
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m / m — Final Depth: 3.70m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 85.33m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.15	85.18		Recovered as soft, dark brown, slightly gravelly, sandy CLAY with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF
								Recovered as 75% dark grey, gravelly, very clayey SAND; 15% cobble sized fragments of red brick; and 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, slate, concrete and mixed lithologies. DW
					1.50	83.83		Recovered as 50% greyish brown to light brown, gravelly, very clayey, fine to medium SAND; 20% cobble sized fragments of timber; 10% cobble sized fragments of red brick; 10% cobble sized fragments of fabric; and 10% plastic bags / sheeting. Gravel is angular to subrounded of fine to coarse red brick, ceramic, timber, plastic, glass and mixed lithologies. HW
		3.00 3.00 3.00	B B ES		3.00	82.33		Recovered as 50% greyish brown to light brown, very sandy, very clayey GRAVEL; 20% cobble sized fragments of timber; 10% cobble sized fragments of red brick; 10% cobble sized fragments of fabric; and 10% plastic bags / sheeting. Gravel is angular to subrounded of fine to coarse red brick, ceramic, timber, plastic, glass and mixed lithologies. HW *3.20m : Occasional cobble to boulder sized bundles of rope / thread and carpet fragments at 3.20m.* *3.50m : A single shopping basket, occasional light bulbs and occasional cobble sized polystyrene fragments at 3.50m.* *3.60m : Frequent cobble to boulder sized rusted metal fragments at 3.60m.*
					3.70	81.63		Base of Excavation at 3.70m

Scale: 1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP208
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387737.84 N400297.69
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m m / Final Depth: 3.00m

Logged By	Checked By	Approved By	Level	Orientation
JC	JC	MP	88.57m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	88.47		Recovered as dark greyish brown, gravelly, clayey SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
								Recovered as 85% dark brownish grey, very gravelly, very clayey SAND; and 15% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramic, concrete and mixed lithologies. GMG *0.40m : Two large concrete boulders (0.3m x 0.2m x 0.2m) at 0.40m* *0.50m : Frequent fabric strips at 0.50m.* *1.50m : Frequent boulder sized fragments of concrete at 1.50m. Possible large concrete obstruction.*	1
					1.60	86.97		Recovered as 50% light brown, becoming dark greyish brown, very sandy GRAVEL; 10% plastic bag / sheeting, 10% cobble sized fragments of fabric; 10% cobble sized fragments of red brick; 10% cobble sized fragments of concrete; 10% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick, timber, slate, concrete and mixed lithologies. Acrid / putrid odour. HW *1.60m : Large concrete boulder (0.6m x 0.1m x 0.1m) with metal stanchion (1.5m x 0.1m x0.1m) at 1.60m.* *1.70m : HDPE plastic piping (70mm diameter) at 1.70m.* *2.50m : Occasional cobble to boulder sized metal fragments at 2.50m.* *2.70m : Frequent timber beams / laths at 2.70m.*	2
					3.00	85.57		Base of Excavation at 3.00m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Multiple collapses from 2.50m.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP209
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387723.34 N400270.60
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.20m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 85.99m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as soft, dark brown, slightly sandy, slightly gravelly CLAY with frequent roots and rootlets. Gravel is subangular to subrounded of fine to coarse mixed lithologies and red brick. TF	
					0.40	85.59			
								Recovered as 80% soft, dark brown, slightly sandy, gravelly CLAY with occasional roots and rootlets; and 20% cobble sized fragments of red brick, concrete and plastic bags. Gravel is angular to rounded of fine to coarse red brick and mixed lithologies. CMG	
					0.80	85.19			
								Recovered as firm to stiff, light grey, mottled light brown, slightly sandy CLAY. Sand is fine. RNG	1
					1.40	84.59			
								Recovered as 60% dark brown to light brown, very gravelly SAND; 40% cobble sized fragments of red brick, concrete, wood, metal pipe, metal sheeting, and plastic bags. Gravel is angular to subangular of fine to coarse red brick, glass, concrete, paper, polystyrene, wood and plastic DW *1.80m : Rubber tubing (5m in length) at 1.80m.*	2
								2.30m : Rubber coated cables (5mm x 2mm) with abundant plastic bags at 2.30m.	
		2.50	ES						3
	▽				3.80	82.19		Recovered as COBBLES of red brick with frequent plastic bags, glass bottles, wooden board and cobble sized metal fragments DW	4
					4.20	81.79		Base of Excavation at 4.20m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP210
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387720.85 N400221.58
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m / Final Depth: 4.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 82.50m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.90	ES					Recovered as 35% cobble sized fragments of red brick, 20% dark greyish brown, gravelly SAND; 15% glass bottles; 10% boulder sized fragments of red brick and concrete; 5% plastic bag and wrappers; 5% plastic tubs and bottles; 5% cobble to boulder sized fragments of decomposed timbers; 5% blue plastic bags filled with rubble. Gravel is subangular of fine to coarse brick and concrete. HW	1
					1.75	80.75			
		2.10	ES					Recovered as firm to stiff, dark brown, greyish brown and orange mottled, slightly sandy, gravelly CLAY with occasional cobbles of subangular brick. Gravel is subangular of brick. Sand is fine. RNG	2
	▽								3
					4.30	78.20		Base of Excavation at 4.30m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP211
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/05/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387760.64 N400273.54
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 4.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 88.14m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 40% brown, gravelly SAND; 40% cobble to boulder sized fragments of red brick, brick walls, concrete slabs; and 20% plastic wrappers, plastic and rubble bags. Gravel is subangular of fine to coarse brick, concrete and sandstone. DW	1
					1.60	86.54		Recovered as soft, dark grey, slightly sandy, gravelly CLAY. Gravel is subangular of fine to coarse brick, suspected slag and suspected clinker. Putrid and metallic odours. CMG	2
		1.80 1.80 1.80 – 2.20	B ES B						3
					3.80	84.34		Recovered as brown, silty, very clayey fine to medium SAND with decomposed plant remains. GGT	4
					4.10	84.04		Recovered as very stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular of fine to coarse mixed natural lithologies. Sand is fine to medium. CGT	
					4.30	83.84		Base of Excavation at 4.30m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP212
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387504.45 N400172.98
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 4.50m

Logged By	Checked By	Approved By	Level	Orientation
MS	JC	MP	81.87m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	81.67		Recovered as 85% soft, dark grey to brown, sandy, gravelly CLAY; 10% cobble sized fragments of red brick; 5% cobble sized fragments of wood and timber. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. TF	
		1.50	ES					Recovered as 65% dark grey to brown, very gravelly, very clayey SAND / ASH with occasional cobble to boulder sized lenses of red, coarse sand; 10% cobble sized fragments of red brick; 5% cobble sized fragments of metal pipe and metal frames; 5% cobble sized fragments of timber; 5% cobble sized fragments of concrete; 5% cobbles sized fragments of plastic tubing, piping, bags, sheets and toys; 5% cobble sized fragments of tiles. Gravel is subangular to subrounded of fine to coarse suspected slag, suspected clinker, red brick, timber, glass and mixed lithologies. HW	1
	▽				2.10	79.77		Recovered as 70% dark grey to brown, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of plastic bin bags and sheeting; 5% cobble sized fragments of red brick; 5% cobble sized fragments of tile and ceramics; 5% boulder sized fragments of timber; and 5% boulder sized concrete fragments. Gravel is subangular to subrounded of fine to coarse suspected slag, suspected clinker, red brick, timber, glass and mixed lithologies. GMG	2
		3.00	B						3
					3.30	78.57		Recovered as firm, orange to greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. CGT	4
					4.50	77.37		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Minor spalling from 1.80m.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP213
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 27/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387538.20 N400164.15
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 4.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 81.70m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	81.40		Recovered as 85% soft, dark grey to brown, sandy, gravelly CLAY; 10% cobble sized fragments of red brick; and 5% cobble sized fragments of wood and timber. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. TF	
		0.60	ES					Recovered as 65% dark grey to orange, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick; 5% plastic bags, pipes, toys and drums; 5% cobble sized bundles of fabric; 5% glass bottles; 5% cobble sized bundles of wires and cables; 5% cobble to boulder sized glass reinforced plastic sheeting. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. HW	
		1.00 1.00	B B		1.00	80.70		Recovered as 60% dark grey to orange, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% plastic bags, sheeting and containers; 5% boulder sized fragments of concrete and red brick; 5% cobble sized fragments of timber; and 5% glass bottles. Gravel is angular to subrounded of fine to coarse of suspected slag, suspected clinker, red brick and mixed lithologies. GMG	1 2
					2.30	79.40		Recovered as 55% dark grey to orange, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% cobble sized fragments of ceramic and tiles; 5% cobble sized fragments of wooden board and timber; 5% plastic tape; 5% cobble sized fragments of polystyrene; 5% rolls of carpet (up to 3.00m x 0.40m x 0.05m). Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. HW	3
					3.80	77.90		Recovered as firm, orange to greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	4
					4.50	77.20		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Minor spalling from 1.00m.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP214
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387518.99 N400199.51
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 3.80m

Logged By	Checked By	Approved By	Level	Orientation
MS	JC	MP	82.01m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	81.81		Recovered as 85% soft, dark grey to brown, sandy, gravelly CLAY; 10% cobble sized fragments of red brick; 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. TF	
								Recovered as 60% reddish brown, very gravelly, very clayey SAND; 15% cobble sized fragments of red brick; 5% plastic bags and containers; 5% boulder sized fragments of concrete; 5% cobble sized fragments timber; 5% cobble sized fragments of metal pipe and sheeting; 5% cobble sized bundles of fabric. Gravel is angular to subrounded of fine to coarse of red brick, suspected slag, suspected clinker, glass, metal, fabric and mixed lithologies. HW	1
	▽	2.00 2.00 2.00	B B ES						2
					2.40	79.61		Recovered as 50% reddish brown, very gravelly, very clayey SAND; 15% cobble sized fragments of red brick; 10% cobble sized fragments of metal sheeting, pipes and bundles of wire; 10% cobble sized bundles of plastic wire, cables, containers and bags; 10% cobble sized bundles of carpet and fabric; 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick, suspected slag, suspected clinker, glass, metal, fabric and mixed lithologies. HW	3
					3.80	78.21		Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Spalling from 2.00m.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP215
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 01/04/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387497.54 N400213.62
Project No. : LD10385	Excavator: 14t tracked exavator	Dimensions : m x m — Final Depth: 3.70m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 82.25m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	81.95		Recovered as 80% dark brown to dark grey, slightly sandy, slightly gravelly CLAY; 10% cobble sized fragments of red brick, 5% cobble sized fragments of timber; and 5% cobble to boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. TF	
		1.00	ES					Recovered as 50% dark grey, very sandy / ashy, very clayey GRAVEL; 15% cobble sized fragments of timber; 10% plastic bags and rope, 10% cobble sized bundles of fabric; 10% cobble to boulder sized fragments of metal; and 5% cobble sized fragments of breeze blocks. Gravel is angular to rounded of fine to coarse red brick, plastic, timber and mixed lithologies. HW *1.20m : Frequent cobble sized fragments of tarmac in the excavation wall at 1.20m.*	1
	▽				1.50	80.75		Recovered as 40% dark grey, very sandy / ashy, very clayey GRAVEL; 20% cobble sized fragments of timber; 15% plastic bags, rope and netting; 10% cobble sized fragments of red brick; 5% cobble sized fragments of metal (exhausts); and 5% glass bottles; 5% boulder sized fragments of timber beams. Gravel is angular to rounded of fine to coarse red brick, plastic, timber and mixed lithologies. HW	2
		2.50	ES						3
					3.70	78.55		Base of Excavation at 3.70m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Significant collapses below 2.00m.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP216
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387473.94 N400233.01
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.00m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 82.13m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.60	ES		0.80	81.33		Recovered as 65% dark grey, mottled brown, orange and cream, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% cobble sized fragments of wooden chip board; and 10% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. CW	
					1.70	80.43		Recovered as 55% dark grey, mottled brown, orange and cream, very gravelly, very clayey SAND / ASH; 15% plastic bags and containers; 10% cobble sized fragments of red brick; 5% cobble sized fragments of metal; 5% cobble sized fragments of timber; 5% cobble sized bundles of cable; 5% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. CW	1
	▽				2.10	80.03		Recovered as 50% dark grey, mottled brown, orange and cream, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% plastic bags and containers; 10% cobble sized fragments of timber; 10% cobble sized fragments of concrete; 5% cobble sized bundles of metal wire. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. CW	2
					4.00	78.13		Recovered as 45% dark grey, mottled brown, orange and cream, very gravelly, very clayey SAND / ASH; 20% cobble sized fragments of ceramic; 15% cobble sized fragments of red brick; 10% cobble sized fragments of timber; 5% plastic bags and containers; 5% cobble sized fragments of polystyrene. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. Putrid odour. CW Base of Excavation at 4.00m	3 4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Major spalling below 0.80m bgl.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP218
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387471.78 N400322.20
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 3.30m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 82.66m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 0.70	ES		0.20	82.46		Recovered as soft, dark brown, gravelly, very silty, very clayey, fine to medium SAND with frequent roots and rootlets. Gravel is angular to subrounded of fine to coarse red brick, concrete and plastic. TF	
					0.70	81.96		Recovered as 50% damp, dark greyish brown, sandy, slightly clayey GRAVEL with frequent roots and rootlets; 30% cobble sized fragments of red brick; 10% boulder sized fragments of concrete; 5% plastic bags, sheeting, wrappers; and 5% cobble sized fragments of metal. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, ceramic, plastic and fabric. GMG	
					1.10	81.56		Recovered as 60% damp, dark grey, mottled white, very sandy / ashy, slightly clayey GRAVEL; 30% cobble sized fragments of red brick; 5% boulder sized fragments of concrete; and 5% cobble sized bundles of fibrous thread. Gravel is angular to subrounded of fine to coarse suspected clinker, red brick, ceramics and mixed lithologies. CW	1
					1.40	81.26		Recovered as 70% reddish brown, very gravelly, slightly clayey, fine to medium SAND / ASH; and 30% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse suspected clinker, suspected slag, red brick and mixed lithologies. CW	
		1.60 – 1.90	ES					Damp orangish brown and light grey, medium SAND with rare angular, fine gravel of red brick and ceramics. GMG	2
					3.10	79.56		Recovered as dark reddish brown, gravelly, medium to coarse SAND with occasional cobble to boulder sized inclusions of stiff, brown, slightly sandy, slightly gravelly clay. Gravel within sand is angular of fine mixed lithologies. Gravel within clay is angular to subrounded of fine to coarse mixed natural lithologies. RNG	3
					3.30	79.36		Base of Excavation at 3.30m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Multiple collapses from 2.40m.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP219
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 25/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387432.59 N400274.11
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 1.50m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 80.76m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.30	80.46		Recovered as 70% soft, dark brown, slightly gravelly, sandy CLAY; 20% roots and rootlets; and 10% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, concrete, glass, ceramics and mixed lithologies. TF
		0.50	ES		0.50	80.26		Recovered as 50% brown to reddish brown, very sandy GRAVEL; 20% cobble sized fragments of red brick; 15% cobble to boulder sized fragments of concrete; 5% cobble sized fragments of polystyrene; 5% cobble sized metal fragments; and 5% cobble sized timber fragments. Gravel is angular to subrounded of fine to coarse red brick, concrete, suspected clinker, ceramic and mixed lithologies. DW *0.40m : Large brick boulder (1.1m x 1.0m x 0.6m) in the northern section of the excavation at 0.50m. Possible part of a brick wall.*
		1.20 1.20	B B		1.00	79.76		Recovered as grey COBBLE and BOULDER sized fragments of concrete with rebar. Possible concrete obstruction. DW *0.50m : Occasional plastic wrappers and bulk bags at 0.50m. Plastic wrappers dated 1983.* *0.70m : Occasional glass bottles, plastic bottles and cobble sized timber fragments at 0.70m.* *0.80m : Frequent plastic bags / sheeting and a single plastic drum at 0.80m.*
					1.50	79.26		Recovered as 80% brown, very sandy GRAVEL; 10% cobble sized fragments of red brick; 5% cobble sized fragments of timber; and 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick, timber, concrete, suspected clinker and mixed lithologies. GMG
								Base of Excavation at 1.50m

Scale: 1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP217
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387421.98 N400238.06
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 4.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 79.94m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	79.74		Recovered as black, gravelly, very clayey SAND / ASH with occasional rootlets. Gravel is angular to rounded of fine to medium suspected slag, suspected slag and mixed lithologies. TF	
								Recovered as 75% dark grey to black, very sandy / ashy GRAVEL; 10% gravel to cobble sized inclusions of soft, white clay; 5% cobble to boulder sized suspected slag fragments; 5% cobble sized fragments of slate; and 5% cobble sized fragments of timber. Gravel is angular to rounded of fine to coarse suspected slag, suspected clinker, ceramic, red brick and mixed lithologies. CW	1
		1.60 1.60	B ES						
	▽				1.80	78.14		Recovered as 55% dark grey, mottled orangish brown, very sandy / ashy, very clayey GRAVEL; 15% plastic bags; 10% cobble sized fragments of red brick; 5% cobble sized fragments of metal; 5% cobble sized fragments of timber; 5% cobble sized bundles of metal cable; and 5% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse of suspected slag, suspected clinker, red brick and mixed lithologies. CW	2
									3
					3.20	76.74		Recovered as 0% dark grey, mottled orangish brown, very sandy / ashy, very clayey GRAVEL; 20% cobble sized fragments of ceramic; 10% cobble sized fragments of red brick; 10% cobble sized bundles of metal wire; 5% cobble sized fragments of fabric; and 5% cobble sized fragments of polystyrene. Gravel is angular to subrounded of fine to coarse of suspected slag, suspected clinker, red brick and mixed lithologies. CW	
		4.00	ES						4
					4.50	75.44		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP220
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387535.39 N400246.45
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.50m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 83.16m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	82.96		Recovered as 70% soft, grey to light brown, sandy, gravelly CLAY; 15% cobble sized fragments of red brick; 15% cobble sized fragments of wood. Gravel is subangular to subrounded of fine to coarse red brick, timber, plastic and mixed lithologies. TF	
		2.00 2.00 2.00	B B ES					Recovered as 60% dark grey, reddish brown and orange mottled, very gravelly, very clayey SAND; 15% cobble sized fragments of red brick; 10% plastic bags, pipe fragments and containers; 5% cobble sized fragments of timber; 5% glass bottles; 5% cobble sized fragments of polystyrene. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. GMG	1 2
	▽				3.10	80.06		Recovered as 60% dark grey, reddish brown and orange mottled, very gravelly, very clayey SAND; 10% cobble sized fragments of red brick; 10% cobble sized fragments of timber; 10% plastic bags and containers; 5% glass bottles; 5% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. GMG	3 4
					4.50	78.66		Base of Excavation at 4.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP221
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 02/04/2022 - 22/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387562.01 N400210.48
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.80m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 82.94m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 50% grey to reddish brown, very gravelly, very clayey SAND; 20% cobble sized fragments of red brick; 10% boulder to cobble sized fragments of concrete (up to 2.00m x 0.25m x 0.25m); 5% cobble sized fragments of timber; 5% plastic bags and pipe fragments; 5% cobble sized bundles of fabric and carpet; and 5% car tyres. Gravel is angular to rounded of fine to coarse red brick, plastic, timber and mixed lithologies. HW *0.50m : A single plastic pipe at 0.50m.*	
		1.00	B					*1.05m : Frequent timber beams / laths within the western face of the excavation at 1.05m.*	1
		1.50	ES						
					2.00	80.94		Recovered as 45% grey to reddish brown, very gravelly, very clayey SAND; 20% cobble sized fragments of red brick; 20% cobble sized fragments of timber; and 15% plastic bags and containers. Gravel is angular to rounded of fine to coarse red brick, plastic, timber and mixed lithologies. GMG	2
	▽				3.00	79.94		Recovered as 45% grey to dark grey, sandy, gravelly CLAY with occasional lenses of reddish brown sand; 20% cobble sized fragments of red brick; 15% cobble sized fragments of metal piping; 10% cobble sized fragments of black plastic sheeting; 5% cobble sized fragments of timber; 5% cobble sized bundles of fabric. Gravel is subangular to subrounded of fine to coarse red brick, suspected slag, suspected clinker and mixed lithologies. Slight hydrocarbon odour. HW	3
					4.80	78.14		Base of Excavation at 4.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP222
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387840.90 N400346.98
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m × m — Final Depth: 3.25m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 91.27m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.10	ES					Recovered as 50% cobble sized fragments of red house bricks; 50% reddish brown, gravelly, very clayey SAND. Gravel is subangular of fine to coarse red brick and concrete. DW	
					1.30	89.97		Recovered as soft, dark grey, slightly sandy CLAY with occasional decomposed plant remains. Organic odour. RNG	
		2.00	ES		2.00	89.27		*1.90m : Brick structure at eastern edge of pit at 1.90m. Contained water; stopped draining shortly after breaking.* Recovered as stiff, grey, greyish brown and yellowish brown mottled, slightly sandy CLAY. CGT	
					3.25	88.02		Base of Excavation at 3.25m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP223
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387826.82 N400371.89
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 4.40m

Logged By	Checked By	Approved By	Level	Orientation
LT	JC	MP	85.64m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 90% firm, brown, slightly sandy, slightly gravelly CLAY; and 10% cobble sized fragments of red brick. Gravel is angular of fine to coarse red brick. TF	
					0.40	85.24		Recovered as 60% cobble sized fragments of red brick; 20% boulder sized fragments of sandstone; and 20% reddish brown, sandy, angular to subangular fine to coarse GRAVEL of red brick and concrete. DW *0.40m : Large railway sleeper (1.50m in length) at 0.40m.*	
		1.00	ES		0.80	84.84		Recovered as soft to firm, dark grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to coarse red brick, glass and concrete. Slight creosote odour. CMG	1
		2.10 2.20 2.20 – 2.50	ES B B		1.90	83.74		Recovered as soft to firm, dark grey, slightly sandy CLAY with occasional decomposed plant remains. Slight organic odour. RNG	2 3
					3.30	82.34		Recovered as firm to stiff, greyish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded of fine to coarse mixed lithologies. Sand is fine to medium. CGT	4
					4.40	81.24		Base of Excavation at 4.40m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP224
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 31/03/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387755.30 N400390.66
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 3.20m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 86.36m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	86.16		Recovered as 80% soft, dark brownish grey, slightly sandy, gravelly CLAY with frequent roots and rootlets; 15% cobble sized fragments of red brick and concrete; 5% cobble sized fragments of plastic sheeting. Gravel is angular to subangular of fine to coarse mixed lithologies. TF	
					0.50	85.86		Recovered as 50% dark greyish brown, very sandy GRAVEL; 20% boulder sized inclusions of soft to firm, brown and grey mottled, slightly sandy, slightly gravelly CLAY; 20% cobble sized fragments of red brick; 10% rolls and fragments of carpet. Gravel is angular of fine to coarse red brick, concrete ceramic and mixed lithologies. GMG	
		0.80 – 1.00	ES						
					1.20	85.16		Recovered as 65% dark grey to brown, very sandy GRAVEL; 25% cobble sized fragments of red brick; 5% cobble sized fragments of plastic and fabrics; and 5% cobble sized fragments of timber. Gravel is subangular to rounded of fine to coarse suspected slag, red brick, glass, suspected clinker, and mixed lithologies. GMG	1
								0.50m : Large concrete block (0.8m x 1.0m x 0.2m) at 0.50m.	
		1.40	ES					Recovered as 40% dark grey to brown, very sandy / ashy GRAVEL; 20% cobble sized fragments of red brick; 10% cobble sized fragments of concrete; 10% large timber beams; 10% pieces of rope, 5% plastic sheeting; and 5% cobble sized fragments of ceramic. Gravel is angular to surrounded of fine to coarse suspected slag, suspected clinker, red brick, plastic, timber and mixed lithologies. CW	
					1.90	84.46		*1.60m : Roll of carpet (1.50m x 0.25m) at 1.60m.*	2
	▽				2.40	83.96		Recovered as 50% dark grey to brown, very gravelly, very clayey SAND; 15% cobble sized fragments of red brick; 10% timber laths (0.40m x 0.05m x 0.05m); 10% plastic bags (dated 1982) and tape; 10% boulder sized fragments of glass reinforced plastic; 5% cobble sized fragments of metal. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, plastic, metal, timber, glass and mixed lithologies. DW	
		2.50	ES					*2.00m : 300mm diameter paint tin and pram at 2.00m.*	
								Recovered as 30% cobble to boulder sized fragments of timber; 15% very soft, dark grey, gravelly CLAY; 10% cobble sized fragments of fibreglass sheeting; 10% cobbles and boulder sized fragments of concrete; 15% cobble sized fragments of red brick; 10% metal bars and bundles of wiring; 5% cobble to boulder sized fragments of foam; 5% plastic bags and sheeting. Gravel is angular to subrounded of fine to coarse red brick, timber, concrete and mixed lithologies. DW	3
					3.20	83.16		Base of Excavation at 3.20m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable. Large collapse at 2.00m.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP225
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387884.38 N400403.29
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 0.60m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 86.21m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.60	85.61		Recovered as 70% reddish brown, sandy GRAVEL; 20% boulder sized fragments of concrete and sandstone; and 10% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, concrete, macadam and sandstone. GMG	
								Base of Excavation at 0.60m	1, 2, 3, 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP226
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387763.94 N400291.40
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m / m — Final Depth: 4.10m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 94.07m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	93.97		Recovered as soft, greyish brown, slightly gravelly, sandy CLAY with frequent rootlets. Gravel is angular to subrounded of fine to coarse red brick, ceramic, glass and mixed lithologies. TF	
								Recovered as 75% dark greyish brown, very sandy, very clayey GRAVEL; 15% cobble sized fragments of red brick; and 10% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, glass, ceramic, concrete and mixed lithologies. GMG	1
		1.50 1.50 1.50	B B ES						
					1.70	92.37		Recovered as 40% dark greyish brown, very sandy, clayey GRAVEL; 30% cobble sized fragments of slate; 10% plastic bags / sheeting; 10% cobble sized fragments of timber; 5% cobble sized fragments of red brick; and 5% boulder sized fragments of concrete. Gravel is angular to subangular of fine to coarse slate, red brick, glass and mixed lithologies. DW	2
								2.50m : Bag of cement at 2.50m.	
					2.60	91.47		Recovered as 90% firm to stiff, greyish brown and dark brown, slightly sandy, slightly gravelly CLAY; and 10% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick and mixed lithologies. CMG	3
								3.00m : Plastic wrapper of planters peanuts at 4.00m.	
		4.00 4.00	B ES						4
					4.10	89.97		Base of Excavation at 4.10m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP227
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387641.77 N400202.84
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.10m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 82.48m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	82.33		Recovered as 80% dark grey, angular to subangular fine to coarse GRAVEL of brick, concrete and sandstone; 20% cobble sized fragments of house bricks and sandstone. GMG	
					0.90	81.58		Recovered as firm, brown and greyish brown, slightly gravelly, slightly sandy CLAY. Gravel is subangular of fine to medium red brick, slate, mudstone, coal, sandstone and mixed lithologies. CMG	
		1.10	ES					Recovered as 70% dark grey, sandy, stained orangish brown GRAVEL; 20% cobble sized fragments of mudstone and sandstone; 10% roots and rootlets. Gravel is angular to subangular of fine to coarse coal, mudstone, siltstone and sandstone. CS	1
		1.50 – 2.00	B					*1.20m - 4.10m : Rare cobbles of mudstone and siltstone.*	
								2.30m - 4.10m : Sides unstable, frequent collapses.	2
		2.50	B						3
					4.10	78.38		Base of Excavation at 4.10m	4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable from 2.3m bgl	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP228
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 22/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387578.29 N400238.36
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.00m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 83.18m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	82.88		Recovered as 80% dark grey, mottled black GRAVEL; and 20% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, sandstone and suspected slag. GMG	
								Recovered as 65% dark grey to reddish brown, very gravelly SAND; 20% cobble sized fragments of red brick, 5% cobble sized fragments of glass; 5% plastic sheeting; and 5% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, ceramic, glass and timber GMG	1
		2.00	ES		2.00	81.18		Recovered as 60% dark brown to grey, very sandy / ashy, very clayey GRAVEL; 20% cobble sized fragments of timber; 10% cobble sized fragments of red brick; 5% plastic bags / sheeting; and 5% cobble sized fragments of metal. Gravel is angular of fine to coarse red brick, plastic, metal and mixed lithologies. GMG	2
	▽	3.00	B					*3.10m : Groundwater seepage at 310m.*	3
					4.00	79.18		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP229
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 31/03/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387624.44 N400235.12
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : ___ m × ___ m; Final Depth: 3.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 83.31m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	83.11		Recovered as 80% soft, dark brown and grey, slightly sandy, gravelly CLAY with frequent roots and rootlets; 10% cobble sized fragments of red brick; 10% cobble sized fragments of wood. Gravel is angular to surrounded of fine to coarse, red brick, timber and mixed lithologies. TF	
					0.35	82.96		Recovered as 80% brown to orangish brown, very sandy, very clayey GRAVEL; 20% cobble sized fragments of red brick and concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, timber and mixed lithologies. GMG	
		0.70	ES					Recovered as 60% reddish brown, very gravelly SAND; 25% cobble sized fragments of red brick; 5% cobble sized fragments of broken glass; 5% cobble sized bundles of fabric sheeting; 5% boulder sized fragments of concrete. Gravel is angular to subrounded of fine to medium of red brick, ceramic, glass, timber and concrete. DW	1
					1.40	81.91		Recovered as 65% dark grey to brown, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 10% plastic sheeting and bags; 5% cobble sized fragments of wood; 5% glass bottles and glass fragments. Gravel is angular to subrounded of fine to coarse red brick, timber, plastic, glass and mixed lithologies. DW	2
								2.10m : A single solidified bag of cement at 2.10m.	
					2.30	81.01		Recovered as 50% dark grey to brown, very gravelly, very clayey SAND / ASH; 20% cobble sized fragments of wood; 10% cobble sized fragments of red brick; 5% plastic bags and sheeting; 5% cobble sized fragments of crushed metal; 5% glass bottles; and 5% rubber and rubber tubing. Gravel is angular to subrounded of fine to coarse red brick, timber, plastic, glass and mixed lithologies. DW	3
	▽	3.00	ES					*3.30m - 3.50m : Increased timber content and occasional bundles of wire and cables between 3.30m and 3.50m.*	
					3.50	79.81		Base of Excavation at 3.50m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP230
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 15/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387226.78 N400163.98
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 3.00m

Logged By	Checked By	Approved By	Level	Orientation
JP	JC	MP	76.40m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.10	ES		0.20	76.20		Recovered as 80% soft, dark grey, slightly gravelly, sandy CLAY with frequent roots and rootlets; 20% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse of red brick, timber, suspected ACM, ceramic, glass and suspected clinker. TF	
					0.60	75.80		Recovered as 90% dark grey to reddish brown, very sandy / ashy GRAVEL; 5% cobble sized fragments of suspected slag; 5% cobble sized fragments of ceramic piping (up to 0.1m diameter). Gravel is angular to rounded, of fine to coarse suspected slag, suspected clinker, glass and mixed lithologies. CW *0.30m : Boulder of concrete at 0.30m.*	
	▽				0.90	75.50		Recovered as firm to stiff, brown, mottled light grey and orange, slightly sandy CLAY. CMG	1
		1.50	ES		1.80	74.60		Recovered as 85% dark grey, stained black, very sandy GRAVEL; 5% cobble sized fragments of red brick; 5% cobble sized fragments of suspected slag; 5% cobble sized fragments of concrete. Gravel is angular to rounded of fine to coarse suspected slag, suspected clinker, red brick, glass and mixed lithologies. CW *1.60m : Large collapse of eastern face of the excavation at 1.60m.*	
					2.50	73.90		Recovered as very soft to firm, brown, mottled red, slightly gravelly, silty CLAY. Gravel is angular of fine to coarse redbrick, slate, glass, suspected slag and suspected clinker. CMG *2.40m - 2.50m : Stained black between 2.40m and 2.50m.*	2
					3.00	73.40		Recovered as stiff, brown, mottled light grey and light brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded of fine to coarse mixed lithologies. CGT *2.50m - 3.00m : Multiple collapses between 2.50m and 3.00m.*	3
								Base of Excavation at 3.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 1.6m bgl	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP231
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387262.76 N400143.95
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 2.00m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 76.08m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	75.78		Recovered as 80% soft, dark brown and grey, slightly gravelly, sandy CLAY with frequent roots and rootlets; 10% cobble sized fragments of red brick; 5% cobble sized fragments of wood; and 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick and mixed lithologies. TF	
	▽				0.60	75.48		Recovered as 90% soft, red and brown, slightly gravelly, sandy CLAY with occasional cobble to boulder sized pockets of decomposed grass cuttings; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick and mixed lithologies; CMG	
		1.00	ES					Recovered as 90% soft, reddish brown to brown, slightly gravelly, sandy CLAY; 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick and mixed lithologies. CMG	1
					1.60	74.48		Recovered as firm, brown to light grey and yellow, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse of mixed natural lithologies. CGT	
					2.00	74.08		Base of Excavation at 2.00m	2
									3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 0.80m bgl.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP232
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387236.74 N400122.31
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m E / m — Final Depth: 3.20m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 75.26m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	74.96		Recovered as 80% soft, dark brown and grey, slightly gravelly, sandy CLAY with frequent roots and rootlets; 10% cobble sized fragments of red brick; 5% cobble sized fragments of wood; 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick and mixed lithologies. TF	1
								Recovered as 70% soft, dark brown and reddish brown, slightly gravelly, sandy CLAY; 10% cobble sized fragments of red brick; 10% cobble sized fragments of wood; 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, plastic, timber and mixed lithologies. CMG	
								0.50m : Minor spalling at 0.50m.	
					1.80	73.46		Recovered as firm, brown to light grey and yellow, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	2
					3.20	72.06		Base of Excavation at 3.20m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 0.50m bgl.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP233
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387193.93 N400166.69
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.00m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 76.48m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as dark grey to dark brown, gravelly, silty SAND with frequent roots and rootlets. Gravel is angular to rounded of red brick, suspected slag and mixed lithologies. TF	
					0.30	76.18		Recovered as 90% dark grey, sandy GRAVEL; 5% cobble sized fragments of suspected slag; 5% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick, timber and mixed lithologies. CW	
					0.90	75.58		Recovered as soft to firm, brown, mottled light grey, slightly sandy / ashy, gravelly CLAY. Gravel is angular to subrounded of fine to coarse slate, red brick, glass, suspected slag and mixed lithologies. CMG	
		1.00 – 1.70	ES		1.00	75.48		Recovered as 80% dark grey, very sandy / ashy, silty GRAVEL; 10% cobble sized fragments of slate; 5% cobble sized fragments of suspected slag; 5% cobble sized fragments of red brick. Gravel is angular to rounded of fine to coarse red brick, slate, suspected slag, suspected clinker, glass and mixed lithologies. CW	1
								1.80m : Occasional cobble sized fragments of timber at 1.80m.	2
					2.90	73.58		Recovered as soft to firm, black, silty CLAY. Slight hydrocarbon odour CMG	3
								2.90m - 3.40m : Hydrocarbon sheen noted on water.	
					3.40	73.08		Recovered as stiff, brown, mottled grey, slightly sandy CLAY. Sand is fine to medium. CGT	
					4.00	72.48		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP234
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 18/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387200.44 N400204.18
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 5.00m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 76.71m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 90% soft, dark brown, sandy / ashy, gravelly CLAY with frequent roots and rootlets; 5% cobble sized fragments of red brick; 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse timber, red brick and mixed natural lithologies. TF	
					0.40	76.31		Recovered as 80% dark grey, very sandy / ashy, very clayey GRAVEL; 10% cobble sized fragments of red brick; and 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, suspected clinker, suspected slag and mixed lithologies. CW	1
	▽				2.00	74.71		Recovered as 80% dark grey, very sandy / ashy, very clayey GRAVEL; and 20% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, suspected slag and mixed lithologies. CW *2.10m : Slight groundwater seepage at 2.10m.*	2
		3.50	ES						3
					4.00	72.71		Recovered as firm, brown, light grey and yellow mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	4
					5.00	71.71			

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Stable		

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP234
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 18/04/2022	
Location: Newton Heath	Contractor: Lomond	Co-ords: E387200.44 N400204.18	
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m	Final Depth: 5.00m
Logged By: JP	Checked By: JC	Approved By: MP	Level: 76.71m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Base of Excavation at 5.00m	6 7 8 9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP235
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 04/02/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387486.98 N400369.80
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 3.60m

Logged By	Checked By	Approved By	Level	Orientation
MS	JC	MP	82.92m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	82.77		Recovered as 80% soft, dark brown to dark grey, slightly gravelly, sandy CLAY with frequent roots and rootlets; 10% cobble sized fragments of red brick; 10% plastic bags and cables. Gravel is angular to subrounded of fine to coarse timber, plastic, red brick, concrete and mixed lithologies. TF	
								Recovered as dark grey, light brown, red and black sandy GRAVEL; 20% cobble sized fragments of red brick; 10% plastic bags, piping fragments and cables; 5% boulder sized fragments of concrete. Gravel is angular to rounded of fine to coarse red brick, ceramic and mixed lithologies. GMG	1
								1.10m : Large boulder of concrete (0.7m x 0.4m x 0.2m) at 1.10m.	
		1.40	ES		1.40	81.52		Recovered as 55% reddish brown, very gravelly, silty SAND; 10% cobble to boulder sized fragments of metal sheeting and containers (up to 0.5m x 0.5m x 0.5m); 10% cobble sized fragments of plastic; 10% cobble sized fragments of metal tins and piping; 5% cobble sized bundles of fabric; 5% cobble sized fragments of ceramic; and 5% cobble sized fragments of sandstone. Gravel is angular to subrounded of fine to coarse red brick, plastic, metal, fabric and mixed lithologies. DW	
					1.75	81.17		Recovered as soft to firm, yellow to orangish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse sandstone. Occasionally consolidated into cobble and boulder sized fragments. CGT	2
		2.20	ES						
	▽							*2.90m : Boulder sized lense of yellow to orange, fine to medium sand at 2.90m.*	
					3.00	79.92		Recovered as firm, grey, mottled yellow, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies.	3
					3.60	79.32		Base of Excavation at 3.60m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP236
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 29/03/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387455.23 N400371.83
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 3.30m
Logged By	Checked By: JC / Approved By: MP / Level: 81.80m AoD	Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.50 – 0.70	ES					Recovered as brick, metal, floor tiles, suspected asbestos cement, rock wall insulation with some plastic bags in a dark brown, very sandy, clayey GRAVEL matrix. Gravel is angular, fine to coarse of the above. DW	1
		1.50	B		1.50	80.30			
		1.50	B					Recovered as firm, brown, mottled orangish brown, sandy CLAY with occasional brown sand layers. RNG	2
		1.50 – 1.70	ES						
		2.50	B						
	▽	2.50	B						
					2.70	79.10		Stiff, brown CLAY CGT	3
					3.30	78.50		Base of Excavation at 3.30m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP237
Sheet 1 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387318.92 N400273.42
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 5.00m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 78.63m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	78.43		Recovered as 90% soft, brown to orange, slightly gravelly sandy CLAY; 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, plastic, timber and mixed lithologies. TF	
								Recovered as 60% dark grey to black, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick; 10% glass bottles; 10% cobble sized bundles of metal wire and sheeting fragments; 5% cobble sized fragments of wood; 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse suspected clinker, red brick and mixed lithologies. DW	1
								0.80m : Minor spalling at 0.80m.	
		2.00	ES						2
	▽				2.80	75.83		Recovered as 80% firm, reddish brown, slightly sandy, slightly gravelly CLAY; and 20% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, concrete and mixed lithologies. CMG	3
		4.00	ES						4
		4.50	B						
		4.50	B						
					5.00	73.63			

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable from 0.80m bgl.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP237
Sheet 2 of 2

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387318.92 N400273.42
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m / Final Depth: 5.00m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 78.63m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Base of Excavation at 5.00m	6 7 8 9

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 0.80m bgl.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP238
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022	
Location: Newton Heath	Contractor: Lomond	Co-ords: E387355.48 N400231.91	
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m	Final Depth: 4.90m
Logged By: MS	Checked By: JC	Approved By: MP	Level: 78.65m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	78.50		Recovered as 60% soft, dark brown to grey, gravelly CLAY with frequent roots and rootlets; 20% cobble sized fragments of red brick; 10% cobble sized fragments of wood; and 10% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick, plastic and wood. TF	
								Recovered as 50% dark grey, mottled reddish brown, very gravelly, very clayey, SAND / ASH; 20% cobble sized fragments of red brick; 10% plastic bags and pipes; 10% cobble sized fragments of ceramic; 5% cobble sized fragments of glass; 5% cobble sized fragments of wood. Gravel is angular to subrounded fine to coarse of red brick, ceramic, timber, plastic and mixed lithologies. CW	1
								1.50m : Occasional cobble sized inclusions of soft, white clay from 1.50m	
								2.00m - 3.50m : Lenses of red dye visible. *2.00m - 4.90m : Strong chemical and hydrocarbon odour.*	2
	▽								
									3
								3.50m - 4.00m : Lenses of reddish brown dye visible.	
		4.00	ES						4
					4.90	73.75		Base of Excavation at 4.90m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Minor spalling.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP239
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 08/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387645.36 N400387.73
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 3.80m
Logged By: JP	Checked By: JC	Approved By: MP
Level: 85.11m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.40	84.71		Recovered as 90% soft, dark brown, slightly sandy, slightly gravelly CLAY with occasional roots and rootlets; 5% cobble sized fragments of red brick; and 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick, timber and mixed lithologies. TF	
					1.00	84.11		Recovered as 50% soft, dark brown, mottled orangish grey, slightly sandy, slightly gravelly CLAY; 20% cobble sized fragments of red brick; 10% cobble sized fragments of concrete; 5% boulder sized fragments of concrete; 5% cobble sized fragments of porcelain; 5% cobble sized fragments of rubber; and 5% cobble sized fragments of metal. Gravel is angular to subangular of fine to coarse red brick, suspected slag, suspected clinker and mixed lithologies. DW	1
		1.40	ES					Recovered as 75% dark grey to black, gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick; 5% cobble sized fragments of timber; 5% plastic sheeting and tape; and 5% cobble sized fragments of metal. Gravel is subangular to subrounded of fine to coarse red brick, suspected slag, suspected clinker and mixed lithologies. CW	
					1.60	83.51		Recovered as 50% dark grey to black, gravelly, very clayey SAND / ASH; 20% boulder sized pockets of light brown sand; 15% cobble sized fragments of timber; 5% cobble sized fragments of red brick; 5% metal tubes and exhausts; and 5% plastic bags and sheeting. Gravel is subangular to subrounded of fine to coarse red brick, suspected slag, suspected clinker, glass and mixed lithologies. CW	2
		2.40	ES						3
					3.80	81.31		Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Minor spalling					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP240
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387553.70 N400146.72
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m E / m — Final Depth: 2.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 81.55m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	81.35		Recovered as 85% soft, dark grey to brown, sandy, gravelly CLAY; 10% cobble sized fragments of red brick; 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. TF	
		2.00	ES					Recovered as 45% dark grey to brown, very sandy, very clayey, GRAVEL; 15% cobble sized fragments of red brick; 10% cobble sized fragments of plastic sheeting, piping, and containers; 5% cobble sized fragments of timber; 10% boulder sized bundles of carpet; 10% boulder sized fragments of metal; 5% cobble sized fragments of glass bottles. Gravel is angular to subrounded of fine to coarse red brick, plastic, wood, glass, fabric and mixed lithologies. HW	1 2 3 4
					2.50	79.05		Base of Excavation at 2.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP241
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387571.08 N400364.93
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m x m — Final Depth: 2.70m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 84.33m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	84.23		Recovered as dark brown, gravelly, very clayey SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse red brick, concrete, ceramics and mixed lithologies. TF	
								Recovered as 50% cobble sized fragments of red brick; 40% greyish brown, very gravelly SAND; 5% plastic crisp wrappers; and 5% cobble to boulder sized crumpled metal fragments. Gravel is angular to subangular of fine to coarse red brick, ceramic and mixed lithologies. DW	
								1.00m : Decorative ceramic pot at 1.00m	1
								1.20m : Corrugated metal metal sheeting at 1.20m.	
								1.40m : Washing machine at 1.40m.	
								1.50m : Frequent plastic sheeting at 1.50m.	
					1.60	82.73		Recovered as 70% dark greyish brown, very gravelly SAND; 15% cobble sized fragments of red brick; 5% plastic sheeting; 5% cobble and boulder sized fragments of concrete; and 5% rubber tubing. Gravel is angular to subrounded of fine to coarse mixed lithologies. DW	2
					2.50	81.83		Recovered as soft to firm, dark grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse red brick, glass, ceramics and mixed lithologies. Hydrocarbon odour CMG	
					2.70	81.63		Base of Excavation at 2.70m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP242
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022	
Location: Newton Heath	Contractor: TPH	Co-ords: E387592.57 N400325.78	
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m	Final Depth: 3.20m
Logged By: JC	Checked By: JC	Approved By: MP	Level: 84.83m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	84.73		Recovered as dark brown, gravelly, very clayey, fine to medium SAND with frequent rootlets and roots (10mm diameter). Gravel is angular to subangular of fine to coarse mixed lithologies. TF	
								Recovered as 70% dark greyish brown, very gravelly, very clayey, fine to medium SAND; 15% cobble sized fragments of red brick; 10% cobble to boulder sized fragments of concrete; and 5% plastic sheeting. Gravel is angular to subrounded of fine to coarse red brick, glass, timber, ceramic and mixed lithologies. DW *0.40m : Large boulder sized pocket of smashed glass at 0.40m.*	1
								1.50m : Tarpaulin sheet and occasional crisp wrappers at 1.50m.	
								2.00m : Boulder sized fragment of crumpled metal at 2.00m. *2.10m : Plastic bag full of cassettes at 2.10m.* *2.20m : Occasional glass bottles at 2.20m.*	2
					2.30	82.53		Recovered as 80% light greyish brown, very gravelly, fine to medium SAND; 10% cobble sized fragments of red brick; 5% cobble sized fragments of concrete; and 5% cobble sized fragments of timber beams / laths. Gravel is angular to subangular of fine to coarse red brick, concrete and mixed lithologies. DW *2.40m : Excavator bucket scraping and hard digging at 2.40m.*	
		2.50 2.50 2.50	B B ES						3
					3.20	81.63		Base of Excavation at 3.20m	
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP243
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022	
Location: Newton Heath	Contractor: TPH	Co-ords: E387614.78 N400299.66	
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m	Final Depth: 2.40m
Logged By: JC	Checked By: JC	Approved By: MP	Level: 84.81m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	84.71		Recovered as dark brown, gravelly, very clayey, fine to medium SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
								Recovered as 90% dark grey to black, very gravelly, very clayey SAND; and 10% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, ceramic and mixed lithologies. GMG	1
					1.70	83.11		Recovered as firm, light brown and grey mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subangular of fine to medium red brick, ceramic, glass and mixed lithologies. CMG	
					2.00	82.81		Recovered as 90% damp, dark grey, very sandy / ashy, clayey GRAVEL; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse gravel of red brick, suspected clinker, concrete and mixed lithologies. GMG	2
					2.40	82.41		*2.00m : Excavator bucket scraping with hard digging from 2.00m.*	
								Base of Excavation at 2.40m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP244
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 01/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387576.44 N400130.02
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 2.00m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 81.29m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	81.09		Recovered as 80% soft, dark brown to dark grey, slightly sandy, gravelly CLAY with occasional roots and rootlets; 10% cobble sized fragments of red brick; 5% cobble sized fragments of wood; 5% boulder to cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, timber and mixed lithologies. TF	
		0.70 – 1.00	ES		0.70	80.59		Recovered as 70% dark brown to dark grey, very sandy, very clayey, GRAVEL; 20% cobble sized fragments of red brick; 5% cobble sized fragments of foam and fabric; 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick, timber, plastic and mixed lithologies. GMG	
	▽				1.00	80.29		Recovered as 70% brown to orangish brown, very gravelly, very clayey SAND / ASH; 10% boulder sized fragments of concrete; 10% cobble sized fragments of red brick; 5% cobble sized fragments of wood; 5% cobble sized fragments of plastic. Gravel is angular to subrounded of fine to coarse red brick, plastic, wood and mixed lithologies. GMG	1
					1.40	79.89		Recovered as 50% dark grey, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of wood and timber board; 10% plastic bags, ropes and lids; 10% cobble sized bundles of fabric; 10% cobble sized fragments of metal and bundles of wire and cable; 5% breeze blocks. Gravel is angular to subrounded of fine to coarse of brick, plastic, wood and mixed lithologies. HW	
		1.80	ES					*1.20m : Concrete slab fragment with rebar (2.0m x 1.0m x 0.25m) at 1.20m. Groundwater also encountered.*	
					2.00	79.29		Recovered as 50% dark grey to black, very sandy / ashy, clayey GRAVEL; 10% cobble sized fragments of red brick; 10% cobble sized fragments of timber; 10% plastic netting, bags, bottles; 5% boulder to cobble sized fragments of concrete; 5% metal exhaust pipes; 5% cobble sized fragments of polystyrene floating on water; 5% cobble sized fragments of glass. Gravel is angular to subrounded of fine to coarse red brick, wood, plastic, glass, polystyrene and metal. HW	2
								Base of Excavation at 2.00m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 1.00m bgl.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP245
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387478.44 N400208.66
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 4.00m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 81.29m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	81.09		Recovered as 75% dark brown, slightly gravelly, sandy CLAY; 15% cobble sized fragments of red brick; 5% cobble sized fragments of wood; 5% plastic bags. Gravel is angular to subrounded of fine to coarse of brick, suspected slag and mixed lithologies. TF	
								Recovered as 55% dark grey, very gravelly, very clayey SAND / ASH; 20% cobble sized fragments of red brick; 10% cobble sized bundles of carpet and fabric; 5% plastic bags; 5% cobble sized fragments of wood; 5% boulder sized fragments of carpet. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and wood. HW	1
					1.20	80.09		Recovered as 40% dark grey, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 15% cobble sized fragments of plastic including traffic cones, containers and bags; 10% alloy wheels and tyres; 10% cobble sized fragments of wood; 5% metal tubing; 5% cobble sized bundles of fabric and carpet. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and wood. HW	
	▽	2.00	ES					*2.00m - 3.00m : Strong hydrocarbon odour between 2.00m and 3.00m.*	2
									3
					4.00	77.29		Base of Excavation at 4.00m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP246
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387317.38 N400180.60
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 3.80m

Logged By	Checked By	Approved By	Level	Orientation
MS	JC	MP	77.24m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.30	76.94		Recovered as 80% soft, dark brown, gravelly, sandy CLAY; 10% cobble sized fragments of red brick; 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, wood and mixed lithologies TF	
	▽							Recovered as 80% dark grey to black, mottled reddish brown and orange, very sandy / ashy GRAVEL; 10% cobble sized fragments of red brick; 10% cobble sized inclusions of reworked firm, brown, gravelly clay. Gravel is angular to subangular of fine to coarse red brick, suspected slag, suspected clinker and mixed lithologies CW *0.50m - 0.60m : Layer of red bricks.*	1
	▽								
	▽	1.50	B						2
									3
					3.80	73.44		*3.70m - 3.80m : Frequent boulder sized inclusions of clay between 3.70m and 3.80m* Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Unstable from 0.90m bgl.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP247
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 19/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387290.79 N400179.07
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 3.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 77.22m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.40	76.82		Recovered as 80% soft, dark brown, slightly gravelly, sandy CLAY; 10% cobble sized fragments of red brick; 10% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, wood and mixed lithologies. TF	
								Recovered as 80% dark grey to black, cream and reddish brown, very sandy / ashy GRAVEL; 10% cobble sized inclusions of soft to firm, dark greyish brown, sandy / ashy clay; 10% cobble sized inclusions of soft to firm, brown sandy clay. Gravel is angular to subangular of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. CW	
								0.90m - 1.60m : Occasional cobble to boulder sized lenses of soft to firm, yellow and orange mottled, sandy clay and soft, white and cream mottled, sandy / ashy clay between 0.90m and 1.60m.	1
		1.60	ES						
		2.00 – 2.20	ES		2.00	75.22			2
					2.20	75.02		Recovered as dark brown to dark grey, very gravelly, very clayey SAND. Gravel is angular to subrounded of fine to coarse red brick and mixed lithologies. Slight hydrocarbon odour. GMG	
		2.50	B					Recovered as firm, brown, light grey and yellow mottled, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded of fine to coarse mixed lithologies. CGT	3
					3.50	73.72		Base of Excavation at 3.50m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP248
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 20/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387300.71 N400245.55
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 4.80m
Logged By: MS	Checked By: JC	Approved By: MP — Level: 77.88m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
								Recovered as 80% soft, brown, sandy, gravelly CLAY; 10% cobble sized fragments of ceramic; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramic and mixed lithologies. TF *0.30m - 3.60m : Occasional cobbles of orange to brown gravelly sandy clay between 0.30m and 3.60m*	
					0.50	77.38		Recovered as 60% dark grey to black, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of red brick; 10% cobble sized fragments of ceramic; 5% cobble sized fragments of timber; 5% cobbles sized fragments of mudstone; 5% cobble sized fragments of glass; and 5% cobble sized fragments of metal. Gravel is angular to subrounded of fine to coarse ceramic, suspected slag and suspected clinker. CW	1
		1.00	ES						
		1.40	B						
	▽							*2.00m - 4.80m : Spalling of sides between 2.00m and 4.80m* *2.05m - 4.80m : Hydrocarbon sheen noted on water between 2.05m and 4.80*	2
									3
					3.60	74.28		Recovered as 50% soft, dark grey to black, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of ceramic and tiles; 10% cobble sized fragments of wood; 15% cobble sized fragments of red brick; 5% cobble sized fragments of glass; and 5% cobble sized fragments of metal. Gravel is angular to subrounded of fine to coarse ceramic, suspected slag, metal and suspected clinker CW	4
		4.50	ES						
					4.80	73.08		Base of Excavation at 4.80m	

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Unstable from 2.00m bgl.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP250
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 21/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387452.70 N400140.01
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m / m — Final Depth: 3.50m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 80.14m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	79.94		Recovered as 95% dark brown to grey, slightly sandy, slightly gravelly CLAY; and 5% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. TF	
					0.90	79.24		Recovered as 70% dark grey to brown, very gravelly, very clayey SAND / ASH; 15% cobble sized fragments of red brick; 5% cobble sized fragments of wood; 5% cobble sized fragments of glass; 5% cobble sized plastic fragments. Gravel is angular to subrounded fine to coarse of suspected slag, suspected clinker, red brick, wood, glass and mixed lithologies. CW	
	▽	1.00 1.00 1.00	B B ES					Recovered as firm, orangish brown to greyish brown, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. CGT	1 2 3 4
	▽				3.50	76.64		Base of Excavation at 3.50m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP251
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 25/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387535.79 N400381.98
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 4.20m

Logged By	Checked By	Approved By	Level	Orientation
JC	JC	MP	83.75m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.20	83.55		Recovered as 80% dark brown to black, very gravelly, very clayey, fine to medium SAND; 10% rootlets; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
		0.60	ES		0.50	83.25		Recovered as 60% dark brown to black, very sandy GRAVEL; 20% cobble sized fragments of red brick; 10% cobble to boulder sized fragments of concrete; 5% cobble sized inclusions of stiff, dark brown, stained green, sandy clay; and 5% plastic bags / sheeting. Gravel is angular to subrounded of fine to coarse red brick, glass, concrete and mixed lithologies. DW	
		1.00	B		1.20	82.55		Recovered as 30% light brown to dark brown, very sandy GRAVEL; 20% cobble sized fragments of red brick; 15% cobble to boulder sized bundles of fabric / clothes; 10% cobble to boulder sized fragments of concrete; 10% plastic bags / sheeting; 10% cobble sized fragments of timber; and 5% cobble sized fragments of metal. Gravel is angular to subrounded of fine to coarse red brick, metal, nails, glass, timber and mixed lithologies. HW *0.80m : A boulder sized fragment of crumpled metal at 0.80m. Becoming very clayey from this depth.* *1.00m : Occasional breeze blocks and glass bottles at 1.00m.*	1
		2.00	ES		2.30	81.45		Recovered as 90% firm, light brown, mottled orangish brown, stained black, slightly sandy, slightly gravelly CLAY; 5% cobble sized fragments of red brick; and 5% cobble sized fragments of fabric. Gravel is angular to subrounded of fine to coarse red brick and mixed natural lithologies. Diesel odour. CMG *1.20m : Occasional rubber shoe soles, an electronic motherboard and plastic paint tin at 1.20m.*	2
		3.00	ES		3.50	80.25		Recovered as 85% firm, light brown, mottled orangish brown, stained black, slightly sandy, slightly gravelly CLAY; 5% cobble sized fragments of red brick; and 5% cobble sized fragments of ceramic; and 5% cobble sized fragments of timber. Gravel is angular to subrounded of fine to coarse red brick and mixed natural lithologies. Diesel odour. CMG *2.90m : Becoming soft and wet from 2.90m.* *3.00m : Plastic 20 gallon drum at 3.00m.* *3.20m : Boulder sized fragment of MDF board at 3.20m.* *3.30m : Slight groundwater seepage at 3.30m.*	3
	▽								
	▽								
					4.20	79.55		Recovered as 70% soft, wet, dark grey to black, slightly sandy CLAY; 20% rootlets; and 10% cobble sized timber fragments. Organic / earthy odour. TF	4
								Base of Excavation at 4.20m	

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP252
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 25/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387528.11 N400136.58
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : 6.50m x 1.00m — Final Depth: 2.80m
Logged By: JC	Checked By: JC	Approved By: MP — Level: 81.70m AoD — Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.10	ES					Recovered as 70% soft, dark brown, slightly gravelly, sandy CLAY; 10% rootlets and roots (5mm diameter); 10% cobble sized fragments of red brick; and 10% cobble to boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, ceramics and mixed lithologies.	
					0.40	81.30		TF	
								Recovered as 40% brown, very gravelly, very clayey SAND; 40% cobble sized fragments of red brick; and 20% cobble to boulder sized fragments of concrete. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, ceramics and mixed lithologies.	
					0.80	80.90		DW	
								0.70m - 1.50m : Within the extended western section of the excavation natural sand strata comes in at 0.70m.	
		1.00	B					Recovered as 45% dark brown, very gravelly, very clayey SAND; 10% cobble to boulder sized fragments of timber beams / laths; 10% cobble to boulder sized fragments of concrete; 10% cobble to boulder sized bundles of fabric; 10% cobble sized fragments of red brick; 5% plastic bottles; 5% plastic paint tins; and 5% plastic bulk bags. Gravel is angular to subrounded of fine to coarse red brick, concrete, timber, ceramic and mixed lithologies.	1
		1.30	ES					HW	
					1.50	80.20		*1.00m : Entire metal sink unit at the northern end of the excavation at 1.00m.*	
								1.30m : Occasional plastic cups at 1.30m.	
								1.40m : Bottle of co-op fabric softener at 1.40m.	
	▽	2.10	B					Light brown, stained black in places, fine to medium SAND with a little subrounded, fine gravel of mixed natural lithologies.	2
								GGT	
								1.50m : Black bin bag full of paper, plastic wrappers and kitchen roll at 1.50m.	
								2.10m : Slight seepage of groundwater at 2.10m.	
					2.40	79.30		Firm to stiff, brown, sandy CLAY with rare subrounded, fine to medium gravel of mixed natural lithologies.	
								2.70m : Becoming slightly sandy from 2.70m.	3
					2.80	78.90		Base of Excavation at 2.80m	
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Collapse of the excavation sides at 2.40m and 2.80m in natural sands.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.
Trial pit extended westwards to delineate highwall.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP253
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 04/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387540.90 N400365.03
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m m / Final Depth: 3.80m

Logged By	Checked By	Approved By	Level	Orientation
MS	JC	MP	83.92m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	83.77		Recovered as 80% dark grey to dark brown, slightly sandy, gravelly CLAY; 20% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, concrete, ceramic and mixed lithologies. TF	
								Recovered as 60% dark grey, very gravelly, very clayey SAND / ASH; 20% cobble sized fragments of red brick; 10% cobble sized fragments of metal pipe and fixings; 5% cobble sized fragments of plastic tubes, bags and sheeting; 5% cobble sized fragments of glass. Gravel is angular to subrounded of fine to coarse red brick, metal, plastic and mixed lithologies. DW	
								1.00m : Boulder sized fragment of plastic sheeting at 1.00m.	1
		1.40	ES						
					1.60	82.32		Recovered as 70% dark grey to dark brown, very gravelly, very clayey SAND / ASH; 10% cobble sized fragments of polystyrene, plastic bags and sheeting; 10% cobble sized fragments of red brick; 5% cobble sized fragments of glass; 5% cobble sized fragments of concrete. Gravel is angular to subrounded of fine to coarse suspected slag, suspected clinker, red brick and mixed lithologies. GMG	2
	▽								3
		3.80	ES		3.80	80.12		Base of Excavation at 3.80m	4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Spalling below 3.00m.	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP254
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387540.29 N400333.78
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m / m — Final Depth: 1.60m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 84.14m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	84.04		Recovered as dark greyish brown, gravelly, very clayey, fine to medium SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed lithologies. TF	
								Recovered as 40% cobble sized fragments of red brick; 40% dark greyish brown, very sandy GRAVEL; 15% plastic bags / sheeting; and 5% cobble sized fragments of fabric. Gravel is angular of fine to coarse red brick, ceramic, timber, plastic and mixed lithologies. DW	
								1.00m : 2 No. ten litre fuel cans at 1.00m.	1
								1.20m : Metal fireplace grate at 1.20m	
		1.30 1.30 1.30	B B ES					*1.30m : Ceramic milk bottle at 1.30m*	
								1.50m : 2 No. plastic laundry baskets and bundles of hose pipe at 1.50m.	
					1.60	82.54		Base of Excavation at 1.60m	2
									3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Large collapse of the excavation sides at 1.60m.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP255
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date:
Location: Newton Heath	Contractor: Lomond	Co-ords: E387497.51 N400346.46
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : m x m — Final Depth: 2.70m
Logged By: MS	Checked By: JC	Approved By: MP
Level: 83.37m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.20 – 1.00	ES		0.20	83.17		Recovered as brown to dark grey, slightly sandy, slightly gravelly CLAY with frequent roots and rootlets. Gravel is angular to subrounded of fine to coarse plastic, wood and mixed lithologies. TF	
								Recovered as 60% brown, grey, black and red mottled, very sandy GRAVEL; 20% cobble sized fragments of red brick; 10% plastic bags and fittings; 5% cobble sized bundles of fabric; 5% metal canisters and bolts. Gravel is angular to subrounded of fine to coarse red brick, concrete and mixed lithologies. DW	
					1.00	82.37		Recovered as COBBLE sized fragments of bricks and concrete. DW	1
					1.10	82.27		Recovered as yellow to grey, sandy, angular to subrounded, fine to coarse GRAVEL of concrete and mixed lithologies. GMG	
								1.50m : Minor spalling at 1.50m.	
					2.00	81.37		Recovered as dark grey to grey, very gravelly, very clayey SAND. Gravel is angular to subrounded of fine to coarse brick, concrete and mixed lithologies. GMG	2
					2.50	80.87		Recovered as brown to dark grey, slightly gravelly, sandy CLAY. Gravel is angular to subrounded of fine to coarse mudstone and sandstone. RNG	
	▽				2.70	80.67		Base of Excavation at 2.70m	3
									4

Trench Support and Comment

Pit Stability	Shoring Used	Remarks
Spalling below 1.50m.	None	

Pumping Data

Date	Rate	Remarks

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP256
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 26/04/2022
Location: Newton Heath	Contractor: Lomond	Co-ords: E387574.30 N400284.73
Project No. : LD10385	Excavator: 14t tracked JCB	Dimensions : ___ m × ___ m — Final Depth: 2.30m
Logged By: LT	Checked By: JC	Approved By: MP
Level: 84.04m AoD		Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
		0.35	ES		0.50	83.54		Recovered as 95% dark grey, very sandy / ashy GRAVEL; and 5% plastic bags. Gravel is angular to subangular of fine to coarse suspected slag, suspected clinker, concrete, coal, brick and macadam. CW	
					2.30	81.74		Recovered as soft to firm, greyish brown, dark grey, yellow and orangish brown mottled, slightly sandy CLAY. Sand is fine. RNG	1 2
								Base of Excavation at 2.30m	3 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable	None				

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP258
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387574.30 N400284.73
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m m / Final Depth: 2.80m

Logged By	Checked By	Approved By	Level	Orientation
JC	JC	MP	84.04m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	83.94		Recovered as dark brown, gravelly, very clayey, fine to medium SAND with frequent rootlets. Gravel is angular to subangular of fine to coarse mixed lithologies. TF	
					0.50	83.54		Recovered as 90% dark brown, very sandy, clayey GRAVEL; and 10% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, concrete and timber. CMG	
					1.40	82.64		Recovered as 85% light orangish brown, very gravelly, medium to coarse SAND; and 15% cobble sized fragments of red brick, ceramic and mixed lithologies. GMG	1
		2.50 2.50 2.50	B B ES		2.80	81.24		Recovered as 80% dark greyish brown, very sandy, very clayey GRAVEL; 10% cobble sized fragments of red brick; and 10% cobble to boulder sized concrete fragments. Gravel is angular to subangular of fine to coarse red brick, concrete, timber and mixed lithologies. Acrid / hydrocarbon odour. GMG *1.60m : Rubber matting at 1.60m .* *1.70m : Occasional cobble sized timber laths at 1.70m.* *2.30m : Plastic sheeting and metal wiring at 2.30m. Stained black with acrid / hydrocarbon odour.* *2.60m : Strong acrid / hydrocarbon odour at 2.60m.* *2.70m : Large boulder sized fragment of slate at 2.70m.*	2
								Base of Excavation at 2.80m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Large collapse of excavation sides at 2.80m.					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP259
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387819.00 N400403.00
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m x m / Final Depth: 3.00m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 85.60m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	85.50		Recovered as soft to firm, dark brown, slightly sandy, slightly gravelly CLAY with frequent rootlets. Gravel is angular to subrounded of fine to coarse mixed natural lithologies. TF	
					0.70	84.90		Recovered as 70% light brown, very sandy GRAVEL; and 30% cobble sized fragments of red brick. Gravel is angular to subangular of fine to coarse red brick, ceramic and mixed lithologies. DW	
		2.80 2.80	B B		3.00	82.60		Recovered as 80% reddish brown, very gravelly, fine SAND / ASH; 10% cobble sized fragments of red brick; and 10% cobble to boulder sized inclusions of soft to firm, brown, sandy clay. Gravel is angular to subrounded of fine to medium suspected slag, suspected clinker and red brick. CW Base of Excavation at 3.00m	1 2 3 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP260
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387777.00 N400392.00
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m m / Final Depth: 2.50m

Logged By	Checked By	Approved By	Level	Orientation
JC	JC	MP	86.10m AoD	°

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.15	85.95		Recovered as 90% dark brown, gravelly, very clayey SAND with frequent rootlets; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to medium red brick, ceramic, glass and mixed lithologies. TF	
								Recovered as 80% dark grey, very sandy, clayey GRAVEL; and 20% cobble to boulder sized fragments of mudstone and sandstone. Gravel is angular to subangular of fine to coarse of mudstone, sandstone, ironstone and coal. CS	1
		2.10 2.10	B B						2
					2.50	83.60		Base of Excavation at 2.50m	3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP261
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022
Location: Newton Heath	Contractor: TPH	Co-ords: E387771.00 N400354.00
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m / m — Final Depth: 2.20m
Logged By: JC	Checked By: JC	Approved By: MP
Level: 86.50m AoD	Orientation: °	

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	86.40		Recovered as 90% dark brown, gravelly, very clayey SAND with frequent rootlets; and 10% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramics and mixed lithologies. TF	
					0.40	86.10		Recovered as 80% dark brown, very sandy, very clayey GRAVEL; 10% cobble sized fragments of red brick; and 10% cobble sized fragments of paving slabs. Gravel is angular to subrounded of fine to coarse red brick, concrete, slate, ceramics and mixed lithologies. GMG	
								Recovered as black, very sandy, angular to subangular, fine to coarse GRAVEL of mudstone, shale, ironstone and coal. CS	1
		2.00 2.00	B B						2
					2.20	84.30		Base of Excavation at 2.20m	
									3
									4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

Trial Pit Log

TRIAL PIT REFERENCE
TP262
Sheet 1 of 1

Project Name: Ten Acres Lane	Client: NUVU Developments Ltd	Date: 09/05/2022	
Location: Newton Heath	Contractor: TPH	Co-ords: E387801.32 N400357.05	
Project No. : LD10385	Excavator: Doosan 3CX	Dimensions : m	Final Depth: 2.20m
Logged By: JC	Checked By: JC	Approved By: MP	Level: 86.30m AoD
			Orientation: °

Backfill	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description	Scale
					0.10	86.20		Recovered as dark brown, gravelly, very clayey SAND with frequent rootlets. Gravel is angular to subrounded of fine to coarse red brick, concrete, glass, ceramics and mixed lithologies. TF	
					0.70	85.60		Recovered as 80% dark brown, very sandy, very clayey GRAVEL; and 20% cobble sized fragments of red brick. Gravel is angular to subrounded of fine to coarse red brick, ceramic and mixed lithologies. Putrid odour. GMG *0.50m : Plastic paint tin at 0.50m*	
		2.00 2.00	B B					Recovered as 70% dark grey, very sandy GRAVEL; 30% cobble sized fragments of mudstone, sandstone and ironstone. Gravel is angular to subangular, medium to coarse mudstone, sandstone and ironstone. CS	1 2
					2.20	84.10		Base of Excavation at 2.20m	3 4

Trench Support and Comment			Pumping Data		
Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
Stable					

General Remarks

Logging has been undertaken to provide an approximate volumetric percentage of the various constituents present.
Dimensions generally provided in length x width x depth.

Log printed on 13/09/2022 at 14:09

APPENDIX G

Rotary Core Photographs

Photograph No.1: RH201 11.50m – 16.00m

Photograph No.2: RH201 16.00m – 19.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.3: RH201 19.00m – 22.00m

Photograph No.4: RH201 22.00m – 25.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.5: RH201 25.00m – 28.00m

Photograph No.6: RH201 28.00m – 31.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.7: RH201 31.00m – 34.00m

Photograph No.8: RH201 34.00m – 38.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.9: RH201 38.50m – 41.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.1: RH202 11.00m – 14.00m

Photograph No.2: RH202 14.00m – 17.00m

wardell armstrong

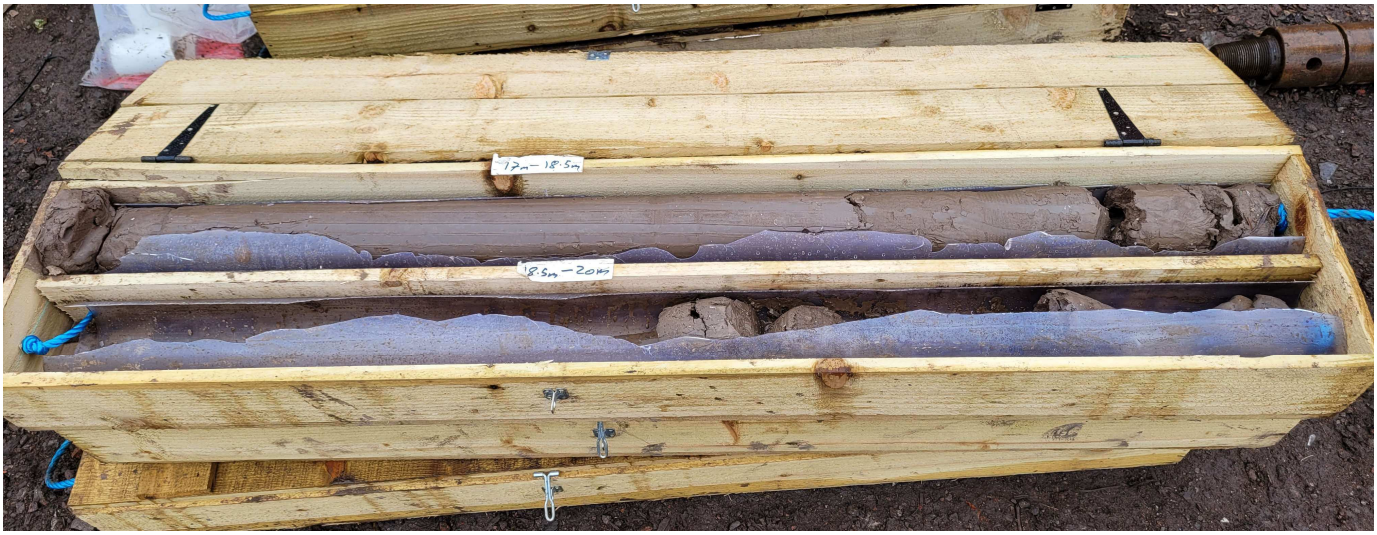
36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022



Photograph No.3: RH202 17.00m – 20.00m

Photograph No.4: RH202 20.00m – 23.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.5: RH202 23.00m – 26.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.7: RH202 29.00m – 32.00m

Photograph No.8: RH202 32.00m – 35.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

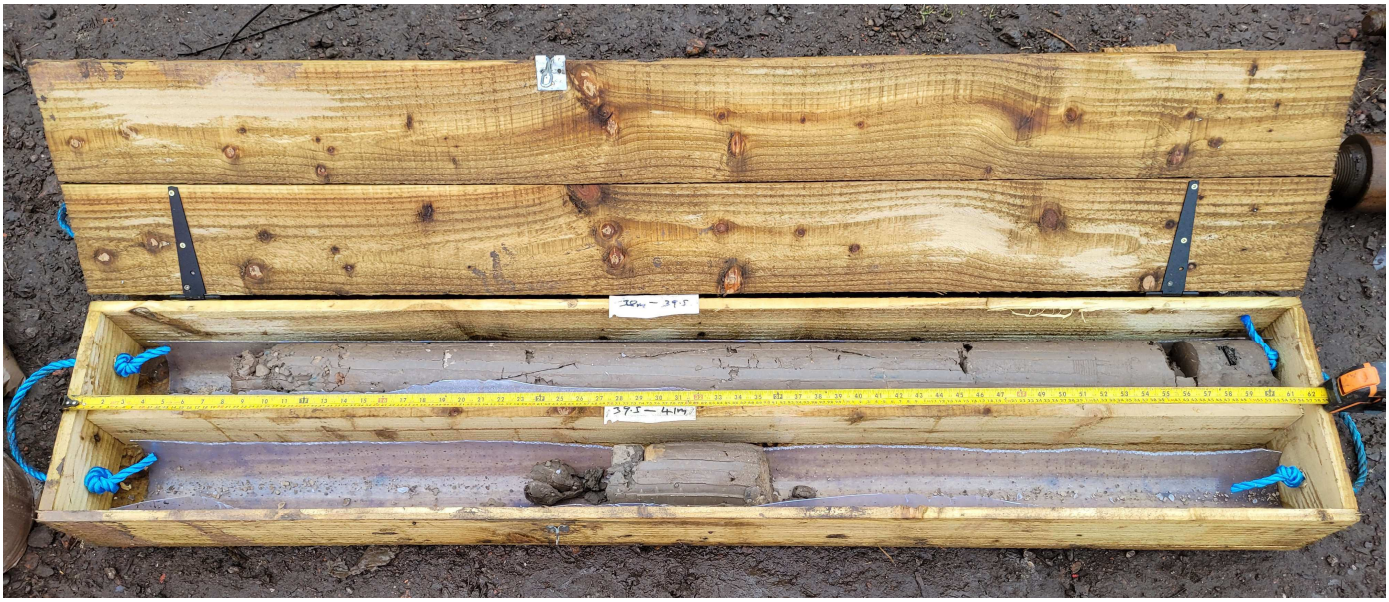
Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.9: RH202 35.00m – 38.00m



Photograph No.10: RH202 38.00m – 41.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.11: RH202 41.00m – 44.00m

Photograph No.12: RH202 44.00m – 47.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.13: RH202 47.00m – 48.50m

Photograph No.14: RH202 48.50m – 50.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

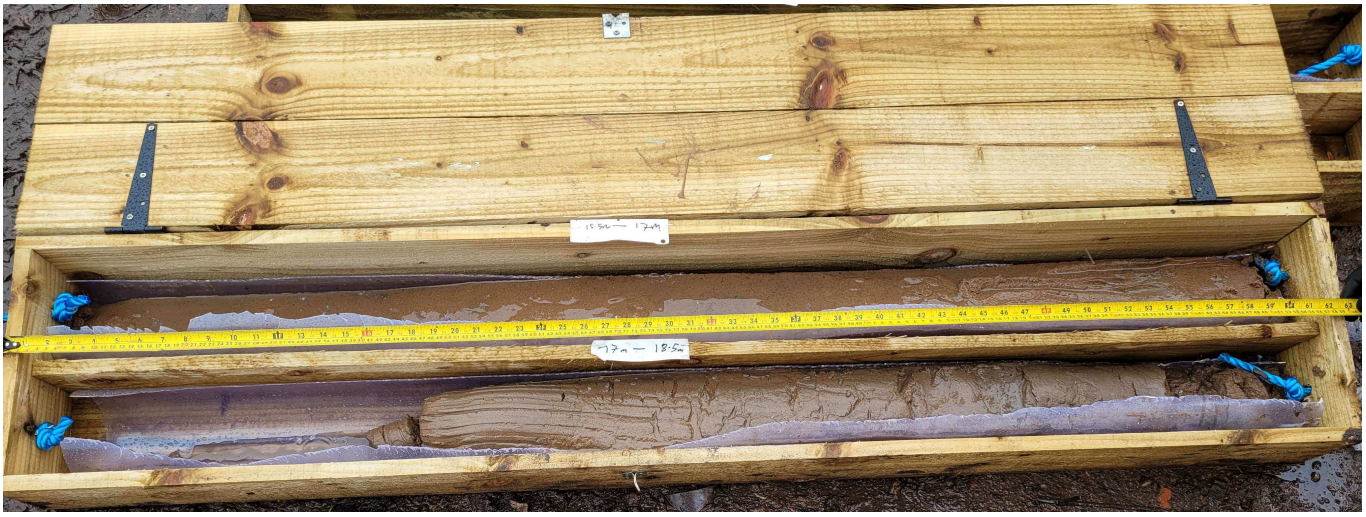
Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.1: RH203 10.00m – 12.50m



Photograph No.2: RH203 15.50m – 18.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.3: RH203 24.50m – 27.50m

Photograph No.4: RH203 27.50m – 31.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.5: RH203 31.50m – 33.50m

Photograph No.6: RH203 33.50m – 36.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.7: RH203 36.50m – 39.50m

Photograph No.8: RH203 39.50m – 42.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.9: RH203 42.50m – 45.50m

Photograph No.10: RH203 45.50m – 47.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.11: RH203 47.50m – 50.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.1: RH204 7.30m – 9.85m

Photograph No.2: RH204 7.30m – 9.85m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.3: RH204 12.85m – 15.95m

Photograph No.4: RH204 15.95m – 19.05m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.5: RH204 19.05m – 21.75m

Photograph No.6: RH204 21.75m – 24.65m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.7: RH204 24.65m – 27.55m

Photograph No.8: RH204 27.55m – 33.75m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.9: RH204 33.75m – 37.00m

Photograph No.10: RH204 37.00m – 44.40m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.11: RH204 44.40m – 46.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.1: RH205 12.20m – 14.30m

Photograph No.2: RH205 14.30m – 17.30m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.3: RH205 17.30m – 20.30m

Photograph No.4: RH205 20.30m – 23.30m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.5: RH205 23.30m – 26.30m

Photograph No.6: RH205 26.30m – 29.30m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.7: RH205 29.30m – 32.30m

Photograph No.8: RH205 32.30m – 35.30m

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36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.9: RH205 35.30m – 38.30m

Photograph No.10: RH205 38.30m – 42.80m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.11: RH205 42.80m – 45.80m

Photograph No.12: RH205 42.80m – 47.30m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.13: RH205 47.30m – 50.30m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.1: RH206 5.00m – 8.50m

Photograph No.2: RH206 8.50m – 11.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.3: RH206 11.50m – 14.50m

Photograph No.4: RH206 14.50m – 17.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.5: RH206 17.50m – 20.50m

Photograph No.6: RH206 20.50m – 23.50m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385 | **Date : September 2022**

Photograph No.7: RH206 23.50m – 25.00m

Photograph No.8: RH206 25.00m – 28.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

Photograph No.9: RH206 28.00m – 31.00m

Photograph No.10: RH206 31.00m – 34.00m

wardell armstrong

36 Park Row
Leeds
LS1 5JL

Project : Ten Acres Lane

Client: Nuvu Developments

Project No. : LD10385

Date : September 2022

APPENDIX H

Environmental / Chemical Results

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
Sir Henry Doulton House
Forge Lane
Etruria
Stoke on Trent
Staffordshire
ST1 5BD

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	05 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201014-61
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	574266

This report has been revised and directly supersedes 572741 in its entirety.

We received 48 samples on Tuesday October 13, 2020 and 23 of these samples were scheduled for analysis which was completed on Thursday November 05, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23029038	CP105	ES1	0.50 - 0.50	07/10/2020
23029045	CP105	ES2	1.50 - 1.50	07/10/2020
23029054	CP105	ES3	2.50 - 2.50	07/10/2020
23029058	CP105	ES4	4.50 - 4.50	07/10/2020
23029066	CP106	ES1	0.50 - 0.50	06/10/2020
23029073	CP106	ES2	1.80 - 1.80	06/10/2020
23029078	CP106	ES3	3.50 - 3.50	06/10/2020
23029083	CP106	ES4	4.50 - 4.50	06/10/2020
23029173	CP108	ES1	0.50 - 0.50	05/10/2020
23029176	CP108	ES2	1.50 - 1.50	05/10/2020
23029179	CP108	ES3	2.40 - 2.40	05/10/2020
23029103	TP101	ES1	0.50 - 0.50	08/10/2020
23029162	TP101	ES2	1.50 - 1.50	08/10/2020
23029293	TP102	ES1	0.50 - 0.50	08/10/2020
23029301	TP102	ES2	1.60 - 1.60	08/10/2020
23029026	TP105	ES1	0.00 - 0.60	08/10/2020
23029089	TP108	ES1	1.00 - 1.00	07/10/2020
23029097	TP108	ES2	2.00 - 2.00	07/10/2020
23029109	TP108	ES3	2.30 - 2.30	07/10/2020
23029311	TP111	ES1	0.60 - 0.60	07/10/2020
23029318	TP111	ES2	1.50 - 1.50	07/10/2020
23029227	TP112	ES1	0.50 - 0.50	08/10/2020
23029287	TP112	ES2	1.80 - 1.80	08/10/2020
23029135	TP122	ES1	1.00 - 1.00	07/10/2020
23029140	TP122	ES2	2.00 - 2.00	07/10/2020
23029248	TP123	ES1	0.80 - 0.80	05/10/2020
23029258	TP123	ES2	1.30 - 1.30	05/10/2020
23029261	TP123	ES3	1.90 - 1.90	05/10/2020
23029265	TP123	ES1	3.00 - 3.00	05/10/2020
23029157	TP126	ES1	0.50 - 0.50	07/10/2020
23029167	TP126	ES2	1.50 - 1.50	07/10/2020
23029170	TP126	ES3	2.70 - 2.70	07/10/2020
23029204	TP136	ES1	0.80 - 0.80	07/10/2020
23029213	TP136	ES2	2.10 - 2.10	07/10/2020
23029183	TP137	ES1	1.20 - 1.20	06/10/2020
23029189	TP137	ES2	2.50 - 2.50	06/10/2020
23029271	TP139	ES1	0.50 - 0.50	05/10/2020
23029278	TP139	ES2	1.50 - 1.50	05/10/2020
23029282	TP139	ES3	2.40 - 2.40	05/10/2020
23029118	TP141	ES1	0.50 - 0.50	07/10/2020
23029127	TP141	ES2	1.50 - 1.50	07/10/2020
23029132	TP141	ES3	2.50 - 2.50	07/10/2020
23029192	TP144	ES1	0.40 - 0.40	07/10/2020
23029237	TP148	ES1	0.40 - 0.40	07/10/2020
23029243	TP148	ES2	1.00 - 1.00	07/10/2020
23029143	TP149	ES1	0.50 - 0.50	07/10/2020
23029150	TP149	ES2	1.60 - 1.60	07/10/2020
23029154	TP149	ES3	2.70 - 2.70	07/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23029073		23029173		23029176	23029103			23029301			23029026			23029109			23029318	
Customer Sample Reference			CP106		CP108		CP108	TP101			TP102			TP105			TP108			TP111	
AGS Reference			ES2		ES1		ES2	ES1			ES2			ES1			ES3			ES2	
Depth (m)			1.80 - 1.80		0.50 - 0.50		1.50 - 1.50	0.50 - 0.50			1.60 - 1.60			0.00 - 0.60			2.30 - 2.30			1.50 - 1.50	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 4					X														
Anions by Kone (soil)	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
Anions by Kone (w)	All	NDPs: 0 Tests: 4					X														
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 19	X		X			X			X			X			X			X	
Asbestos Quantification - Full	All	NDPs: 1 Tests: 3									X										
Boron Water Soluble	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
CEN Readings	All	NDPs: 0 Tests: 4					X														
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23	X		X		X		X			X			X			X			X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4					X														
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 4					X														
Easily Liberated Sulphide	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19		X		X				X			X			X			X		
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 4					X														

23029282	TP139	ES3	2.40 - 2.40	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029278	TP139	ES2	1.50 - 1.50	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029183	TP137	ES1	1.20 - 1.20	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029204	TP136	ES1	0.80 - 0.80	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029157	TP126	ES1	0.50 - 0.50	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X				X		X				X	X		X				
				1kg Cardboard Container	S				X	X														
23029261	TP123	ES3	1.90 - 1.90	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X	N	X		X				X	X		X				
23029258	TP123	ES2	1.30 - 1.30	250g Amber Jar (ALE210)	S	X		X				X	X	X	X									X
23029248	TP123	ES1	0.80 - 0.80	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029135	TP122	ES1	1.00 - 1.00	60g VOC (ALE215)	S																X			
				250g Amber Jar (ALE210)	S		X		X		X		X				X	X		X				
23029287	TP112	ES2	1.80 - 1.80	250g Amber Jar (ALE210)	S																			
				1kg Cardboard Container	S	X		X				X	X	X	X									X
23029318	TP111	ES2	1.50 - 1.50	60g VOC (ALE215)	S																X			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23029073		23029173		23029176	23029103		23029301		23029026			23029109		23029318			
Customer Sample Reference			CP106		CP108		CP108	TP101		TP102		TP105			TP108		TP111			
AGS Reference			ES2		ES1		ES2	ES1		ES2		ES1			ES3		ES2			
Depth (m)			1.80 - 1.80		0.50 - 0.50		1.50 - 1.50	0.50 - 0.50		1.60 - 1.60		0.00 - 0.60			2.30 - 2.30		1.50 - 1.50			
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Mercury Dissolved	All	NDPs: 0 Tests: 4					X														
Metals in solid samples by OES	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 4					X														
PCBs by GCMS	All	NDPs: 0 Tests: 5	X															X			X
pH	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
pH Value	All	NDPs: 0 Tests: 4					X														
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
Phenols by HPLC (W)	All	NDPs: 0 Tests: 4					X														
Sample description	All	NDPs: 0 Tests: 22	X		X		X		X			X			X			X			X
Sulphide	All	NDPs: 0 Tests: 4					X														
Total Organic Carbon	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
Total Sulphate	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 19	X		X				X			X			X			X			X
VOC MS (S)	All	NDPs: 0 Tests: 19		X		X				X			X			X			X		

23029282	TP139	ES3	2.40 - 2.40	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029278	TP139	ES2	1.50 - 1.50	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029183	TP137	ES1	1.20 - 1.20	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029204	TP136	ES1	0.80 - 0.80	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029157	TP126	ES1	0.50 - 0.50	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
				1kg Cardboard Container	S																					
23029261	TP123	ES3	1.90 - 1.90	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X			X	X			X			X			X		X		X	
23029258	TP123	ES2	1.30 - 1.30	250g Amber Jar (ALE210)	S	X				X				X			X		X							
23029248	TP123	ES1	0.80 - 0.80	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029135	TP122	ES1	1.00 - 1.00	60g VOC (ALE215)	S																				X
				250g Amber Jar (ALE210)	S		X		X				X			X			X			X		X		X	
23029287	TP112	ES2	1.80 - 1.80	250g Amber Jar (ALE210)	S						X							X								
				1kg Cardboard Container	S	X				X			X			X			X								
23029318	TP111	ES2	1.50 - 1.50	60g VOC (ALE215)	S																				X

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23029118			23029192			23029237			23029143		23029150
Customer Sample Reference			TP141			TP144			TP148			TP149		TP149
AGS Reference			ES1			ES1			ES1			ES1		ES2
Depth (m)			0.50 - 0.50			0.40 - 0.40			0.40 - 0.40			0.50 - 0.50		1.60 - 1.60
Container			1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)		1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S		S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 4							X							
Anions by Kone (soil)	All	NDPs: 0 Tests: 19		X			X						X		X	
Anions by Kone (w)	All	NDPs: 0 Tests: 4							X							
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 19	X			X						X			X	
Asbestos Quantification - Full	All	NDPs: 1 Tests: 3										X				
Boron Water Soluble	All	NDPs: 0 Tests: 19		X			X						X		X	
CEN Readings	All	NDPs: 0 Tests: 4							X							
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23		X			X		X				X		X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4							X							
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 4							X							
Easily Liberated Sulphide	All	NDPs: 0 Tests: 19		X			X						X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X						X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19			X			X						X		X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 19		X			X						X		X	
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 4							X							

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23029118			23029192			23029237		23029143			23029150
Customer Sample Reference			TP141			TP144			TP148		TP149			TP149
AGS Reference			ES1			ES1			ES1		ES1			ES2
Depth (m)			0.50 - 0.50			0.40 - 0.40			0.40 - 0.40		0.50 - 0.50			1.60 - 1.60
Container			1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S
Mercury Dissolved	All	NDPs: 0 Tests: 4							X						
Metals in solid samples by OES	All	NDPs: 0 Tests: 19		X			X					X		X	
PAH by GCMS	All	NDPs: 0 Tests: 19		X			X					X		X	
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 4							X						
pH	All	NDPs: 0 Tests: 19		X			X					X		X	
pH Value	All	NDPs: 0 Tests: 4							X						
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19		X			X					X		X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 4							X						
Sample description	All	NDPs: 0 Tests: 22		X						X		X		X	
Sulphide	All	NDPs: 0 Tests: 4							X						
Total Organic Carbon	All	NDPs: 0 Tests: 19		X			X					X		X	
Total Sulphate	All	NDPs: 0 Tests: 19		X			X					X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X					X		X	
VOC MS (S)	All	NDPs: 0 Tests: 19			X			X					X		X

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23029073	CP106	1.80 - 1.80	Dark Brown	Loamy Sand	Stones	Vegetation
23029173	CP108	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23029176	CP108	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23029103	TP101	0.50 - 0.50	Dark Brown	Loamy Sand	Vegetation	Crushed Brick
23029301	TP102	1.60 - 1.60	Dark Brown	Loamy Sand	Vegetation	Brick
23029026	TP105	0.00 - 0.60	Beige	Sandy Clay Loam	Stones	Brick
23029109	TP108	2.30 - 2.30	Dark Brown	Silt Loam	Stones	Vegetation
23029318	TP111	1.50 - 1.50	Dark Brown	Loamy Sand	Vegetation	Crushed Brick
23029287	TP112	1.80 - 1.80	Dark Brown	Loamy Sand	Stones	Brick
23029135	TP122	1.00 - 1.00	Dark Brown	Clay	Vegetation	None
23029248	TP123	0.80 - 0.80	Black	Sand	Stones	None
23029258	TP123	1.30 - 1.30	Dark Brown	Sandy Clay	Stones	Vegetation
23029261	TP123	1.90 - 1.90	Red	Sand	Stones	None
23029157	TP126	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23029204	TP136	0.80 - 0.80	Dark Brown	Sand	None	None
23029183	TP137	1.20 - 1.20	Grey	Loamy Sand	Stones	N/A
23029278	TP139	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23029282	TP139	2.40 - 2.40	Black	Loamy Sand	Stones	Oil/Petroleum
23029118	TP141	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Brick
23029192	TP144	0.40 - 0.40	Dark Brown	Sandy Loam	Metal	Crushed Brick
23029237	TP148	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	Crushed Brick
23029143	TP149	0.50 - 0.50	Dark Brown	Sand	Stones	None
23029150	TP149	1.60 - 1.60	Dark Brown	Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP106	CP108	CP108	TP101	TP102	TP105
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	05/10/2020	08/10/2020	08/10/2020	08/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029073	23029173	23029176	23029103	23029301	23029026
			AGS Reference	ES2	ES1	ES2	ES1	ES2	ES1
Moisture Content Ratio (% of as received sample)	%	PM024		23	18	21	21	19	20
Phenol	<0.01 mg/kg	TM062 (S)		0.013 @ M	<0.01 @ M		<0.01 M	0.0124 @ M	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)		0.026 @ M	<0.01 @ M		0.0127 M	0.0372 @ M	<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	<0.015 @ M		<0.015 M	0.0248 @ M	<0.015 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M	<0.035 @ M		<0.035 M	0.0744 @ M	<0.035 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132		71.7 #	25.9 #		19 #	16.9 #	3.28 #
pH	1 pH Units	TM133		11.9 M	7.19 M		8.09 M	8.15 M	8.47 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		26 #	<0.6 #		<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 @ M	<1 @ M		<1 M	<1 M	<1 M
PCB congener 28	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 52	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 101	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 118	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 138	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 153	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 180	<0.003 mg/kg	TM168		<0.003 M					
Sum of detected PCB 7 Congeners	<0.021 mg/kg	TM168		<0.021					
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M		<15 @ M	<15 @ M	<15 @ M
Arsenic	<0.6 mg/kg	TM181		21.9 M	62.9 M		32.1 M	31.2 M	12.3 M
Cadmium	<0.02 mg/kg	TM181		1.08 M	0.86 M		1.3 M	1.17 M	0.0389 M
Chromium	<0.9 mg/kg	TM181		214 M	12.8 M		28.8 M	52 M	14.7 M
Copper	<1.4 mg/kg	TM181		541 M	1470 M		166 M	9990 M	27.1 M
Lead	<0.7 mg/kg	TM181		1220 M	226 M		270 M	470 M	107 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M		0.415 M	1.4 M	0.223 M
Nickel	<0.2 mg/kg	TM181		24.4 M	66.4 M		45.3 M	51.6 M	15.9 M
Selenium	<1 mg/kg	TM181		<1 #	<10 #		<1 #	<1 #	<1 #
Zinc	<1.9 mg/kg	TM181		215 M	695 M		294 M	7290 M	113 M
Sulphate, Total	<48 mg/kg	TM221		1590 M	1720 M		499 M	816 M	<48 M
Boron, water soluble	<1 mg/kg	TM222		<1 M	<1 M		<1 M	<1 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0738 M	0.225 M		0.0263 M	0.0601 M	0.0217 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						0.279 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP106	CP108	CP108	TP101	TP102	TP105
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	05/10/2020	08/10/2020	08/10/2020	08/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029073	23029173	23029176	23029103	23029301	23029026
			AGS Reference	ES2	ES1	ES2	ES1	ES2	ES1
Analysts Comments		TM304						N/C	
Asbestos Quantification - Total - %	<0.001 %	TM304						0.279 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP108	TP111	TP112	TP122	TP123	TP123
			Depth (m)	2.30 - 2.30	1.50 - 1.50	1.80 - 1.80	1.00 - 1.00	0.80 - 0.80	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	07/10/2020	07/10/2020	08/10/2020	07/10/2020	05/10/2020	05/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029109	23029318	23029287	23029135	23029248	23029258
			AGS Reference	ES3	ES2	ES2	ES1	ES1	ES2
Moisture Content Ratio (% of as received sample)	%	PM024		42	19	15	16	14	18
Phenol	<0.01 mg/kg	TM062 (S)		0.0172 @ M	<0.01 M		0.0236 @ M	<0.01 @ M	
Cresols	<0.01 mg/kg	TM062 (S)		0.12 @ M	0.0124 M		<0.01 @ M	<0.01 @ M	
Xylenols	<0.015 mg/kg	TM062 (S)		0.155 @ M	<0.015 M		<0.015 @ M	<0.015 @ M	
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.292 @ M	<0.035 M		<0.035 @ M	<0.035 @ M	
Soil Organic Matter (SOM)	<0.35 %	TM132		32.8 #	6.41 #		1.03 #	81.4 #	
pH	1 pH Units	TM133		7.45 M	7.72 M		8.11 M	5.72 M	
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #		<0.6 #	<0.6 #	
Cyanide, Total	<1 mg/kg	TM153		499 M	<1 M		<1 M	19.2 @ M	
PCB congener 28	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	<0.003 M			
PCB congener 52	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	<0.003 M			
PCB congener 101	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	0.0237 M			
PCB congener 118	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	0.0127 M			
PCB congener 138	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	0.0101 M			
PCB congener 153	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	0.00859 M			
PCB congener 180	<0.003 mg/kg	TM168		<0.03 M	<0.15 M	<0.003 M			
Sum of detected PCB 7 Congeners	<0.021 mg/kg	TM168		<0.21	<1.05	0.0551			
Sulphide, Easily liberated	<15 mg/kg	TM180		1850 @ M	<15 @ M		<15 @ M	<15 @ M	
Arsenic	<0.6 mg/kg	TM181		199 M	23.3 M		7.93 M	16.1 M	
Cadmium	<0.02 mg/kg	TM181		5.44 M	0.647 M		0.185 M	<0.02 M	
Chromium	<0.9 mg/kg	TM181		43.2 M	13.9 M		30.5 M	<0.9 M	
Copper	<1.4 mg/kg	TM181		716 M	130 M		22.6 M	60.7 M	
Lead	<0.7 mg/kg	TM181		1130 M	236 M		6.45 M	31.4 M	
Mercury	<0.14 mg/kg	TM181		3.81 M	0.367 M		<0.14 M	<0.14 M	
Nickel	<0.2 mg/kg	TM181		46.5 M	18.3 M		36.5 M	28.4 M	
Selenium	<1 mg/kg	TM181		<1 #	<1 #		<1 #	<1 #	
Zinc	<1.9 mg/kg	TM181		3270 M	305 M		58.1 M	24.1 M	
Sulphate, Total	<48 mg/kg	TM221		1500 M	4990 M		<48 M	636 M	
Boron, water soluble	<1 mg/kg	TM222		1.85 M	<1 M		<1 M	<1 M	
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0554 M	1.44 M		0.0491 M	0.0292 M	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP123	TP126	TP136	TP137	TP139	TP139
			Depth (m)	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/10/2020	07/10/2020	07/10/2020	06/10/2020	05/10/2020	05/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029261	23029157	23029204	23029183	23029278	23029282
			AGS Reference	ES3	ES1	ES1	ES1	ES2	ES3
Moisture Content Ratio (% of as received sample)	%	PM024		39	19	18	35	26	42
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	0.0124 M	<0.01 @ M	<0.01 @ M	0.459 @ M	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 @ M	0.0372 M	<0.01 @ M	<0.01 @ M	0.0945 @ M	0.709 @ M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	0.0372 M	<0.015 @ M	<0.015 @ M	<0.015 @ M	1.37 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M	0.0868 M	<0.035 @ M	<0.035 @ M	0.554 @ M	2.08 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132		74.8 #	44 #	<0.35 #	22.8 #	15.3 #	82.9 #
pH	1 pH Units	TM133		7.71 M	7.99 M	5.63 M	8.38 M	12.8 M	7.48 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		68.8 @ M	<1 M	<1 M	<1 M	4.32 @ M	162 @ M
PCB congener 28	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 52	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 101	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 118	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 138	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 153	<0.003 mg/kg	TM168		<0.003 M					
PCB congener 180	<0.003 mg/kg	TM168		<0.003 M					
Sum of detected PCB 7 Congeners	<0.021 mg/kg	TM168		<0.021					
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	<15 @ M	<15 @ M	23.6 @ M	1270 @ M
Arsenic	<0.6 mg/kg	TM181		80.9 M	1930 M	3.75 M	34 M	43.3 M	332 M
Cadmium	<0.02 mg/kg	TM181		2.91 M	0.353 M	0.0576 M	0.468 M	0.247 M	1.78 M
Chromium	<0.9 mg/kg	TM181		50.8 M	<9 M	3.7 M	13 M	13.3 M	24 M
Copper	<1.4 mg/kg	TM181		141 M	274 M	8.34 M	125 M	45.5 M	194 M
Lead	<0.7 mg/kg	TM181		208 M	879 M	4.98 M	96.5 M	3220 M	284 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<0.14 M	0.22 M	0.251 M	13.1 M
Nickel	<0.2 mg/kg	TM181		121 M	41.1 M	6.08 M	35.8 M	20.8 M	101 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<1 #	<1 #	<1 #	<10 #
Zinc	<1.9 mg/kg	TM181		153 M	332 M	21.7 M	163 M	42.1 M	953 M
Sulphate, Total	<48 mg/kg	TM221		15200 M	1920 M	<48 M	1980 M	5060 M	8490 M
Boron, water soluble	<1 mg/kg	TM222		<1 M	<1 M	<1 M	<1 M	<1 M	1.34 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0865 M	0.178 M	0.0229 M	0.056 M	0.0244 M	1.46 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			<0.001 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304			<0.001 #				
Additional Asbestos Components (Using TM048)		TM304			None #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP123	TP126	TP136	TP137	TP139	TP139
			Depth (m)	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/10/2020	07/10/2020	07/10/2020	06/10/2020	05/10/2020	05/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029261	23029157	23029204	23029183	23029278	23029282
			AGS Reference	ES3	ES1	ES1	ES1	ES2	ES3
Analysts Comments		TM304			N/C				
Asbestos Quantification - Total - %	<0.001 %	TM304			<0.001 #				

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP141	TP144	TP148	TP149	TP149
			Depth (m)	0.50 - 0.50	0.40 - 0.40	0.40 - 0.40	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	07/10/2020	07/10/2020	07/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029118	23029192	23029237	23029143	23029150
			AGS Reference	ES1	ES1	ES1	ES1	ES2
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	35	21	15
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M		<0.01 @ M	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M		<0.01 @ M	<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	<0.015 @ M		<0.015 @ M	<0.015 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M	<0.035 @ M		<0.035 @ M	<0.035 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132		24 #	9.22 #		16.5 #	0.788 #
pH	1 pH Units	TM133		7.75 M	8.2 M		7.97 M	7.79 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	5.23 #		<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		1.12 M	<1 M		<1 M	<1 M
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M		<15 @ M	<15 @ M
Arsenic	<0.6 mg/kg	TM181		34.2 M	36.3 M		99.7 M	9.99 M
Cadmium	<0.02 mg/kg	TM181		1.91 M	0.715 M		0.577 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		41.3 M	61 M		22.6 M	<9 M
Copper	<1.4 mg/kg	TM181		824 M	137 M		227 M	19 M
Lead	<0.7 mg/kg	TM181		931 M	622 M		510 M	19.6 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	6.76 M		<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		175 M	29.7 M		160 M	22.9 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #		<10 #	<10 #
Zinc	<1.9 mg/kg	TM181		249 M	341 M		390 M	60.3 M
Sulphate, Total	<48 mg/kg	TM221		1030 M	336 M		384 M	<48 M
Boron, water soluble	<1 mg/kg	TM222		<1 M	<1 M		<1 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0534 M	0.0162 M		0.0298 M	0.0116 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #	
Additional Asbestos Components (Using TM048)		TM304					None #	
Analysts Comments		TM304					N/C	
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP106	CP108	TP101	TP102	TP105	TP108
			Depth (m)	1.80 - 1.80	0.50 - 0.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	08/10/2020	08/10/2020	08/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029073	23029173	23029103	23029301	23029026	23029109
			AGS Reference	ES2	ES1	ES1	ES2	ES1	ES3
Naphthalene-d8 % recovery**	%	TM218		86.7	86.3	90.4	79.5	84.5	87.2
Acenaphthene-d10 % recovery**	%	TM218		80	82.4	83.2	76.5	79.7	82.8
Phenanthrene-d10 % recovery**	%	TM218		85.1	87.6	90.7	82.7	88.6	91.6
Chrysene-d12 % recovery**	%	TM218		91.1	95.8	87.3	89.5	98.2	96.6
Perylene-d12 % recovery**	%	TM218		78	84	81.8	82.4	87.4	97
Naphthalene	<0.009 mg/kg	TM218		0.089 @ M	0.604 @ M	0.6 M	0.54 M	0.0292 M	1.65 M
Acenaphthylene	<0.012 mg/kg	TM218		0.0197 @ M	0.176 @ M	0.136 M	0.653 M	0.0187 M	1.13 M
Acenaphthene	<0.008 mg/kg	TM218		0.1 @ M	0.222 @ M	0.587 M	0.964 M	0.055 M	12.8 M
Fluorene	<0.01 mg/kg	TM218		0.0682 @ M	0.318 @ M	0.871 M	1.14 M	0.0448 M	12.2 M
Phenanthrene	<0.015 mg/kg	TM218		0.915 @ M	2.82 @ M	5.88 M	10 M	0.726 M	57.1 M
Anthracene	<0.016 mg/kg	TM218		0.202 @ M	0.707 @ M	1.2 M	2.44 M	0.19 M	12.1 M
Fluoranthene	<0.017 mg/kg	TM218		1.28 @ M	4.17 @ M	5.63 M	13.9 M	1.59 M	86.8 M
Pyrene	<0.015 mg/kg	TM218		1.18 @ M	3.97 @ M	5.15 M	14 M	1.39 M	68.5 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.677 @ M	2.14 @ M	2.37 M	6.58 M	0.878 M	22.2 M
Chrysene	<0.01 mg/kg	TM218		0.748 @ M	1.93 @ M	2.37 M	5.96 M	0.699 M	22.7 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.862 @ M	2.71 @ M	2.92 M	9.73 M	1.2 M	21.2 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.296 @ M	1 @ M	0.906 M	3.19 M	0.423 M	6.88 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.634 @ M	2.14 @ M	2.22 M	6.92 M	0.849 M	16.4 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.412 @ M	1.66 @ M	1.57 M	4.9 M	0.614 M	9.8 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.0802 @ M	0.297 @ M	0.256 M	0.963 M	0.0934 M	1.66 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.444 @ M	1.53 @ M	1.45 M	4.38 M	0.515 M	9.26 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		8	26.4	34.1	86.3	9.31	362

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP111	TP122	TP123	TP123	TP126	TP136
			Depth (m)	1.50 - 1.50	1.00 - 1.00	0.80 - 0.80	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	07/10/2020	07/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029318	23029135	23029248	23029261	23029157	23029204
			AGS Reference	ES2	ES1	ES1	ES3	ES1	ES1
Naphthalene-d8 % recovery**	%	TM218		90.5	98.4	79.8	85.1	70	88
Acenaphthene-d10 % recovery**	%	TM218		82.5	91.5	75	81.3	63	82.7
Phenanthrene-d10 % recovery**	%	TM218		88	101	71.2	88.7	71	92.9
Chrysene-d12 % recovery**	%	TM218		98	113	68.9	92.6	71	100
Perylene-d12 % recovery**	%	TM218		88.5	112	52.7	78.1	66	91.3
Naphthalene	<0.009 mg/kg	TM218		0.722 M	<0.009 M	0.186 @ M	0.0401 @ M	5.1 @ M	<0.009 @ M
Acenaphthylene	<0.012 mg/kg	TM218		<0.6 M	<0.012 M	0.424 @ M	0.15 @ M	<1.2 @ M	<0.012 @ M
Acenaphthene	<0.008 mg/kg	TM218		<0.4 M	<0.008 M	0.18 @ M	<0.008 @ M	8.71 @ M	<0.008 @ M
Fluorene	<0.01 mg/kg	TM218		<0.5 M	<0.01 M	0.22 @ M	<0.01 @ M	8.55 @ M	<0.01 @ M
Phenanthrene	<0.015 mg/kg	TM218		2.34 M	<0.015 M	3.31 @ M	0.218 @ M	58.1 @ M	<0.015 @ M
Anthracene	<0.016 mg/kg	TM218		<0.8 M	<0.016 M	0.969 @ M	0.0829 @ M	14 @ M	<0.016 @ M
Fluoranthene	<0.017 mg/kg	TM218		2.24 M	<0.017 M	5.94 @ M	0.453 @ M	65.4 @ M	<0.017 @ M
Pyrene	<0.015 mg/kg	TM218		2.09 M	0.0184 M	6.08 @ M	0.425 @ M	59.7 @ M	<0.015 @ M
Benz(a)anthracene	<0.014 mg/kg	TM218		1.23 M	<0.014 M	5.39 @ M	0.268 @ M	24 @ M	<0.014 @ M
Chrysene	<0.01 mg/kg	TM218		1.47 M	<0.01 M	5.21 @ M	0.26 @ M	21.9 @ M	<0.01 @ M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		1.62 M	<0.015 M	5.34 @ M	0.508 @ M	18.9 @ M	<0.015 @ M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.7 M	<0.014 M	2.89 @ M	0.159 @ M	5.19 @ M	<0.014 @ M
Benzo(a)pyrene	<0.015 mg/kg	TM218		1.07 M	<0.015 M	6.05 @ M	0.258 @ M	21.9 @ M	<0.015 @ M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.9 M	<0.018 M	3.47 @ M	0.325 @ M	13.7 @ M	<0.018 @ M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<1.15 M	<0.023 M	0.815 @ M	0.0532 @ M	<2.3 @ M	<0.023 @ M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<1.2 M	<0.024 M	3.44 @ M	0.297 @ M	14.3 @ M	<0.024 @ M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		12.8	<0.118	49.9	3.49	339	<0.118

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP137	TP139	TP139	TP141	TP144	TP149
			Depth (m)	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	0.40 - 0.40	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029183	23029278	23029282	23029118	23029192	23029143
			AGS Reference	ES1	ES2	ES3	ES1	ES1	ES1
Naphthalene-d8 % recovery**	%	TM218		84.6	86.1	81	89.6	90.8	80.5
Acenaphthene-d10 % recovery**	%	TM218		78.7	82.1	412	86.2	84.3	75.6
Phenanthrene-d10 % recovery**	%	TM218		86	89.1	75	89.4	95.1	82.4
Chrysene-d12 % recovery**	%	TM218		94	102	61	90.2	92.4	92.7
Perylene-d12 % recovery**	%	TM218		79.8	96.1	42	82.3	87	81.7
Naphthalene	<0.009 mg/kg	TM218		0.0524 @ M	0.0292 @ M	13100 @ M	0.186 M	0.503 @ M	0.372 @ M
Acenaphthylene	<0.012 mg/kg	TM218		0.0294 @ M	0.142 @ M	315 @ M	0.0912 M	0.24 @ M	0.0863 @ M
Acenaphthene	<0.008 mg/kg	TM218		0.0757 @ M	0.0529 @ M	153 @ M	1.29 M	2.1 @ M	2.43 @ M
Fluorene	<0.01 mg/kg	TM218		0.0649 @ M	0.0517 @ M	656 @ M	0.965 M	1.53 @ M	1.72 @ M
Phenanthrene	<0.015 mg/kg	TM218		0.95 @ M	0.462 @ M	1320 @ M	12.8 M	15.4 @ M	15.9 @ M
Anthracene	<0.016 mg/kg	TM218		0.223 @ M	0.117 @ M	419 @ M	2.64 M	3.92 @ M	3.77 @ M
Fluoranthene	<0.017 mg/kg	TM218		1.24 @ M	0.828 @ M	450 @ M	15.8 M	21.8 @ M	23.4 @ M
Pyrene	<0.015 mg/kg	TM218		1.17 @ M	0.805 @ M	574 @ M	13.6 M	19.2 @ M	19.9 @ M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.617 @ M	0.516 @ M	237 @ M	6.99 M	8.91 @ M	9.02 @ M
Chrysene	<0.01 mg/kg	TM218		0.648 @ M	0.514 @ M	187 @ M	7.34 M	8.27 @ M	9.42 @ M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.888 @ M	0.8 @ M	113 @ M	9.08 M	11.3 @ M	11.8 @ M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.265 @ M	0.243 @ M	45.2 @ M	3.3 M	3.63 @ M	5.22 @ M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.636 @ M	0.608 @ M	154 @ M	7.04 M	8.15 @ M	8.57 @ M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.482 @ M	0.562 @ M	61.7 @ M	4.67 M	5.99 @ M	6.07 @ M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.074 @ M	0.101 @ M	15.4 @ M	0.911 M	0.924 @ M	0.995 @ M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.466 @ M	0.507 @ M	54.5 @ M	4.8 M	5.1 @ M	5.47 @ M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		7.88	6.34	17800	91.5	117	124

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. TP149
			Depth (m) 1.60 - 1.60
			Sample Type Soil/Solid (S)
			Date Sampled 07/10/2020
			Sample Time .
			Date Received 13/10/2020
			SDG Ref 201014-61
			Lab Sample No.(s) 23029150
			AGS Reference ES2
Naphthalene-d8 % recovery**	%	TM218	85.4
Acenaphthene-d10 % recovery**	%	TM218	80
Phenanthrene-d10 % recovery**	%	TM218	89.2
Chrysene-d12 % recovery**	%	TM218	94.8
Perylene-d12 % recovery**	%	TM218	83.4
Naphthalene	<0.009 mg/kg	TM218	0.011 @ M
Acenaphthylene	<0.012 mg/kg	TM218	<0.012 @ M
Acenaphthene	<0.008 mg/kg	TM218	0.104 @ M
Fluorene	<0.01 mg/kg	TM218	0.0927 @ M
Phenanthrene	<0.015 mg/kg	TM218	0.59 @ M
Anthracene	<0.016 mg/kg	TM218	0.177 @ M
Fluoranthene	<0.017 mg/kg	TM218	0.55 @ M
Pyrene	<0.015 mg/kg	TM218	0.461 @ M
Benz(a)anthracene	<0.014 mg/kg	TM218	0.193 @ M
Chrysene	<0.01 mg/kg	TM218	0.189 @ M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218	0.241 @ M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218	0.0577 @ M
Benzo(a)pyrene	<0.015 mg/kg	TM218	0.169 @ M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218	0.111 @ M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218	<0.023 @ M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218	0.1 @ M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218	3.05

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP106	CP108	TP101	TP102	TP105	TP108
			Depth (m)	1.80 - 1.80	0.50 - 0.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	08/10/2020	08/10/2020	08/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029073	23029173	23029103	23029301	23029026	23029109
			AGS Reference	ES2	ES1	ES1	ES2	ES1	ES3
GRO Surrogate % recovery**	%	TM089		75.2	53 4 @	92.6	43.2 4	84.9	38.9 4 @
Aliphatics >C5-C6	<0.01 mg/kg	TM089		0.0169	0.0207 4 @	<0.01	0.0112 4	<0.01	0.115 4 @
Aliphatics >C6-C8	<0.01 mg/kg	TM089		0.0507	0.189 4 @	0.033	0.0285 4	<0.01	0.537 4 @
Aliphatics >C8-C10	<0.01 mg/kg	TM089		0.039	0.173 4 @	0.0546	0.0322 4	<0.01	0.568 4 @
Aliphatics >C10-C12	<1 mg/kg	TM414		<1	3.04	<1	1.05	<1	3.35
Aliphatics >C12-C16	<1 mg/kg	TM414		<1	3.49	<1	2.41	<1	11.7
Aliphatics >C16-C21	<1 mg/kg	TM414		14.1	5.32	1.84	5.31	<1	27.3
Aliphatics >C21-C35	<1 mg/kg	TM414		45.9	34.6	13.2	50.1	4.12	1320
Aliphatics >C35-C44	<1 mg/kg	TM414		<1	3.83	2.75	8.08	<1	1640
Total Aliphatics >C10-C44	<5 mg/kg	TM414		60.7	50.3	18	67	<5	3000
Total Aliphatics & Aromatics >C10-C44	<10 mg/kg	TM414		262	157	90.6	778	30.6	3740
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.01	<0.01 4 @	<0.01	<0.01 4	<0.01	<0.01 4 @
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.01	0.0195 4 @	<0.01	<0.01 4	<0.01	<0.01 4 @
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		0.026	0.116 4 @	0.0368	0.0211 4	<0.01	0.378 4 @
Aromatics > EC10-EC12	<1 mg/kg	TM414		<1	<1	<1	8.28	<1	4.15
Aromatics > EC12-EC16	<1 mg/kg	TM414		<1	6.51	<1	18	<1	66.6
Aromatics > EC16-EC21	<1 mg/kg	TM414		12.1	26.3	8.61	106	5.13	382
Aromatics > EC21-EC35	<1 mg/kg	TM414		179	65.9	57.7	375	19.1	282
Aromatics >EC35-EC44	<1 mg/kg	TM414		9.25	7.8	5.84	203	1.61	11.7
Aromatics > EC40-EC44	<1 mg/kg	TM414		2.09	<1	1.43	84.3	<1	1.45
Total Aromatics > EC10-EC44	<5 mg/kg	TM414		201	107	72.6	711	26	746
Total Aliphatics & Aromatics >C5-C44	<10 mg/kg	TM414		262	158	90.7	778	26	3740
Total Aliphatics >C5-C10	<0.05 mg/kg	TM089		0.107	0.383 4 @	0.0876	0.0719 4	<0.05	1.22 4 @
Total Aromatics >EC5-EC10	<0.05 mg/kg	TM089		<0.05	0.135 4 @	<0.05	<0.05 4	<0.05	0.378 4 @
GRO >C5-C10	<0.02 mg/kg	TM089		0.107	0.519 4 @	0.0876	0.0719 4	<0.02	1.6 4 @

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP111	TP122	TP123	TP123	TP126	TP136
			Depth (m)	1.50 - 1.50	1.00 - 1.00	0.80 - 0.80	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	07/10/2020	07/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029318	23029135	23029248	23029261	23029157	23029204
			AGS Reference	ES2	ES1	ES1	ES3	ES1	ES1
GRO Surrogate % recovery**	%	TM089		47.3 4	86.1	70.5 @	120 @	70.5	94.8
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.01 4	<0.01	<0.01 @	0.0131 @	0.0174	<0.01
Aliphatics >C6-C8	<0.01 mg/kg	TM089		0.0174 4	<0.01	<0.01 @	0.0574 @	0.0434	<0.01
Aliphatics >C8-C10	<0.01 mg/kg	TM089		0.0124 4	<0.01	<0.01 @	0.0656 @	0.185	<0.01
Aliphatics >C10-C12	<1 mg/kg	TM414		<1	<1	<1	<1	<5	<1
Aliphatics >C12-C16	<1 mg/kg	TM414		<1	<1	3.95	<1	11	<1
Aliphatics >C16-C21	<1 mg/kg	TM414		1.41	<1	21.3	<1	12.1	<1
Aliphatics >C21-C35	<1 mg/kg	TM414		13.3	<1	22	18.9	20	<1
Aliphatics >C35-C44	<1 mg/kg	TM414		1.49	<1	1.92	12.7	<5	<1
Total Aliphatics >C10-C44	<5 mg/kg	TM414		16.4	<5	49.2	32.8	49.2	<5
Total Aliphatics & Aromatics >C10-C44	<10 mg/kg	TM414		91.2	<10	187	82.9	4360	<10
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.01 4	<0.01	<0.01 @	<0.01 @	<0.01	<0.01
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.01 4	<0.01	<0.01 @	<0.01 @	<0.01	<0.01
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.01 4	<0.01	<0.01 @	0.0443 @	0.123	<0.01
Aromatics > EC10-EC12	<1 mg/kg	TM414		<1	<1	<1	5.66	52.7	<1
Aromatics > EC12-EC16	<1 mg/kg	TM414		2.48	<1	1.28	1.38	325	<1
Aromatics > EC16-EC21	<1 mg/kg	TM414		13	<1	17.5	<1	1380	<1
Aromatics > EC21-EC35	<1 mg/kg	TM414		39.1	1.52	101	40.4	2210	<1
Aromatics >EC35-EC44	<1 mg/kg	TM414		19.6	<1	16.9	1.22	336	<1
Aromatics > EC40-EC44	<1 mg/kg	TM414		3.01	<1	1.93	<1	34.6	<1
Total Aromatics > EC10-EC44	<5 mg/kg	TM414		74.8	<5	137	50	4310	<5
Total Aliphatics & Aromatics >C5-C44	<10 mg/kg	TM414		91.2	<10	187	83.1	4360	<10
Total Aliphatics >C5-C10	<0.05 mg/kg	TM089		<0.05 4	<0.05	<0.05 @	0.136 @	0.246	<0.05
Total Aromatics >EC5-EC10	<0.05 mg/kg	TM089		<0.05 4	<0.05	<0.05 @	<0.05 @	0.123	<0.05
GRO >C5-C10	<0.02 mg/kg	TM089		<0.02 4	<0.02	<0.02 @	0.136 @	0.368	<0.02

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP137	TP139	TP139	TP141	TP144	TP149
			Depth (m)	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	0.40 - 0.40	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029183	23029278	23029282	23029118	23029192	23029143
			AGS Reference	ES1	ES2	ES3	ES1	ES1	ES1
GRO Surrogate % recovery**	%	TM089		82.4	83.5	84.3 3 @	56.7 4 @	91.1	76 @
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.01	0.0189	1.45 3 @	<0.01 4 @	<0.01	<0.01 @
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.01	0.0446	5.49 3 @	0.0125 4 @	0.0281	<0.01 @
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.01	0.0608	703 3 @	0.0148 4 @	0.0398	<0.01 @
Aliphatics >C10-C12	<1 mg/kg	TM414		<1	<1	126	<1	<1	<1
Aliphatics >C12-C16	<1 mg/kg	TM414		<1	<1	180	1.27	1.21	6.32
Aliphatics >C16-C21	<1 mg/kg	TM414		2.18	<1	38.3	6.77	1.69	7.09
Aliphatics >C21-C35	<1 mg/kg	TM414		9.19	1.51	18.8	52.2	11.5	27.4
Aliphatics >C35-C44	<1 mg/kg	TM414		<1	<1	<10	19	2.89	4.48
Total Aliphatics >C10-C44	<5 mg/kg	TM414		12	<5	363	79.6	17.6	45.8
Total Aliphatics & Aromatics >C10-C44	<10 mg/kg	TM414		380	72.7	16200	286	407	887
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.01	<0.01	6.32 3 @	<0.01 4 @	<0.01	<0.01 @
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.01	<0.01	8.23 3 @	<0.01 4 @	<0.01	<0.01 @
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.01	0.0405	469 3 @	0.0103 4 @	0.0269	<0.01 @
Aromatics > EC10-EC12	<1 mg/kg	TM414		3.62	1.8	6110	<1	<1	<1
Aromatics > EC12-EC16	<1 mg/kg	TM414		29.7	3.34	5210	9.67	15	31.6
Aromatics > EC16-EC21	<1 mg/kg	TM414		112	16.1	2160	49.7	104	235
Aromatics > EC21-EC35	<1 mg/kg	TM414		194	41.8	2220	138	234	513
Aromatics >EC35-EC44	<1 mg/kg	TM414		29.6	7.55	90.9	8.68	36.4	61.3
Aromatics > EC40-EC44	<1 mg/kg	TM414		3.05	<1	<10	<1	4.6	8.22
Total Aromatics > EC10-EC44	<5 mg/kg	TM414		368	70.6	15800	206	390	841
Total Aliphatics & Aromatics >C5-C44	<10 mg/kg	TM414		380	70.7	17400	286	407	887
Total Aliphatics >C5-C10	<0.05 mg/kg	TM089		<0.05	0.124	710 3 @	<0.05 4 @	0.0679	<0.05 @
Total Aromatics >EC5-EC10	<0.05 mg/kg	TM089		<0.05	<0.05	483 3 @	<0.05 4 @	<0.05	<0.05 @
GRO >C5-C10	<0.02 mg/kg	TM089		<0.02	0.124	1190 3 @	<0.02 4 @	0.0679	<0.02 @

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP149
Depth (m)	1.60 - 1.60
Sample Type	Soil/Solid (S)
Date Sampled	07/10/2020
Sample Time	.
Date Received	13/10/2020
SDG Ref	201014-61
Lab Sample No.(s)	23029150
AGS Reference	ES2

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	93.9 @
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01 @
Aliphatics >C6-C8	<0.01 mg/kg	TM089	0.0118 @
Aliphatics >C8-C10	<0.01 mg/kg	TM089	<0.01 @
Aliphatics >C10-C12	<1 mg/kg	TM414	<1
Aliphatics >C12-C16	<1 mg/kg	TM414	<1
Aliphatics >C16-C21	<1 mg/kg	TM414	<1
Aliphatics >C21-C35	<1 mg/kg	TM414	<1
Aliphatics >C35-C44	<1 mg/kg	TM414	<1
Total Aliphatics >C10-C44	<5 mg/kg	TM414	<5
Total Aliphatics & Aromatics >C10-C44	<10 mg/kg	TM414	<10
Aromatics >EC5-EC7	<0.01 mg/kg	TM089	<0.01 @
Aromatics >EC7-EC8	<0.01 mg/kg	TM089	<0.01 @
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01 @
Aromatics > EC10-EC12	<1 mg/kg	TM414	<1
Aromatics > EC12-EC16	<1 mg/kg	TM414	<1
Aromatics > EC16-EC21	<1 mg/kg	TM414	<1
Aromatics > EC21-EC35	<1 mg/kg	TM414	<1
Aromatics >EC35-EC44	<1 mg/kg	TM414	<1
Aromatics > EC40-EC44	<1 mg/kg	TM414	<1
Total Aromatics > EC10-EC44	<5 mg/kg	TM414	<5
Total Aliphatics & Aromatics >C5-C44	<10 mg/kg	TM414	<10
Total Aliphatics >C5-C10	<0.05 mg/kg	TM089	<0.05 @
Total Aromatics >EC5-EC10	<0.05 mg/kg	TM089	<0.05 @
GRO >C5-C10	<0.02 mg/kg	TM089	<0.02 @

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP106	CP108	TP101	TP102	TP105	TP108
			Depth (m)	1.80 - 1.80	0.50 - 0.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	08/10/2020	08/10/2020	08/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029073	23029173	23029103	23029301	23029026	23029109
			AGS Reference	ES2	ES1	ES1	ES2	ES1	ES3
Dibromofluoromethane**	%	TM116		110	106 @	114	115	119	117
Toluene-d8**	%	TM116		92.3	93.2 @	94.4	91.5	101	84.3
4-Bromofluorobenzene**	%	TM116		72.5	84.7 @	83.6	80.6	83.9	72.9
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.01 M	<0.2 @ M	<0.2 M	<0.2 M	<0.01 M	<0.2 M
Benzene	<0.009 mg/kg	TM116		<0.009 M	<0.18 @ M	<0.18 M	<0.18 M	<0.009 M	<0.18 M
Toluene	<0.007 mg/kg	TM116		<0.007 M	<0.14 @ M	<0.14 M	<0.14 M	<0.007 M	<0.14 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.004 M	<0.08 @ M	<0.08 M	<0.08 M	<0.004 M	<0.08 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.01 #	<0.2 @ #	<0.2 #	<0.2 #	<0.01 #	<0.2 #
o-Xylene	<0.01 mg/kg	TM116		<0.01 M	<0.2 @ M	<0.2 M	<0.2 M	<0.01 M	<0.2 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.4 @	<0.4	<0.4	<0.02	<0.4
Sum of BTEX	<0.04 mg/kg	TM116		<0.04	<0.8 @	<0.8	<0.8	<0.04	<0.8

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP111	TP122	TP123	TP123	TP126	TP136
			Depth (m)	1.50 - 1.50	1.00 - 1.00	0.80 - 0.80	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	07/10/2020	07/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029318	23029135	23029248	23029261	23029157	23029204
			AGS Reference	ES2	ES1	ES1	ES3	ES1	ES1
Dibromofluoromethane**	%	TM116		110	106	119 @	127	107	113
Toluene-d8**	%	TM116		94.5	95.7	94.2 @	102	94.4	101
4-Bromofluorobenzene**	%	TM116		87.9	95.4	81.6 @	72.1	88.1	92.8
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.2 M	<0.2 M	<0.1 @ M	<0.01 M	<0.2 M	<0.01 M
Benzene	<0.009 mg/kg	TM116		<0.18 M	<0.18 M	<0.09 @ M	<0.009 M	<0.18 M	<0.009 M
Toluene	<0.007 mg/kg	TM116		<0.14 M	<0.14 M	<0.07 @ M	<0.007 M	<0.14 M	<0.007 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.08 M	<0.08 M	<0.04 @ M	<0.004 M	<0.08 M	<0.004 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.2 #	<0.2 #	<0.1 @ #	<0.01 #	<0.2 #	<0.01 #
o-Xylene	<0.01 mg/kg	TM116		<0.2 M	<0.2 M	<0.1 @ M	<0.01 M	<0.2 M	<0.01 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.2 @	<0.02	<0.4	<0.02
Sum of BTEX	<0.04 mg/kg	TM116		<0.8	<0.8	<0.4 @	<0.04	<0.8	<0.04

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP137	TP139	TP139	TP141	TP144	TP149
			Depth (m)	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	0.40 - 0.40	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	06/10/2020	05/10/2020	05/10/2020	07/10/2020	07/10/2020	07/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			SDG Ref	201014-61	201014-61	201014-61	201014-61	201014-61	201014-61
			Lab Sample No.(s)	23029183	23029278	23029282	23029118	23029192	23029143
			AGS Reference	ES1	ES2	ES3	ES1	ES1	ES1
Dibromofluoromethane**	%	TM116		124	16.8 @	113 @	108	114	113
Toluene-d8**	%	TM116		100	92.9 @	87.5 @	94.8	95.1	93.3
4-Bromofluorobenzene**	%	TM116		82	69.4 @	76.1 @	92.7	84.1	85.5
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.01 M	<0.01 @ M	<0.2 @ M	<0.2 M	<0.2 M	<0.2 M
Benzene	<0.009 mg/kg	TM116		<0.009 M	<0.009 @ M	2.74 @ M	<0.18 M	<0.18 M	<0.18 M
Toluene	<0.007 mg/kg	TM116		<0.007 M	<0.007 @ M	3.28 @ M	<0.14 M	<0.14 M	<0.14 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.004 M	<0.004 @ M	31.1 @ M	<0.08 M	<0.08 M	<0.08 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.01 #	<0.01 @ #	219 @ #	<0.2 #	<0.2 #	<0.2 #
o-Xylene	<0.01 mg/kg	TM116		<0.01 M	<0.01 @ M	114 @ M	<0.2 M	<0.2 M	<0.2 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02 @	333 @	<0.4	<0.4	<0.4
Sum of BTEX	<0.04 mg/kg	TM116		<0.04	<0.04 @	374 @	<0.8	<0.8	<0.8

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP149
Depth (m)	1.60 - 1.60
Sample Type	Soil/Solid (S)
Date Sampled	07/10/2020
Sample Time	.
Date Received	13/10/2020
SDG Ref	201014-61
Lab Sample No.(s)	23029150
AGS Reference	ES2

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	135
Toluene-d8**	%	TM116	101
4-Bromofluorobenzene**	%	TM116	82.2
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116	<0.01 M
Benzene	<0.009 mg/kg	TM116	<0.009 M
Toluene	<0.007 mg/kg	TM116	<0.007 M
Ethylbenzene	<0.004 mg/kg	TM116	<0.004 M
p/m-Xylene	<0.01 mg/kg	TM116	<0.01 #
o-Xylene	<0.01 mg/kg	TM116	<0.01 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02
Sum of BTEX	<0.04 mg/kg	TM116	<0.04

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP106ES2 1.80 - 1.80 SOLID 06/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029073 TM048	22/10/2020	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP108ES1 0.50 - 0.50 SOLID 05/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029173 TM048	22/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP101ES1 0.50 - 0.50 SOLID 08/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029103 TM048	22/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP102ES2 1.60 - 1.60 SOLID 08/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029301 TM048	22/10/2020	Marcin Magdziarek	Soil containing material typical of asbestos paper	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP105ES1 0.00 - 0.60 SOLID 08/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029026 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP108ES3 2.30 - 2.30 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029109 TM048	22/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP111ES2 1.50 - 1.50 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029318 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP122ES1 1.00 - 1.00 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029135 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP123ES1 0.80 - 0.80 SOLID 05/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029248 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP123ES3 1.90 - 1.90 SOLID 05/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029261 TM048	22/10/2020	James Richards	Fibre bundle in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP126ES1 0.50 - 0.50 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029157 TM048	22/10/20	Eva Guerra	fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP136ES1 0.80 - 0.80 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029204 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP137ES1 1.20 - 1.20 SOLID 06/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029183 TM048	22/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP139ES2 1.50 - 1.50 SOLID 05/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029278 TM048	22/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP139ES3 2.40 - 2.40 SOLID 05/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029282 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP141ES1 0.50 - 0.50 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029118 TM048	22/10/20	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP144ES1 0.40 - 0.40 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029192 TM048	22/10/20	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP149ES1 0.50 - 0.50 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029143 TM048	22/10/2020	Barbara Urbanek-Walsh	Loose fibres in soil.	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP149ES2 1.60 - 1.60 SOLID 07/10/2020 00:00:00 13/10/2020 05:00:00 201014-61 23029150 TM048	22/10/2020	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP102ES2	None (#)	N/C	0.2785 (#)	<0.001 (#)	0.2785 (#)
Depth (m)	1.60 - 1.60					
Sample Type	SOLID					
Date Sampled	08/10/2020 00:00:00					
Date Received	13/10/2020 05:00:00					
SDG	201014-61					
Original Sample	23029301					
Method Number	TM304					
Cust. Sample Ref.	TP126ES1	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.50 - 0.50					
Sample Type	SOLID					
Date Sampled	07/10/2020 00:00:00					
Date Received	13/10/2020 05:00:00					
SDG	201014-61					
Original Sample	23029157					
Method Number	TM304					
Cust. Sample Ref.	TP149ES1	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.50 - 0.50					
Sample Type	SOLID					
Date Sampled	07/10/2020 00:00:00					
Date Received	13/10/2020 05:00:00					
SDG	201014-61					
Original Sample	23029143					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.115	**Natural Moisture Content (%)**	28.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	77.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029176
Sampled Date	05-Oct-2020
Customer Sample Ref.	CP108 ES2
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Low Level Hexavalent Chromium	0.0534	<0.003	0.534	<0.03	-	-	-
Sulphate (soluble)	114	<2	1140	<20	-	-	-
Sulphide	0.0354	<0.01	0.354	<0.1	-	-	-
Dissolved Organic Carbon	205	<6	2050	<60	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	0.0000262	<0.00001	0.000262	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.0000135	<0.000005	0.000135	<0.00005	-	-	-
Arsenic	0.00176	<0.0005	0.0176	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000241	<0.000005	0.000241	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	0.00000669	<0.000005	0.0000669	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.0212	<0.01	0.212	<0.1	-	-	-
Phenanthrene (diss.filt)	0.0000239	<0.000005	0.000239	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	100	<2	1000	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	0.0000058	<0.000005	0.000058	<0.00005	-	-	-
Chrysene (diss.filt)	0.0000164	<0.000005	0.000164	<0.00005	-	-	-
Pyrene (diss.filt)	0.0000199	<0.000005	0.000199	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Benzo(a)anthracene (diss.filt)	0.0000163	<0.000005	0.000163	<0.00005	-	-	-
Chromium	0.0503	<0.001	0.503	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	0.0000214	<0.000005	0.000214	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	0.0000054	<0.000005	0.000054	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	0.0000164	<0.000002	0.000164	<0.00002	-	-	-
Copper	0.0358	<0.0003	0.358	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	0.0000301	<0.000005	0.000301	<0.00005	-	-	-
Lead	0.000335	<0.0002	0.00335	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	0.0000403	<0.000005	0.000403	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	0.0000352	<0.000005	0.000352	<0.00005	-	-	-

Leach Test Information

Date Prepared	17-Oct-2020
pH (pH Units)	7.74
Conductivity (µS/cm)	440.00
Temperature (°C)	18.10
Volume Leachant (Litres)	0.875

Mcerts Certification does not apply to leachates

05/11/2020 14:13:51

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.115	**Natural Moisture Content (%)**	28.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	77.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029176
Sampled Date	05-Oct-2020
Customer Sample Ref.	CP108 ES2
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
PAH 16 EPA Total by GCMS (diss.filt)	0.000302	<0.000082	0.00302	<0.00082	-	-	-
Nickel	0.00163	<0.0004	0.0163	<0.004	-	-	-
Selenium	0.00177	<0.001	0.0177	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	26.3	<0.2	263	<2	-	-	-

Leach Test Information

Date Prepared	17-Oct-2020
pH (pH Units)	7.74
Conductivity (µS/cm)	440.00
Temperature (°C)	18.10
Volume Leachant (Litres)	0.875

Mcerts Certification does not apply to leachates

05/11/2020 14:13:51

14:13:28 05/11/2020

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.129	**Natural Moisture Content (%)**	43.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	69.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029237
Sampled Date	07-Oct-2020
Customer Sample Ref.	TP148 ES1
Depth (m)	0.40 - 0.40

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Low Level Hexavalent Chromium	<0.003	<0.003	<0.03	<0.03	-	-	-
Sulphate (soluble)	9.3	<2	93	<20	-	-	-
Sulphide	0.012	<0.01	0.12	<0.1	-	-	-
Dissolved Organic Carbon	4.85	<3	48.5	<30	-	-	-
Mercury Dissolved (CVAF)	0.0000222	<0.00001	0.000222	<0.0001	-	-	-
Naphthalene (diss.filt)	0.0000138	<0.00001	0.000138	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.0000202	<0.000005	0.000202	<0.00005	-	-	-
Arsenic	0.00227	<0.0005	0.0227	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	0.0000069	<0.000005	0.000069	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000222	<0.000005	0.000222	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	0.00000719	<0.000005	0.0000719	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.0685	<0.01	0.685	<0.1	-	-	-
Phenanthrene (diss.filt)	0.0000282	<0.000005	0.000282	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	34	<2	340	<20	-	-	-
Cadmium	0.000349	<0.00008	0.00349	<0.0008	-	-	-
Fluorene (diss.filt)	0.00000724	<0.000005	0.0000724	<0.00005	-	-	-
Chrysene (diss.filt)	0.0000182	<0.000005	0.000182	<0.00005	-	-	-
Pyrene (diss.filt)	0.000022	<0.000005	0.00022	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Benzo(a)anthracene (diss.filt)	0.0000154	<0.000005	0.000154	<0.00005	-	-	-
Chromium	1.5	<0.00281	15	<0.0281	-	-	-
Benzo(b)fluoranthene (diss.filt)	0.0000358	<0.000005	0.000358	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	0.00000797	<0.000005	0.0000797	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	0.0000177	<0.000002	0.000177	<0.00002	-	-	-
Copper	0.0112	<0.0003	0.112	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	0.0000127	<0.000005	0.000127	<0.00005	-	-	-
Lead	0.108	<0.0002	1.08	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	0.0000435	<0.000005	0.000435	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	0.0000267	<0.000005	0.000267	<0.00005	-	-	-

Leach Test Information

Date Prepared	19-Oct-2020
pH (pH Units)	7.96
Conductivity (µS/cm)	91.90
Temperature (°C)	18.30
Volume Leachant (Litres)	0.861

Mcerts Certification does not apply to leachates

05/11/2020 14:13:51

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.129	**Natural Moisture Content (%)**	43.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	69.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029237
Sampled Date	07-Oct-2020
Customer Sample Ref.	TP148 ES1
Depth (m)	0.40 - 0.40

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
PAH 16 EPA Total by GCMS (diss.filt)	0.000306	<0.000082	0.00306	<0.00082	-	-	-
Nickel	0.00191	<0.0004	0.0191	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	16	<0.2	160	<2	-	-	-

Leach Test Information

Date Prepared	19-Oct-2020
pH (pH Units)	7.96
Conductivity (µS/cm)	91.90
Temperature (°C)	18.30
Volume Leachant (Litres)	0.861

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.111	**Natural Moisture Content (%)**	23.5
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	80.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029258
Sampled Date	05-Oct-2020
Customer Sample Ref.	TP123 ES2
Depth (m)	1.30 - 1.30

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Low Level Hexavalent Chromium	0.00496	<0.003	0.0496	<0.03	-	-	-
Sulphate (soluble)	2.2	<2	22	<20	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Total Cyanide (W)	0.07	<0.05	0.7	<0.5	-	-	-
Acenaphthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Arsenic	0.000533	<0.0005	0.00533	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000106	<0.000005	0.000106	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.0599	<0.01	0.599	<0.1	-	-	-
Phenanthrene (diss.filt)	0.00000786	<0.000005	0.0000786	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	19	<2	190	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene (diss.filt)	0.00000687	<0.000005	0.0000687	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chromium	0.00428	<0.001	0.0428	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Copper	0.000938	<0.0003	0.00938	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-

Leach Test Information

Date Prepared	20-Oct-2020
pH (pH Units)	8.03
Conductivity (µS/cm)	42.60
Temperature (°C)	15.30
Volume Leachant (Litres)	0.879

Mcerts Certification does not apply to leachates

05/11/2020 14:13:51

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.111	**Natural Moisture Content (%)**	23.5
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	80.9
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029258
Sampled Date	05-Oct-2020
Customer Sample Ref.	TP123 ES2
Depth (m)	1.30 - 1.30

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
PAH 16 EPA Total by GCMS (diss.filt)	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
Nickel	0.0011	<0.0004	0.011	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	4.93	<0.2	49.3	<2	-	-	-

Leach Test Information

Date Prepared	20-Oct-2020
pH (pH Units)	8.03
Conductivity (µS/cm)	42.60
Temperature (°C)	15.30
Volume Leachant (Litres)	0.879

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.105	**Natural Moisture Content (%)**	15.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	86.3
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029287
Sampled Date	08-Oct-2020
Customer Sample Ref.	TP112 ES2
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Low Level Hexavalent Chromium	<0.003	<0.003	<0.03	<0.03	-	-	-
Sulphate (soluble)	279	<2	2790	<20	-	-	-
Sulphide	0.102	<0.01	1.02	<0.1	-	-	-
Dissolved Organic Carbon	6.36	<3	63.6	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	0.0000316	<0.00001	0.000316	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.00031	<0.000005	0.0031	<0.00005	-	-	-
Arsenic	0.00332	<0.0005	0.0332	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	0.000322	<0.000005	0.00322	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000501	<0.000005	0.000501	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	0.000025	<0.000005	0.00025	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.272	<0.01	2.72	<0.1	-	-	-
Phenanthrene (diss.filt)	0.0000201	<0.000005	0.000201	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	115	<2	1150	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	0.0000111	<0.000005	0.000111	<0.00005	-	-	-
Chrysene (diss.filt)	0.0000348	<0.000005	0.000348	<0.00005	-	-	-
Pyrene (diss.filt)	0.0000391	<0.000005	0.000391	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Benzo(a)anthracene (diss.filt)	0.0000221	<0.000005	0.000221	<0.00005	-	-	-
Chromium	0.00305	<0.001	0.0305	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	0.0000312	<0.000005	0.000312	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	0.0000398	<0.000002	0.000398	<0.00002	-	-	-
Copper	0.00328	<0.0003	0.0328	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	0.0000672	<0.000005	0.000672	<0.00005	-	-	-
Lead	0.000584	<0.0002	0.00584	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	0.000106	<0.000005	0.00106	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	0.0000858	<0.000005	0.000858	<0.00005	-	-	-

Leach Test Information

Date Prepared	17-Oct-2020
pH (pH Units)	6.78
Conductivity (µS/cm)	713.00
Temperature (°C)	20.20
Volume Leachant (Litres)	0.885

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.105	**Natural Moisture Content (%)**	15.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	86.3
Particle Size <4mm	>95%		

Case	
SDG	201014-61
Lab Sample Number(s)	23029287
Sampled Date	08-Oct-2020
Customer Sample Ref.	TP112 ES2
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
PAH 16 EPA Total by GCMS (diss.filt)	0.0012	<0.000082	0.012	<0.00082	-	-	-
Nickel	0.00876	<0.0004	0.0876	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	154	<0.2	1540	<2	-	-	-

Leach Test Information

Date Prepared	17-Oct-2020
pH (pH Units)	6.78
Conductivity (µS/cm)	713.00
Temperature (°C)	20.20
Volume Leachant (Litres)	0.885

Mcerts Certification does not apply to leachates

05/11/2020 14:13:51

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CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Notification of NDPs (No determination possible)

Date Received : 14/10/2020 10:58:38

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
23029261	TP123 ES3	1.90 - 1.90	Asbestos Quantification - Full	Insufficient Sample

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM243		Mixed Anions In Soils By Kone
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM331		Low Level Hexavalent Chromium
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Test Completion Dates

Lab Sample No(s)	23029073	23029173	23029176	23029103	23029301	23029026	23029109	23029318	23029287	23029135
Customer Sample Ref.	CP106	CP108	CP108	TP101	TP102	TP105	TP108	TP111	TP112	TP122
AGS Ref.	ES2	ES1	ES2	ES1	ES2	ES1	ES3	ES2	ES2	ES1
Depth	1.80 - 1.80	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.00 - 0.60	2.30 - 2.30	1.50 - 1.50	1.80 - 1.80	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3			21-Oct-2020						21-Oct-2020	
Anions by Kone (soil)	22-Oct-2020	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	22-Oct-2020	21-Oct-2020		21-Oct-2020
Anions by Kone (w)			21-Oct-2020						21-Oct-2020	
Asbestos ID in Solid Samples	22-Oct-2020	22-Oct-2020		22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020		22-Oct-2020
Asbestos Quantification - Full					05-Nov-2020					
Boron Water Soluble	22-Oct-2020	21-Oct-2020		20-Oct-2020	20-Oct-2020	20-Oct-2020	22-Oct-2020	20-Oct-2020		21-Oct-2020
CEN 10:1 Leachate (1 Stage)			20-Oct-2020						17-Oct-2020	
CEN Readings			21-Oct-2020						21-Oct-2020	
Cyanide Comp/Free/Total/Thiocyanate	21-Oct-2020	21-Oct-2020	22-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	22-Oct-2020	20-Oct-2020	22-Oct-2020	21-Oct-2020
Dissolved Metals by ICP-MS			21-Oct-2020						22-Oct-2020	
Dissolved Organic/Inorganic Carbon			23-Oct-2020						21-Oct-2020	
Easily Liberated Sulphide	21-Oct-2020	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	22-Oct-2020	21-Oct-2020		21-Oct-2020
EPH CWG GC (S)	21-Oct-2020	20-Oct-2020		20-Oct-2020	20-Oct-2020	20-Oct-2020	22-Oct-2020	20-Oct-2020		21-Oct-2020
GRO by GC-FID (S)	21-Oct-2020	21-Oct-2020		19-Oct-2020	21-Oct-2020	19-Oct-2020	21-Oct-2020	21-Oct-2020		21-Oct-2020
Hexavalent Chromium (s)	21-Oct-2020	21-Oct-2020		20-Oct-2020	20-Oct-2020	20-Oct-2020	22-Oct-2020	20-Oct-2020		21-Oct-2020
Low Level Hexavalent Chromium (w)			21-Oct-2020						21-Oct-2020	
Mercury Dissolved			21-Oct-2020						21-Oct-2020	
Metals in solid samples by OES	23-Oct-2020	22-Oct-2020		20-Oct-2020	23-Oct-2020	21-Oct-2020	22-Oct-2020	20-Oct-2020		22-Oct-2020
Moisture at 105C			17-Oct-2020						17-Oct-2020	
PAH by GCMS	21-Oct-2020	22-Oct-2020		22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020		23-Oct-2020
PAH in waters by GC-MS (diss.filt)			22-Oct-2020						22-Oct-2020	
PCBs by GCMS	22-Oct-2020						22-Oct-2020	21-Oct-2020	21-Oct-2020	
pH	21-Oct-2020	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	21-Oct-2020		20-Oct-2020
pH Value			21-Oct-2020						21-Oct-2020	
Phenols by HPLC (S)	21-Oct-2020	20-Oct-2020		20-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	20-Oct-2020		21-Oct-2020
Phenols by HPLC (W)			22-Oct-2020						21-Oct-2020	
Sample description	20-Oct-2020	16-Oct-2020	16-Oct-2020	17-Oct-2020	17-Oct-2020	16-Oct-2020	19-Oct-2020	17-Oct-2020	17-Oct-2020	19-Oct-2020
Sulphide			21-Oct-2020						21-Oct-2020	
Total Organic Carbon	26-Oct-2020	22-Oct-2020		22-Oct-2020	22-Oct-2020	22-Oct-2020	23-Oct-2020	22-Oct-2020		23-Oct-2020
Total Sulphate	22-Oct-2020	22-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	22-Oct-2020	21-Oct-2020		22-Oct-2020
TPH CWG GC (S)	21-Oct-2020	21-Oct-2020		20-Oct-2020	21-Oct-2020	20-Oct-2020	22-Oct-2020	21-Oct-2020		21-Oct-2020
VOC MS (S)	21-Oct-2020	21-Oct-2020		19-Oct-2020	19-Oct-2020	21-Oct-2020	21-Oct-2020	19-Oct-2020		21-Oct-2020

Lab Sample No(s)	23029248	23029258	23029261	23029157	23029204	23029183	23029278	23029282	23029118	23029192
Customer Sample Ref.	TP123	TP123	TP123	TP126	TP136	TP137	TP139	TP139	TP141	TP144
AGS Ref.	ES1	ES2	ES3	ES1	ES1	ES1	ES2	ES3	ES1	ES1
Depth	0.80 - 0.80	1.30 - 1.30	1.90 - 1.90	0.50 - 0.50	0.80 - 0.80	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	0.40 - 0.40
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3		22-Oct-2020								
Anions by Kone (soil)	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020
Anions by Kone (w)		22-Oct-2020								
Asbestos ID in Solid Samples	22-Oct-2020		22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020
Asbestos Quantification - Full				05-Nov-2020						
Boron Water Soluble	20-Oct-2020		21-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	21-Oct-2020	20-Oct-2020	21-Oct-2020	20-Oct-2020
CEN 10:1 Leachate (1 Stage)		20-Oct-2020								
CEN Readings		21-Oct-2020								
Cyanide Comp/Free/Total/Thiocyanate	20-Oct-2020	23-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	20-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020
Dissolved Metals by ICP-MS		22-Oct-2020								
Dissolved Organic/Inorganic Carbon		23-Oct-2020								
Easily Liberated Sulphide	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	21-Oct-2020
EPH CWG GC (S)	20-Oct-2020		21-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	21-Oct-2020	20-Oct-2020
GRO by GC-FID (S)	21-Oct-2020		21-Oct-2020	19-Oct-2020	19-Oct-2020	19-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	19-Oct-2020
Hexavalent Chromium (s)	20-Oct-2020		21-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	21-Oct-2020	20-Oct-2020	22-Oct-2020	20-Oct-2020
Low Level Hexavalent Chromium (w)		22-Oct-2020								
Mercury Dissolved		22-Oct-2020								
Metals in solid samples by OES	21-Oct-2020		22-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	22-Oct-2020	21-Oct-2020	22-Oct-2020	21-Oct-2020
Moisture at 105C		20-Oct-2020								
PAH by GCMS	25-Oct-2020		22-Oct-2020	24-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	25-Oct-2020	23-Oct-2020	22-Oct-2020
PAH in waters by GC-MS (diss.filt)		22-Oct-2020								
PCBs by GCMS			27-Oct-2020							
pH	21-Oct-2020		21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	21-Oct-2020
pH Value		22-Oct-2020								
Phenols by HPLC (S)	22-Oct-2020		22-Oct-2020	20-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	21-Oct-2020	22-Oct-2020
Phenols by HPLC (W)		22-Oct-2020								
Sample description	16-Oct-2020	16-Oct-2020	16-Oct-2020	16-Oct-2020	16-Oct-2020	16-Oct-2020	16-Oct-2020	16-Oct-2020	19-Oct-2020	16-Oct-2020
Sulphide		22-Oct-2020								
Total Organic Carbon	22-Oct-2020		23-Oct-2020	22-Oct-2020	22-Oct-2020	22-Oct-2020	23-Oct-2020	23-Oct-2020	22-Oct-2020	22-Oct-2020
Total Sulphate	21-Oct-2020		22-Oct-2020	21-Oct-2020	20-Oct-2020	21-Oct-2020	22-Oct-2020	21-Oct-2020	22-Oct-2020	20-Oct-2020
TPH CWG GC (S)	21-Oct-2020		21-Oct-2020	20-Oct-2020	20-Oct-2020	20-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020
VOC MS (S)	19-Oct-2020		20-Oct-2020	20-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	21-Oct-2020	20-Oct-2020	19-Oct-2020

CERTIFICATE OF ANALYSIS

SDG:	201014-61	**Client Reference:**	LD10162	**Report Number:**	574266
Location:	Ten Acres Lane	**Order Number:**	LD1659	**Superseded Report:**	572741

Lab Sample No(s)	23029237	23029143	23029150
Customer Sample Ref.	TP148	TP149	TP149
AGS Ref.	ES1	ES1	ES2
Depth	0.40 - 0.40	0.50 - 0.50	1.60 - 1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3	21-Oct-2020		
Anions by Kone (soil)		21-Oct-2020	21-Oct-2020
Anions by Kone (w)	21-Oct-2020		
Asbestos ID in Solid Samples		22-Oct-2020	22-Oct-2020
Asbestos Quantification - Full		05-Nov-2020	
Boron Water Soluble		21-Oct-2020	21-Oct-2020
CEN 10:1 Leachate (1 Stage)	20-Oct-2020		
CEN Readings	21-Oct-2020		
Cyanide Comp/Free/Total/Thiocyanate	22-Oct-2020	21-Oct-2020	21-Oct-2020
Dissolved Metals by ICP-MS	21-Oct-2020		
Dissolved Organic/Inorganic Carbon	22-Oct-2020		
Easily Liberated Sulphide		21-Oct-2020	21-Oct-2020
EPH CWG GC (S)		20-Oct-2020	20-Oct-2020
GRO by GC-FID (S)		21-Oct-2020	21-Oct-2020
Hexavalent Chromium (s)		21-Oct-2020	21-Oct-2020
Low Level Hexavalent Chromium (w)	21-Oct-2020		
Mercury Dissolved	21-Oct-2020		
Metals in solid samples by OES		22-Oct-2020	22-Oct-2020
Moisture at 105C	19-Oct-2020		
PAH by GCMS		22-Oct-2020	22-Oct-2020
PAH in waters by GC-MS (diss.filt)	22-Oct-2020		
pH		21-Oct-2020	21-Oct-2020
pH Value	21-Oct-2020		
Phenols by HPLC (S)		22-Oct-2020	22-Oct-2020
Phenols by HPLC (W)	22-Oct-2020		
Sample description	16-Oct-2020	16-Oct-2020	16-Oct-2020
Sulphide	21-Oct-2020		
Total Organic Carbon		23-Oct-2020	22-Oct-2020
Total Sulphate		22-Oct-2020	22-Oct-2020
TPH CWG GC (S)		21-Oct-2020	21-Oct-2020
VOC MS (S)		21-Oct-2020	20-Oct-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Wardell Armstrong LLP
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Staffordshire
ST1 5BD

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	24 October 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201015-136
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	572485

We received 7 samples on Wednesday October 14, 2020 and 3 of these samples were scheduled for analysis which was completed on Saturday October 24, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23041441	CP110		0.60 - 0.60	08/10/2020
23041445	CP113		0.50 - 0.50	08/10/2020
23041449	CP113		0.80 - 0.80	08/10/2020
23041422	TP104		1.80 - 1.80	09/10/2020
23041413	TP109		1.10 - 1.10	09/10/2020
23041433	TP138		1.60 - 1.60	09/10/2020
23041437	TP138		3.30 - 3.30	09/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)							
			23041449			23041422			23041433	
			Customer Sample Reference							
			CP113			TP104			TP138	
			AGS Reference							
			Depth (m)							
			0.80 - 0.80			1.80 - 1.80			1.60 - 1.60	
			Container							
			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type							
			S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3	X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3	X		X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 3	X			X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3	X			X			X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 3	X			X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 3	X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 3		X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3	X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 3	X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 3	X			X			X	
pH	All	NDPs: 0 Tests: 3	X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3	X			X			X	
Sample description	All	NDPs: 0 Tests: 1	X							
Total Organic Carbon	All	NDPs: 0 Tests: 3	X			X			X	
Total Sulphate	All	NDPs: 0 Tests: 3	X			X			X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23041449		23041422		23041433			
Customer Sample Reference			CP113		TP104		TP138			
AGS Reference										
Depth (m)			0.80 - 0.80		1.80 - 1.80		1.60 - 1.60			
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S
TPH CWG GC (S)	All	NDPs: 0 Tests: 3	X			X			X	
VOC MS (S)	All	NDPs: 0 Tests: 3		X			X			X

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23041449	CP113	0.80 - 0.80	Dark Brown	Sandy Clay Loam	None	None
23041422	TP104	1.80 - 1.80	Dark Brown	Sandy Loam	Vegetation	Brick
23041433	TP138	1.60 - 1.60	Dark Brown	Sandy Loam	Vegetation	Brick

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP104	TP138			
			Depth (m)	0.80 - 0.80	1.80 - 1.80	1.60 - 1.60			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	08/10/2020	09/10/2020	09/10/2020			
			Sample Time	.	.	.			
			Date Received	14/10/2020	14/10/2020	14/10/2020			
			SDG Ref	201015-136	201015-136	201015-136			
			Lab Sample No.(s)	23041449	23041422	23041433			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	16	18			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M	<0.01 @ M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 @ M	0.0714 @ M	<0.01 @ M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	<0.015 @ M	<0.015 @ M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M	0.0714 @ M	<0.035 @ M			
Soil Organic Matter (SOM)	<0.35 %	TM132		0.748 #	8.76 #	5.05 #			
pH	1 pH Units	TM133		7.35 M	8.2 M	8.39 M			
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	1.63 #			
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M			
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	<15 @ M			
Arsenic	<0.6 mg/kg	TM181		4.56 M	18.1 M	10.3 M			
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.408 M	0.415 M			
Chromium	<0.9 mg/kg	TM181		10.5 M	27.3 M	11.1 M			
Copper	<1.4 mg/kg	TM181		6.9 M	100 M	44.5 M			
Lead	<0.7 mg/kg	TM181		13.1 M	123 M	471 M			
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.178 M	0.356 M			
Nickel	<0.2 mg/kg	TM181		7.73 M	29.9 M	22.4 M			
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #			
Zinc	<1.9 mg/kg	TM181		32.8 M	162 M	194 M			
Sulphate, Total	<48 mg/kg	TM221		<48 M	821 M	1070 M			
Boron, water soluble	<1 mg/kg	TM222		<1 M	1.29 M	<1 M			
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0225 M	0.116 M	0.0275 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP104	TP138			
			Depth (m)	0.80 - 0.80	1.80 - 1.80	1.60 - 1.60			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	08/10/2020	09/10/2020	09/10/2020			
			Sample Time	.	.	.			
			Date Received	14/10/2020	14/10/2020	14/10/2020			
			SDG Ref	201015-136	201015-136	201015-136			
			Lab Sample No.(s)	23041449	23041422	23041433			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.5	84	85.8			
Acenaphthene-d10 % recovery**	%	TM218		84.1	78.3	80.6			
Phenanthrene-d10 % recovery**	%	TM218		91.6	87	85.6			
Chrysene-d12 % recovery**	%	TM218		98.8	87.8	92.7			
Perylene-d12 % recovery**	%	TM218		93.1	84	84.2			
Naphthalene	<0.009 mg/kg	TM218		<0.009 M	3.14 M	0.0632 M			
Acenaphthylene	<0.012 mg/kg	TM218		<0.012 M	0.148 M	0.0172 M			
Acenaphthene	<0.008 mg/kg	TM218		<0.008 M	7.93 M	0.0843 M			
Fluorene	<0.01 mg/kg	TM218		<0.01 M	6.32 M	0.0521 M			
Phenanthrene	<0.015 mg/kg	TM218		<0.015 M	45.4 M	0.679 M			
Anthracene	<0.016 mg/kg	TM218		<0.016 M	11.7 M	0.154 M			
Fluoranthene	<0.017 mg/kg	TM218		<0.017 M	51.9 M	1.13 M			
Pyrene	<0.015 mg/kg	TM218		<0.015 M	43.8 M	1.04 M			
Benz(a)anthracene	<0.014 mg/kg	TM218		<0.014 M	18.7 M	0.604 M			
Chrysene	<0.01 mg/kg	TM218		<0.01 M	18.4 M	0.594 M			
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		<0.015 M	22.1 M	0.894 M			
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.014 M	7 M	0.322 M			
Benzo(a)pyrene	<0.015 mg/kg	TM218		<0.015 M	16.3 M	0.655 M			
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.018 M	10.2 M	0.596 M			
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023 M	1.92 M	0.103 M			
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<0.024 M	10 M	0.522 M			
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		<0.118	275	7.52			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP104	TP138
			Depth (m)	0.80 - 0.80	1.80 - 1.80	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	08/10/2020	09/10/2020	09/10/2020
			Sample Time	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201015-136	201015-136	201015-136
			Lab Sample No.(s)	23041449	23041422	23041433
			AGS Reference			
GRO Surrogate % recovery**	%	TM089		99.3 @	79.3	77.1
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.01 @	0.0107	<0.01
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.01 @	0.0476	<0.01
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.01 @	0.0762	<0.01
Aliphatics >C10-C12	<1 mg/kg	TM414		<1	2.29	<1
Aliphatics >C12-C16	<1 mg/kg	TM414		<1	14.1	<1
Aliphatics >C16-C21	<1 mg/kg	TM414		<1	23.1	4.16
Aliphatics >C21-C35	<1 mg/kg	TM414		<1	55.9	22.8
Aliphatics >C35-C44	<1 mg/kg	TM414		<1	17.1	3.53
Total Aliphatics >C10-C44	<5 mg/kg	TM414		<5	112	31
Total Aliphatics & Aromatics >C10-C44	<10 mg/kg	TM414		<10	657	74.7
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.01 @	<0.01	<0.01
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.01 @	<0.01	<0.01
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.01 @	0.05	<0.01
Aromatics > EC10-EC12	<1 mg/kg	TM414		<1	3.84	<1
Aromatics > EC12-EC16	<1 mg/kg	TM414		<1	40.2	1.35
Aromatics > EC16-EC21	<1 mg/kg	TM414		<1	142	5.99
Aromatics > EC21-EC35	<1 mg/kg	TM414		<1	324	31.8
Aromatics >EC35-EC44	<1 mg/kg	TM414		<1	34.4	4.44
Aromatics > EC40-EC44	<1 mg/kg	TM414		<1	7.07	<1
Total Aromatics > EC10-EC44	<5 mg/kg	TM414		<5	544	43.7
Total Aliphatics & Aromatics >C5-C44	<10 mg/kg	TM414		<10	657	74.7
Total Aliphatics >C5-C10	<0.05 mg/kg	TM089		<0.05 @	0.134	<0.05
Total Aromatics >EC5-EC10	<0.05 mg/kg	TM089		<0.05 @	<0.05	<0.05
GRO >C5-C10	<0.02 mg/kg	TM089		<0.02 @	0.134	<0.02

Validated

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP104	TP138			
			Depth (m)	0.80 - 0.80	1.80 - 1.80	1.60 - 1.60			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	08/10/2020	09/10/2020	09/10/2020			
			Sample Time	.	.	.			
			Date Received	14/10/2020	14/10/2020	14/10/2020			
			SDG Ref	201015-136	201015-136	201015-136			
			Lab Sample No.(s)	23041449	23041422	23041433			
			AGS Reference						
Dibromofluoromethane**	%	TM116		123	117	109			
Toluene-d8**	%	TM116		97.9	87.9	96			
4-Bromofluorobenzene**	%	TM116		97.4	72.4	90			
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.01 M	<0.01 M	<0.1 M			
Benzene	<0.009 mg/kg	TM116		<0.009 M	<0.009 M	<0.09 M			
Toluene	<0.007 mg/kg	TM116		<0.007 M	<0.007 M	<0.07 M			
Ethylbenzene	<0.004 mg/kg	TM116		<0.004 M	<0.004 M	<0.04 M			
p/m-Xylene	<0.01 mg/kg	TM116		<0.01 #	<0.01 #	<0.1 #			
o-Xylene	<0.01 mg/kg	TM116		<0.01 M	<0.01 M	<0.1 M			
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.2			
Sum of BTEX	<0.04 mg/kg	TM116		<0.04	<0.04	<0.4			

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP113 0.80 - 0.80 SOLID 08/10/2020 00:00:00 14/10/2020 05:00:00 201015-136 23041449 TM048	23/10/2020	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP104 1.80 - 1.80 SOLID 09/10/2020 00:00:00 14/10/2020 05:00:00 201015-136 23041422 TM048	23/10/2020	Barbara Urbanek-Walsh	Loose fibres in soil.	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP138 1.60 - 1.60 SOLID 09/10/2020 00:00:00 14/10/2020 05:00:00 201015-136 23041433 TM048	23/10/2020	Barbara Urbanek-Walsh	Soil containing ACM debris.	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201015-136	**Client Reference:**	LD10162	**Report Number:**	572485
Location:	Ten Acres Lane	**Order Number:**	LD1664	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23041449	23041422	23041433
Customer Sample Ref.	CP113	TP104	TP138
AGS Ref.			
Depth	0.80 - 0.80	1.80 - 1.80	1.60 - 1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	22-Oct-2020	22-Oct-2020	22-Oct-2020
Asbestos ID in Solid Samples	23-Oct-2020	23-Oct-2020	23-Oct-2020
Boron Water Soluble	22-Oct-2020	22-Oct-2020	22-Oct-2020
Cyanide Comp/Free/Total/Thiocyanate	22-Oct-2020	22-Oct-2020	22-Oct-2020
Easily Liberated Sulphide	21-Oct-2020	21-Oct-2020	22-Oct-2020
EPH CWG GC (S)	22-Oct-2020	22-Oct-2020	22-Oct-2020
GRO by GC-FID (S)	22-Oct-2020	22-Oct-2020	22-Oct-2020
Hexavalent Chromium (s)	22-Oct-2020	22-Oct-2020	22-Oct-2020
Metals in solid samples by OES	23-Oct-2020	23-Oct-2020	23-Oct-2020
PAH by GCMS	24-Oct-2020	24-Oct-2020	22-Oct-2020
pH	22-Oct-2020	21-Oct-2020	22-Oct-2020
Phenols by HPLC (S)	23-Oct-2020	23-Oct-2020	23-Oct-2020
Sample description	20-Oct-2020	21-Oct-2020	21-Oct-2020
Total Organic Carbon	23-Oct-2020	23-Oct-2020	23-Oct-2020
Total Sulphate	22-Oct-2020	22-Oct-2020	22-Oct-2020
TPH CWG GC (S)	22-Oct-2020	22-Oct-2020	22-Oct-2020
VOC MS (S)	21-Oct-2020	21-Oct-2020	21-Oct-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	12 June 2021
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201020-9
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	601712

This report has been revised and directly supersedes 599546 in its entirety.

We received 13 samples on Wednesday October 14, 2020 and 7 of these samples were scheduled for analysis which was completed on Wednesday May 26, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23067137	CP104	ES02		12/10/2020
23067134	CP104	ES01	0.50 - 0.50	12/10/2020
23067092	CP104		1.50 - 1.50	12/10/2020
23067095	CP104		2.70 - 2.70	12/10/2020
23067122	CP107		0.50 - 0.50	12/10/2020
23067127	CP107		3.00 - 3.00	12/10/2020
23067131	CP107		4.50 - 4.50	12/10/2020
23067109	TP106		1.30 - 1.30	12/10/2020
23067118	TP119		1.70 - 1.70	12/10/2020
23067113	TP120		3.10 - 3.10	12/10/2020
23067088	TP121		2.20 - 2.20	12/10/2020
23067098	TP147		3.30 - 3.30	12/10/2020
23067103	TP150		2.20 - 2.20	12/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067095	23067127	23067131	23067118	23067113	23067088		23067103						
Customer Sample Reference			CP104	CP107	CP107	TP119	TP120	TP121		TP150						
AGS Reference																
Depth (m)			2.70 - 2.70	3.00 - 3.00	4.50 - 4.50	1.70 - 1.70	3.10 - 3.10	2.20 - 2.20		2.20 - 2.20						
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 2			X				X							
Anions by Kone (soil)	All	NDPs: 0 Tests: 5	X				X		X			X			X	
Anions by Kone (w)	All	NDPs: 0 Tests: 2			X				X							
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 5	X				X				X			X		
Asbestos Quantification - Full	All	NDPs: 1 Tests: 0				N										
Boron Water Soluble	All	NDPs: 0 Tests: 5	X				X					X			X	
CEN Readings	All	NDPs: 0 Tests: 2			X				X							
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7	X		X		X		X			X			X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 2			X				X							
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 2			X				X							
Easily Liberated Sulphide	All	NDPs: 0 Tests: 5	X				X					X			X	
EPH CWG (Aliphatic) Filtered GC (W)	All	NDPs: 0 Tests: 2			X				X							
EPH CWG (Aromatic) Filtered GC (W)	All	NDPs: 0 Tests: 2			X				X							
EPH CWG GC (S)	All	NDPs: 0 Tests: 5	X				X					X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5		X		X				X			X			X

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067095		23067127		23067131		23067118		23067113		23067088				23067103	
Customer Sample Reference			CP104		CP107		CP107		TP119		TP120		TP121				TP150	
AGS Reference																		
Depth (m)			2.70 - 2.70		3.00 - 3.00		4.50 - 4.50		1.70 - 1.70		3.10 - 3.10		2.20 - 2.20				2.20 - 2.20	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
GRO by GC-FID (W)	All	NDPs: 0 Tests: 2			X						X							
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 5	X				X		X					X			X	
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 2			X						X							
Mercury Dissolved	All	NDPs: 0 Tests: 2			X						X							
Metals in solid samples by OES	All	NDPs: 0 Tests: 5	X				X		X					X			X	
PAH by GCMS	All	NDPs: 0 Tests: 5	X				X		X					X			X	
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 2			X						X							
PCBs by GCMS	All	NDPs: 0 Tests: 3					X		X								X	
pH	All	NDPs: 0 Tests: 5	X				X		X					X			X	
pH Value	All	NDPs: 0 Tests: 2			X						X							
Phenols by HPLC (S)	All	NDPs: 0 Tests: 5	X				X		X					X			X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 2			X						X							
Sample description	All	NDPs: 0 Tests: 7	X			X	X		X			X		X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 3	X				X		X									
Sulphide	All	NDPs: 0 Tests: 2			X						X							

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067095	23067127	23067131	23067118	23067113	23067088								23067103	
Customer Sample Reference			CP104	CP107	CP107	TP119	TP120	TP121								TP150	
AGS Reference																	
Depth (m)			2.70 - 2.70	3.00 - 3.00	4.50 - 4.50	1.70 - 1.70	3.10 - 3.10	2.20 - 2.20								2.20 - 2.20	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg Cardboard Container	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Total Organic Carbon	All	NDPs: 0 Tests: 5	X			X	X	X					X			X	
Total Sulphate	All	NDPs: 0 Tests: 5	X			X	X	X					X			X	
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 2			X					X							
TPH CWG GC (S)	All	NDPs: 0 Tests: 5	X			X	X	X					X			X	
VOC MS (S)	All	NDPs: 0 Tests: 5		X					X					X			X

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23067095	CP104	2.70 - 2.70	Dark Brown	Loamy Sand	Stones	None
23067127	CP107	3.00 - 3.00	Dark Brown	Loamy Sand	Vegetation	Stones
23067131	CP107	4.50 - 4.50	Dark Brown	Sand	Stones	Brick
23067118	TP119	1.70 - 1.70	Dark Brown	Sandy Loam	Stones	Oil/Petroleum
23067113	TP120	3.10 - 3.10	Dark Brown	Loamy Sand	Vegetation	Stones
23067088	TP121	2.20 - 2.20	Dark Brown	Clay	None	None
23067103	TP150	2.20 - 2.20	Dark Brown	Loamy Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	CP107	TP119	TP120	TP121
			Depth (m)	2.70 - 2.70	3.00 - 3.00	4.50 - 4.50	1.70 - 1.70	3.10 - 3.10	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9	201020-9
			Lab Sample No.(s)	23067095	23067127	23067131	23067118	23067113	23067088
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		16	18	18	11	12	15
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M		0.0122 @ M	0.0336 @ M		<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 @ M		0.0366 @ M	0.056 @ M		<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M		0.183 @ M	<0.015 @ M		<0.015 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M		0.232 @ M	0.0896 @ M		<0.035 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.49 #		3.78 #	7.53 #		1.13 #
pH	1 pH Units	TM133		8.28 M		7.81 M	7.89 M		7.75 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #		<0.6 #	<0.6 #		<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 @ M		<1 @ M	5.7 @ M		<1 @ M
PCB congener 28	<3 µg/kg	TM168				<30 M	64.8 M		
PCB congener 52	<3 µg/kg	TM168				<30 M	24.7 M		
PCB congener 101	<3 µg/kg	TM168				<30 M	26.5 M		
PCB congener 118	<3 µg/kg	TM168				<30 M	16.8 M		
PCB congener 138	<3 µg/kg	TM168				<30 M	17.1 M		
PCB congener 153	<3 µg/kg	TM168				<30 M	<15 M		
PCB congener 180	<3 µg/kg	TM168				<30 M	<15 M		
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168				<210	150		
Sulphide, Easily liberated	<15 mg/kg	TM180		195 @ M		200 @ M	91.6 @ M		<15 @ M
Arsenic	<0.6 mg/kg	TM181		10.8 M		8.2 M	20.8 M		8.52 M
Cadmium	<0.02 mg/kg	TM181		0.299 M		0.407 M	3.21 M		0.0607 M
Chromium	<0.9 mg/kg	TM181		12.9 M		13.5 M	32.4 M		25.3 M
Copper	<1.4 mg/kg	TM181		56 M		76.6 M	162 M		22.6 M
Lead	<0.7 mg/kg	TM181		113 M		589 M	352 M		12.7 M
Mercury	<0.1 mg/kg	TM181		<0.14 M		0.144 M	0.329 M		<0.14 M
Nickel	<0.2 mg/kg	TM181		15.9 M		19.2 M	35.8 M		45.4 M
Selenium	<1 mg/kg	TM181		<1 #		<1 #	<1 #		<1 #
Zinc	<1.9 mg/kg	TM181		188 M		474 M	873 M		60.8 M
Sulphate, Total	<48 mg/kg	TM221		1150 M		12300 M	1020 M		<48 M
Boron, water soluble	<1 mg/kg	TM222		<1 M		<1 M	<1 M		<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.128 M		1.5 M	0.0837 M		0.0493 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP150
Depth (m)	2.20 - 2.20
Sample Type	Soil/Solid (S)
Date Sampled	12/10/2020
Sample Time	.
Date Received	14/10/2020
SDG Ref	201020-9
Lab Sample No.(s)	23067103
AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	27
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132	3.34 #
pH	1 pH Units	TM133	7.12 M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #
Cyanide, Total	<1 mg/kg	TM153	<1 @ M
PCB congener 28	<3 µg/kg	TM168	<3 M
PCB congener 52	<3 µg/kg	TM168	11.7 M
PCB congener 101	<3 µg/kg	TM168	19.7 M
PCB congener 118	<3 µg/kg	TM168	10.3 M
PCB congener 138	<3 µg/kg	TM168	14.8 M
PCB congener 153	<3 µg/kg	TM168	9.46 M
PCB congener 180	<3 µg/kg	TM168	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	65.9
Sulphide, Easily liberated	<15 mg/kg	TM180	2610 @ M
Arsenic	<0.6 mg/kg	TM181	20.6 M
Cadmium	<0.02 mg/kg	TM181	<0.2 M
Chromium	<0.9 mg/kg	TM181	70.9 M
Copper	<1.4 mg/kg	TM181	1250 M
Lead	<0.7 mg/kg	TM181	133 M
Mercury	<0.1 mg/kg	TM181	<1.4 M
Nickel	<0.2 mg/kg	TM181	87.3 M
Selenium	<1 mg/kg	TM181	31.1 #
Zinc	<1.9 mg/kg	TM181	463 M
Sulphate, Total	<48 mg/kg	TM221	3330 M
Boron, water soluble	<1 mg/kg	TM222	1.42 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.417 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119	TP121	TP150
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70	2.20 - 2.20	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
			Sample Time	.	.	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9
			Lab Sample No.(s)	23067095	23067131	23067118	23067088	23067103
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		97.2	97.1	92.2	95.8	86.8
Acenaphthene-d10 % recovery**	%	TM218		87.1	90.3	83.9	87.1	84.4
Phenanthrene-d10 % recovery**	%	TM218		95.9	96.5	88.1	94.6	79.2
Chrysene-d12 % recovery**	%	TM218		108	96.1	81.4	95.8	61.9
Perylene-d12 % recovery**	%	TM218		102	92.9	72.3	82.6	50.6
Naphthalene	<9 µg/kg	TM218		113 M	556 @ M	343 @ M	<9 M	173 @ M
Acenaphthylene	<12 µg/kg	TM218		29 M	<120 @ M	95.5 @ M	<12 M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		230 M	905 @ M	459 @ M	<8 M	25 @ M
Fluorene	<10 µg/kg	TM218		194 M	798 @ M	456 @ M	<10 M	20.8 @ M
Phenanthrene	<15 µg/kg	TM218		1190 M	6560 @ M	4110 @ M	20.8 M	101 @ M
Anthracene	<16 µg/kg	TM218		330 M	1750 @ M	1110 @ M	<16 M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		1470 M	7570 @ M	7710 @ M	34.1 M	91.9 @ M
Pyrene	<15 µg/kg	TM218		1400 M	6350 @ M	7360 @ M	33.8 M	88.2 @ M
Benz(a)anthracene	<14 µg/kg	TM218		635 M	2770 @ M	3520 @ M	20.1 M	39.1 @ M
Chrysene	<10 µg/kg	TM218		541 M	2320 @ M	3290 @ M	16.8 M	39.1 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		723 M	3130 @ M	4840 @ M	20.6 M	71.1 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		212 M	1130 @ M	1650 @ M	<14 M	22.9 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		583 M	2440 @ M	3060 @ M	<15 M	29.6 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		356 M	1590 @ M	2110 @ M	<18 M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		70.5 M	<230 @ M	330 @ M	<23 M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		365 M	1480 @ M	1790 @ M	<24 M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		8440	39300	42200	146	702

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119			
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/10/2020	12/10/2020	12/10/2020			
			Sample Time	.	.	.			
			Date Received	14/10/2020	14/10/2020	14/10/2020			
			SDG Ref	201020-9	201020-9	201020-9			
			Lab Sample No.(s)	23067095	23067131	23067118			
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<200	499			
Pentachlorophenol	<100 µg/kg	TM157		<100	<200	<200			
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<200	<200			
Nitrobenzene	<100 µg/kg	TM157		<100	<200	<200			
Isophorone	<100 µg/kg	TM157		<100	<200	<200			
Hexachloroethane	<100 µg/kg	TM157		<100	<200	<200			
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<200	<400			
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<200	<200			
Hexachlorobenzene	<100 µg/kg	TM157		<100	<200	<200			
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	284	<200			
Dimethyl phthalate	<100 µg/kg	TM157		<100	<200	<200			
Diethyl phthalate	<100 µg/kg	TM157		<100	<200	<200			
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	256	265			
Dibenzofuran	<100 µg/kg	TM157		144	376	245			
Carbazole	<100 µg/kg	TM157		<100	376	416			
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	102000	<200			
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	37300	1830			
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<200	<200			
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<200	<200			
Azobenzene	<100 µg/kg	TM157		<100	<200	<200			
4-Nitrophenol	<100 µg/kg	TM157		<100	<200	<200			
4-Nitroaniline	<100 µg/kg	TM157		<100	<200	<200			
4-Methylphenol	<100 µg/kg	TM157		<100	<200	<200			
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<200	<200			
4-Chloroaniline	<100 µg/kg	TM157		<100	<200	<200			
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<200	<200			
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<200	<200			
3-Nitroaniline	<100 µg/kg	TM157		<100	<200	<200			
2-Nitrophenol	<100 µg/kg	TM157		<100	<200	<200			
2-Nitroaniline	<100 µg/kg	TM157		<100	<200	<200			
2-Methylphenol	<100 µg/kg	TM157		<100	<200	<200			
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<200	<200			
2-Chlorophenol	<100 µg/kg	TM157		<100	<200	<200			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119			
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/10/2020	12/10/2020	12/10/2020			
			Sample Time	.	.	.			
			Date Received	14/10/2020	14/10/2020	14/10/2020			
			SDG Ref	201020-9	201020-9	201020-9			
			Lab Sample No.(s)	23067095	23067131	23067118			
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<200	<200			
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<200	<200			
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<200	<200			
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<200	<200			
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<200	<200			
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<200	<200			
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<200			
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<200			
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<200			
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<200	<200			
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<200	228			
Acenaphthylene	<100 µg/kg	TM157		<100	<200	<200			
Acenaphthene	<100 µg/kg	TM157		264	426	411			
Anthracene	<100 µg/kg	TM157		348	1230	1180			
Benzo(a)anthracene	<100 µg/kg	TM157		708	2060	3270			
Benzo(b)fluoranthene	<100 µg/kg	TM157		552	1590	3300			
Benzo(k)fluoranthene	<100 µg/kg	TM157		588	1430	2280			
Benzo(a)pyrene	<100 µg/kg	TM157		600	1790	2980			
Benzo(g,h,i)perylene	<100 µg/kg	TM157		384	894	1920			
Chrysene	<100 µg/kg	TM157		780	1830	3110			
Fluoranthene	<100 µg/kg	TM157		1750	5330	8170			
Fluorene	<100 µg/kg	TM157		192	576	377			
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		264	1510	2780			
Phenanthrene	<100 µg/kg	TM157		1450	4930	4420			
Pyrene	<100 µg/kg	TM157		1720	4260	6930			
Naphthalene	<100 µg/kg	TM157		192	<200	244			
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<200	326			
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<200	<200			

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119	TP121	TP150	
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70	2.20 - 2.20	2.20 - 2.20	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	
			Sample Time	.	.	.	.	.	
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020	
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9	
			Lab Sample No.(s)	23067095	23067131	23067118	23067088	23067103	
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		92.5	80.7	72.9	101	68.3 4	
Aliphatics >C5-C6	<10 µg/kg	TM089		30	36.6	29.1	<10	41.1 4	
Aliphatics >C6-C8	<10 µg/kg	TM089		76.8	101	57.1	<10	101 4	
Aliphatics >C8-C10	<10 µg/kg	TM089		355	195	149	<10	114 4	
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	18000	<1000	11500	
Aliphatics >C12-C16	<1000 µg/kg	TM414		6830	3140	263000	<1000	28200	
Aliphatics >C16-C21	<1000 µg/kg	TM414		53700	4300	773000	<1000	31000	
Aliphatics >C21-C35	<1000 µg/kg	TM414		211000	29000	902000	2850	120000	
Aliphatics >C35-C44	<1000 µg/kg	TM414		29200	2130	194000	<1000	24900	
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		301000	38700	2150000	<5000	216000	
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		343000	362000	2680000	<10000	321000	
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	
Aromatics >EC8-EC10	<10 µg/kg	TM089		236	129	99.7	<10	75.4 4	
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	19900	<1000	9720	
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	7020	88800	<1000	15200	
Aromatics > EC16-EC21	<1000 µg/kg	TM414		8980	76700	91400	<1000	6820	
Aromatics > EC21-EC35	<1000 µg/kg	TM414		29200	203000	322000	<1000	71800	
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2950	36600	5720	<1000	1080	
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1530	3740	<1000	<1000	<1000	
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		42100	323000	528000	<5000	105000	
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		344000	362000	2680000	<10000	321000	
Total Aliphatics >C5-C10	<50 µg/kg	TM089		462	333	235	<50	256 4	
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		236	129	99.7	<50	75.4 4	
GRO >C5-C10	<20 µg/kg	TM089		698	462	335	<20	332 4	

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119	TP121	TP150
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70	2.20 - 2.20	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
			Sample Time	.	.	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9
			Lab Sample No.(s)	23067095	23067131	23067118	23067088	23067103
			AGS Reference					
Dibromofluoromethane**	%	TM116		102	111	111	105	112
Toluene-d8**	%	TM116		90.4	90.2	96	94.9	96.8
4-Bromofluorobenzene**	%	TM116		70.3	70.3	85.7	70.1	90.5
Dichlorodifluoromethane	<6 µg/kg	TM116		<6 M	<6 M	<120 M		
Chloromethane	<7 µg/kg	TM116		<7 #	<7 #	<140 #		
Vinyl Chloride	<6 µg/kg	TM116		<6 M	<6 M	<120 M		
Bromomethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Chloroethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Trichlorofluorormethane	<6 µg/kg	TM116		<6 M	<6 M	<120 M		
1,1-Dichloroethene	<10 µg/kg	TM116		<10 #	<10 #	<200 #		
Carbon Disulphide	<7 µg/kg	TM116		<7 M	18.4 M	<140 M		
Dichloromethane	<10 µg/kg	TM116		26.9 #	<10 #	<200 #		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M	<200 M	<10 M	<200 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,1-Dichloroethane	<8 µg/kg	TM116		<8 M	<8 M	<160 M		
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<6 M	<6 M	<120 M		
2,2-Dichloropropane	<10 µg/kg	TM116		<10	<10	<200		
Bromochloromethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Chloroform	<8 µg/kg	TM116		<8 M	<8 M	<160 M		
1,1,1-Trichloroethane	<7 µg/kg	TM116		<7 M	<7 M	<140 M		
1,1-Dichloropropene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Carbontetrachloride	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,2-Dichloroethane	<5 µg/kg	TM116		<5 M	<5 M	<100 M		
Benzene	<9 µg/kg	TM116		<9 M	<9 M	<180 M	<9 M	<180 M
Trichloroethene	<9 µg/kg	TM116		<9 #	<9 #	<180 #		
1,2-Dichloropropane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Dibromomethane	<9 µg/kg	TM116		<9 M	<9 M	<180 M		
Bromodichloromethane	<7 µg/kg	TM116		<7 M	<7 M	<140 M		
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Toluene	<7 µg/kg	TM116		<7 M	<7 M	<140 M	<7 M	<140 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<10	<10	<200		
1,1,2-Trichloroethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,3-Dichloropropane	<7 µg/kg	TM116		<7 M	<7 M	<140 M		

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119	TP121	TP150
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70	2.20 - 2.20	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
			Sample Time	.	.	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9
			Lab Sample No.(s)	23067095	23067131	23067118	23067088	23067103
			AGS Reference					
Tetrachloroethene	<5 µg/kg	TM116		<5 M	<5 M	<100 M		
Dibromochloromethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,2-Dibromoethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Chlorobenzene	<5 µg/kg	TM116		<5 M	<5 M	<100 M		
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M	<80 M	<4 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #	<200 #	<10 #	<200 #
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M	<200 M	<10 M	<200 M
Styrene	<10 µg/kg	TM116		<10 #	<10 #	<200 #		
Bromoform	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Isopropylbenzene	<5 µg/kg	TM116		<5 #	<5 #	<100 #		
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<10 #	<10 #	<200 #		
1,2,3-Trichloropropane	<16 µg/kg	TM116		<16 M	<16 M	<320 M		
Bromobenzene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
Propylbenzene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
2-Chlorotoluene	<9 µg/kg	TM116		<9 M	<9 M	<180 M		
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<8 M	<8 M	<160 M		
4-Chlorotoluene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
tert-Butylbenzene	<14 µg/kg	TM116		<14 M	<14 M	<280 M		
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		15.8 #	<9 #	<180 #		
sec-Butylbenzene	<10 µg/kg	TM116		<10	<10	<200		
4-Isopropyltoluene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,3-Dichlorobenzene	<8 µg/kg	TM116		<8 M	<8 M	<160 M		
1,4-Dichlorobenzene	<5 µg/kg	TM116		<5 M	<5 M	<100 M		
n-Butylbenzene	<11 µg/kg	TM116		<11	<11	<220		
1,2-Dichlorobenzene	<10 µg/kg	TM116		<10 M	<10 M	<200 M		
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<14 M	<14 M	<280 M		
Tert-amyl methyl ether	<10 µg/kg	TM116		<10 #	<10 #	<200 #		
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<20	<20	<400		
Hexachlorobutadiene	<20 µg/kg	TM116		<20	<20	<400		
Naphthalene	<13 µg/kg	TM116		473 M	<13 M	<260 M		
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<20 #	<20 #	<400 #		
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<20	<20	<400		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	CP107	TP119	TP121	TP150
			Depth (m)	2.70 - 2.70	4.50 - 4.50	1.70 - 1.70	2.20 - 2.20	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
			Sample Time	.	.	.	.	.
			Date Received	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			SDG Ref	201020-9	201020-9	201020-9	201020-9	201020-9
			Lab Sample No.(s)	23067095	23067131	23067118	23067088	23067103
			AGS Reference					
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.4	<0.02	<0.4
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<800	<40	<800

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP104 2.70 - 2.70 SOLID 12/10/2020 00:00:00 14/10/2020 05:00:00 201020-9 23067095 TM048	27/10/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP107 4.50 - 4.50 SOLID 12/10/2020 00:00:00 14/10/2020 05:00:00 201020-9 23067131 TM048	27/10/2020	Marcin Magdziarek	Soil containing ACM debris	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP119 1.70 - 1.70 SOLID 12/10/2020 00:00:00 14/10/2020 05:00:00 201020-9 23067118 TM048	27/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP121 2.20 - 2.20 SOLID 12/10/2020 00:00:00 14/10/2020 05:00:00 201020-9 23067088 TM048	27/10/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP150 2.20 - 2.20 SOLID 12/10/2020 00:00:00 14/10/2020 05:00:00 201020-9 23067103 TM048	27/10/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.110	**Natural Moisture Content (%)**	21.8
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	82.1
Particle Size <4mm	>95%		

Case	
SDG	201020-9
Lab Sample Number(s)	23067113
Sampled Date	12-Oct-2020
Customer Sample Ref.	TP120
Depth (m)	3.10 - 3.10

Eluate Analysis	**C_2** Concⁿ in 10:1 eluate (mg/l)		**A_2** 10:1 concⁿ leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Alkalinity Filtered as CaCO3	65	<2	650	<20	-	-	-
Low Level Hexavalent Chromium	<0.003	<0.003	<0.03	<0.03	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.000978	<0.0005	0.00978	<0.005	-	-	-
Boron	0.113	<0.01	1.13	<0.1	-	-	-
Cadmium	0.000112	<0.00008	0.00112	<0.0008	-	-	-
Sulphate (soluble)	60.3	<2	603	<20	-	-	-
Acenaphthene (diss.filt)	0.0000225	<0.000005	0.000225	<0.00005	-	-	-
Acenaphthylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Anthracene (diss.filt)	0.00000837	<0.000005	0.0000837	<0.00005	-	-	-
Chrysene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene (diss.filt)	0.0000408	<0.000005	0.000408	<0.00005	-	-	-
Fluorene (diss.filt)	0.0000077	<0.000005	0.000077	<0.00005	-	-	-
Naphthalene (diss.filt)	0.0000135	<0.00001	0.000135	<0.0001	-	-	-
Phenanthrene (diss.filt)	0.0000388	<0.000005	0.000388	<0.00005	-	-	-
Pyrene (diss.filt)	0.0000352	<0.000005	0.000352	<0.00005	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.49
Conductivity (µS/cm)	221.00
Temperature (°C)	6.20
Volume Leachant (Litres)	0.880

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.110	**Natural Moisture Content (%)**	21.8
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	82.1
Particle Size <4mm	>95%		

Case	
SDG	201020-9
Lab Sample Number(s)	23067113
Sampled Date	12-Oct-2020
Customer Sample Ref.	TP120
Depth (m)	3.10 - 3.10

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Calcium (Dis.Filt) mg/l	45.8	<0.2	458	<2	-	-	-
Chromium	0.00482	<0.001	0.0482	<0.01	-	-	-
Copper	0.00451	<0.0003	0.0451	<0.003	-	-	-
Lead	0.00164	<0.0002	0.0164	<0.002	-	-	-
Nickel	0.00551	<0.0004	0.0551	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS (diss.filt)	0.000167	<0.000082	0.00167	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.49
Conductivity (µS/cm)	221.00
Temperature (°C)	6.20
Volume Leachant (Litres)	0.880

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19.2
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	83.9
Particle Size <4mm	>95%		

Case	
SDG	201020-9
Lab Sample Number(s)	23067127
Sampled Date	12-Oct-2020
Customer Sample Ref.	CP107
Depth (m)	3.00 - 3.00

Eluate Analysis	**C_2** Concⁿ in 10:1 eluate (mg/l)		**A_2** 10:1 concⁿ leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	0.013	<0.01	0.13	<0.1	-	-	-
Aromatics >EC16-EC21	0.036	<0.01	0.36	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC35	0.036	<0.01	0.36	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.049	<0.01	0.49	<0.1	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.049	<0.01	0.49	<0.1	-	-	-
Total Alkalinity Filtered as CaCO3	75	<2	750	<20	-	-	-
Low Level Hexavalent Chromium	<0.015	<0.015	<0.15	<0.15	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Dissolved Organic Carbon	3.76	<3	37.6	<30	-	-	-
Mercury Dissolved (CVAF)	0.0000234	<0.00001	0.000234	<0.0001	-	-	-
Arsenic	0.00105	<0.0005	0.0105	<0.005	-	-	-
Boron	0.021	<0.01	0.21	<0.1	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Sulphate (soluble)	26.9	<2	269	<20	-	-	-
Acenaphthene (diss.filt)	0.00236	<0.000005	0.0236	<0.00005	-	-	-
Acenaphthylene (diss.filt)	0.0000726	<0.000005	0.000726	<0.00005	-	-	-
Anthracene (diss.filt)	0.00118	<0.000005	0.0118	<0.00005	-	-	-
Chrysene (diss.filt)	0.0000766	<0.000005	0.000766	<0.00005	-	-	-
Fluoranthene (diss.filt)	0.00163	<0.000005	0.0163	<0.00005	-	-	-
Fluorene (diss.filt)	0.00148	<0.000005	0.0148	<0.00005	-	-	-
Naphthalene (diss.filt)	0.000089	<0.00001	0.00089	<0.0001	-	-	-
Phenanthrene (diss.filt)	0.00527	<0.000005	0.0527	<0.00005	-	-	-
Pyrene (diss.filt)	0.0011	<0.000005	0.011	<0.00005	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.33
Conductivity (µS/cm)	183.00
Temperature (°C)	19.00
Volume Leachant (Litres)	0.883

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19.2
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	83.9
Particle Size <4mm	>95%		

Case	
SDG	201020-9
Lab Sample Number(s)	23067127
Sampled Date	12-Oct-2020
Customer Sample Ref.	CP107
Depth (m)	3.00 - 3.00

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Calcium (Dis.Filt) mg/l	41.4	<0.2	414	<2	-	-	-
Chromium	0.0179	<0.001	0.179	<0.01	-	-	-
Copper	0.00794	<0.0003	0.0794	<0.003	-	-	-
Lead	0.0332	<0.0002	0.332	<0.002	-	-	-
Nickel	0.00124	<0.0004	0.0124	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Benzo(a)anthracene (diss.filt)	0.0000458	<0.000005	0.000458	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	0.0000288	<0.000002	0.000288	<0.00002	-	-	-
Benzo(b)fluoranthene (diss.filt)	0.0000455	<0.000005	0.000455	<0.00005	-	-	-
Benzo(g,h,i)perylene (diss.filt)	0.0000184	<0.000005	0.000184	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	0.0000228	<0.000005	0.000228	<0.00005	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS (diss.filt)	0.0134	<0.000082	0.134	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.33
Conductivity (µS/cm)	183.00
Temperature (°C)	19.00
Volume Leachant (Litres)	0.883

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Notification of NDPs (No determination possible)

Date Received : 20/10/2020 07:13:27

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
23067131	CP107	4.50 - 4.50	Asbestos Quantification - Full	Insufficient Sample

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM243		Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201020-9	**Client Reference:**	LD10162	**Report Number:**	601712
Location:	Ten Acres Lane	**Order Number:**	LD1668	**Superseded Report:**	599546

Test Completion Dates

Lab Sample No(s)	23067095	23067127	23067131	23067118	23067113	23067088	23067103
Customer Sample Ref.	CP104	CP107	CP107	TP119	TP120	TP121	TP150
AGS Ref.							
Depth	2.70 - 2.70	3.00 - 3.00	4.50 - 4.50	1.70 - 1.70	3.10 - 3.10	2.20 - 2.20	2.20 - 2.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3		26-Oct-2020			26-Oct-2020		
Anions by Kone (soil)	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
Anions by Kone (w)		26-Oct-2020			26-Oct-2020		
Asbestos ID in Solid Samples	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
Boron Water Soluble	26-Oct-2020		26-Oct-2020	26-Oct-2020		26-Oct-2020	26-Oct-2020
CEN 10:1 Leachate (1 Stage)		24-Oct-2020			24-Oct-2020		
CEN Readings		25-Oct-2020			25-Oct-2020		
Cyanide Comp/Free/Total/Thiocyanate	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020
Dissolved Metals by ICP-MS		27-Oct-2020			27-Oct-2020		
Dissolved Organic/Inorganic Carbon		27-Oct-2020			26-Oct-2020		
Easily Liberated Sulphide	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
EPH CWG (Aliphatic) Filtered GC (W)		27-Oct-2020			27-Oct-2020		
EPH CWG (Aromatic) Filtered GC (W)		27-Oct-2020			27-Oct-2020		
EPH CWG GC (S)	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	29-Oct-2020
GRO by GC-FID (S)	25-Oct-2020		25-Oct-2020	25-Oct-2020		25-Oct-2020	25-Oct-2020
GRO by GC-FID (W)		26-Oct-2020			26-Oct-2020		
Hexavalent Chromium (s)	26-Oct-2020		26-Oct-2020	26-Oct-2020		26-Oct-2020	26-Oct-2020
Low Level Hexavalent Chromium (w)		26-Oct-2020			26-Oct-2020		
Mercury Dissolved		27-Oct-2020			27-Oct-2020		
Metals in solid samples by OES	26-Oct-2020		27-Oct-2020	27-Oct-2020		26-Oct-2020	27-Oct-2020
Moisture at 105C		22-Oct-2020			22-Oct-2020		
PAH by GCMS	25-Oct-2020		26-Oct-2020	26-Oct-2020		25-Oct-2020	27-Oct-2020
PAH in waters by GC-MS (diss.filt)		26-May-2021			26-Oct-2020		
PCBs by GCMS			27-Oct-2020	27-Oct-2020			27-Oct-2020
pH	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
pH Value		27-Oct-2020			27-Oct-2020		
Phenols by HPLC (S)	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
Phenols by HPLC (W)		27-Oct-2020			26-Oct-2020		
Sample description	23-Oct-2020	22-Oct-2020	23-Oct-2020	23-Oct-2020	22-Oct-2020	23-Oct-2020	23-Oct-2020
Semi Volatile Organic Compounds	26-Oct-2020		27-Oct-2020	26-Oct-2020			
Sulphide		27-Oct-2020			27-Oct-2020		
Total Organic Carbon	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
Total Sulphate	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	27-Oct-2020
TPH CWG Filtered (W)		27-Oct-2020			27-Oct-2020		
TPH CWG GC (S)	27-Oct-2020		27-Oct-2020	27-Oct-2020		27-Oct-2020	29-Oct-2020
VOC MS (S)	24-Oct-2020		25-Oct-2020	24-Oct-2020		24-Oct-2020	25-Oct-2020

ALS Environmental, Land	Issue No. 4
	Date: 03/03/2020
QF.7.5.1 Data Amendments Form	Issued and Authorised by Quality Manager

SDG	Sample Event	Sample ID	Date Amended	Amendment Reason	Analysis/Component	Authorised (Lab Manager)	Previous Value	New Value	Units	Supersedes Report
201020-9	23113810	CP107	28/05/2021	Analytical/Quality Issue	PAH EPAMS Acenaphthylene	Geraint Pumford	2.39	0.0726	µg/L	599546

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Deeside
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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	27 October 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201020-14
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	572888

We received 10 samples on Thursday October 15, 2020 and 5 of these samples were scheduled for analysis which was completed on Tuesday October 27, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
230y7328	CP104		7.30 - 7.30	13/10/2020
23067321	NO ID		1.50 - 1.50	05/10/2020
23067326	TP109		1.30 - 1.30	09/10/2020
23067333	TP113		0.40 - 0.40	13/10/2020
23067357	TP115		0.40 - 0.40	13/10/2020
23067353	TP116		2.20 - 2.20	13/10/2020
23067323	TP140		0.50 - 1.60	09/10/2020
23067337	TP142		2.70 - 2.70	13/10/2020
23067343	TP146		0.80 - 0.80	13/10/2020
23067349	TP146		4.30 - 4.30	13/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067328		23067357		23067353		23067337		23067349	
Customer Sample Reference			CP104		TP115		TP116		TP142		TP146	
AGS Reference												
Depth (m)			7.30 - 7.30		0.40 - 0.40		2.20 - 2.20		2.70 - 2.70		4.30 - 4.30	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 1											X	
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X			X			X				
Anions by Kone (w)	All	NDPs: 0 Tests: 1											X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X			X					
Boron Water Soluble	All	NDPs: 0 Tests: 4		X			X			X				
CEN Readings	All	NDPs: 0 Tests: 1											X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5		X			X			X			X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1											X	
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 1											X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4		X			X			X				
EPH CWG (Aliphatic) Filtered GC (W)	All	NDPs: 0 Tests: 1											X	
EPH CWG (Aromatic) Filtered GC (W)	All	NDPs: 0 Tests: 1											X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X			X			X			
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1											X	

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Results Legend

- X — Test
- N — No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067328			23067357			23067353			23067337			23067349	
Customer Sample Reference			CP104			TP115			TP116			TP142			TP146	
AGS Reference																
Depth (m)			7.30 - 7.30			0.40 - 0.40			2.20 - 2.20			2.70 - 2.70			4.30 - 4.30	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4		X			X			X			X			
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 1													X	
Mercury Dissolved	All	NDPs: 0 Tests: 1													X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X			X			X			X			
PAH by GCMS	All	NDPs: 0 Tests: 4		X			X			X			X			
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 1													X	
PCBs by GCMS	All	NDPs: 0 Tests: 2		X			X									
pH	All	NDPs: 0 Tests: 4		X			X			X			X			
pH Value	All	NDPs: 0 Tests: 1													X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X			X			X			X			
Phenols by HPLC (W)	All	NDPs: 0 Tests: 1													X	
Sample description	All	NDPs: 0 Tests: 5		X			X			X			X			X
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 1		X												
Sulphide	All	NDPs: 0 Tests: 1													X	
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X			X			X			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23067328		23067357		23067353		23067337		23067349				
Customer Sample Reference			CP104		TP115		TP116		TP142		TP146				
AGS Reference															
Depth (m)			7.30 - 7.30		0.40 - 0.40		2.20 - 2.20		2.70 - 2.70		4.30 - 4.30				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Total Sulphate	All	NDPs: 0 Tests: 4		X			X			X			X			
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 1													X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X			X			
VOC MS (S)	All	NDPs: 0 Tests: 4			X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23067328	CP104	7.30 - 7.30	Dark Brown	Sand	Stones	Oil/Petroleum
23067357	TP115	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	Brick
23067353	TP116	2.20 - 2.20	Dark Brown	Sandy Silt Loam	Stones	None
23067337	TP142	2.70 - 2.70	Dark Brown	Silty Clay	Stones	None
23067349	TP146	4.30 - 4.30	Black	Loamy Sand	Vegetation	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142	TP146
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70	4.30 - 4.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020	13/10/2020
			Sample Time	.	.	.	.	.
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020	15/10/2020
			SDG Ref	201020-14	201020-14	201020-14	201020-14	201020-14
			Lab Sample No.(s)	23067328	23067357	23067353	23067337	23067349
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		14	17	18	21	15
Phenol	<0.01 mg/kg	TM062 (S)		0.0234 M	<0.01 M	<0.01 M	<0.01 @ M	
Cresols	<0.01 mg/kg	TM062 (S)		0.0351 M	<0.01 M	<0.01 M	<0.01 @ M	
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 @ M	
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0585 M	<0.035 M	<0.035 M	<0.035 @ M	
Soil Organic Matter (SOM)	<0.35 %	TM132		2.09 #	5.74 #	2.9 #	3.64 #	
pH	1 pH Units	TM133		9.86 M	8.38 M	8.38 M	7.94 M	
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	
PCB congener 28	<3 µg/kg	TM168		83.4 M	<15 M			
PCB congener 52	<3 µg/kg	TM168		92.4 M	<15 M			
PCB congener 101	<3 µg/kg	TM168		170 M	<15 M			
PCB congener 118	<3 µg/kg	TM168		109 M	<15 M			
PCB congener 138	<3 µg/kg	TM168		88.7 M	<15 M			
PCB congener 153	<3 µg/kg	TM168		58.2 M	<15 M			
PCB congener 180	<3 µg/kg	TM168		14.2 M	<15 M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		616	<105			
Sulphide, Easily liberated	<15 mg/kg	TM180		388 @ M	<15 @ M	19.5 @ M	<15 @ M	
Arsenic	<0.6 mg/kg	TM181		32 M	12.8 M	14 M	11.9 M	
Cadmium	<0.02 mg/kg	TM181		1.19 M	0.95 M	0.155 M	0.222 M	
Chromium	<0.9 mg/kg	TM181		99.4 M	24.9 M	25.2 M	23.4 M	
Copper	<1.4 mg/kg	TM181		510 M	61.3 M	600 M	37.2 M	
Lead	<0.7 mg/kg	TM181		165 M	245 M	32.7 M	77 M	
Mercury	<0.14 mg/kg	TM181		<1.4 M	<0.14 M	<0.14 M	<0.14 M	
Nickel	<0.2 mg/kg	TM181		145 M	24.5 M	32.3 M	30 M	
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<1 #	<1 #	
Zinc	<1.9 mg/kg	TM181		316 M	218 M	74.1 M	77.3 M	
Sulphate, Total	<48 mg/kg	TM221		1320 M	634 M	158 M	188 M	
Boron, water soluble	<1 mg/kg	TM222		15.2 M	<1 M	1.81 M	6.21 M	
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0779 M	0.0154 M	0.0348 M	0.0863 M	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142		
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020		
			Sample Time	.	.	.	.		
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			SDG Ref	201020-14	201020-14	201020-14	201020-14		
			Lab Sample No.(s)	23067328	23067357	23067353	23067337		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.4	95.1	94.1	95		
Acenaphthene-d10 % recovery**	%	TM218		83	87.1	83.7	84.2		
Phenanthrene-d10 % recovery**	%	TM218		81.6	96	87.3	89.8		
Chrysene-d12 % recovery**	%	TM218		63.6	92.9	92.3	94.5		
Perylene-d12 % recovery**	%	TM218		51.2	85.2	84.6	88		
Naphthalene	<9 µg/kg	TM218		84.7 @ M	971 M	22.2 M	<9 M		
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	205 M	15.9 M	<12 M		
Acenaphthene	<8 µg/kg	TM218		76.1 @ M	800 M	16.5 M	24.1 M		
Fluorene	<10 µg/kg	TM218		71.8 @ M	782 M	13.6 M	16.9 M		
Phenanthrene	<15 µg/kg	TM218		368 @ M	7300 M	86.5 M	179 M		
Anthracene	<16 µg/kg	TM218		81.3 @ M	1430 M	40.8 M	41.5 M		
Fluoranthene	<17 µg/kg	TM218		441 @ M	8010 M	140 M	229 M		
Pyrene	<15 µg/kg	TM218		388 @ M	7030 M	147 M	203 M		
Benz(a)anthracene	<14 µg/kg	TM218		158 @ M	3190 M	59.9 M	93.4 M		
Chrysene	<10 µg/kg	TM218		190 @ M	2970 M	48 M	95 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		273 @ M	3250 M	64 M	78 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		68.2 @ M	1180 M	20.1 M	38.4 M		
Benzo(a)pyrene	<15 µg/kg	TM218		117 @ M	2570 M	63.4 M	83.8 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		70.9 @ M	1530 M	49.7 M	57.4 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	266 M	<23 M	<23 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		77.2 @ M	1400 M	58.8 M	56.3 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2460	42900	846	1200		

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	CP104
Depth (m)	7.30 - 7.30
Sample Type	Soil/Solid (S)
Date Sampled	13/10/2020
Sample Time	.
Date Received	15/10/2020
SDG Ref	201020-14
Lab Sample No.(s)	23067328
AGS Reference	

Component	LOD/Units	Method	
Phenol	<100 µg/kg	TM157	<100
Pentachlorophenol	<100 µg/kg	TM157	<100
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157	<100
Nitrobenzene	<100 µg/kg	TM157	<100
Isophorone	<100 µg/kg	TM157	<100
Hexachloroethane	<100 µg/kg	TM157	<100
Hexachlorocyclopentadiene	<100 µg/kg	TM157	<100
Hexachlorobutadiene	<100 µg/kg	TM157	<100
Hexachlorobenzene	<100 µg/kg	TM157	<100
n-Dioctyl phthalate	<100 µg/kg	TM157	<100
Dimethyl phthalate	<100 µg/kg	TM157	<100
Diethyl phthalate	<100 µg/kg	TM157	<100
n-Dibutyl phthalate	<100 µg/kg	TM157	<100
Dibenzofuran	<100 µg/kg	TM157	<100
Carbazole	<100 µg/kg	TM157	<100
Butylbenzyl phthalate	<100 µg/kg	TM157	<100
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157	164
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157	<100
bis(2-Chloroethyl)ether	<100 µg/kg	TM157	<100
Azobenzene	<100 µg/kg	TM157	<100
4-Nitrophenol	<100 µg/kg	TM157	<100
4-Nitroaniline	<100 µg/kg	TM157	<100
4-Methylphenol	<100 µg/kg	TM157	<100
4-Chlorophenylphenylether	<100 µg/kg	TM157	<100
4-Chloroaniline	<100 µg/kg	TM157	<100
4-Chloro-3-methylphenol	<100 µg/kg	TM157	<100
4-Bromophenylphenylether	<100 µg/kg	TM157	<100
3-Nitroaniline	<100 µg/kg	TM157	<100
2-Nitrophenol	<100 µg/kg	TM157	<100
2-Nitroaniline	<100 µg/kg	TM157	<100
2-Methylphenol	<100 µg/kg	TM157	<100
1,2,4-Trichlorobenzene	<100 µg/kg	TM157	<100
2-Chlorophenol	<100 µg/kg	TM157	<100

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.			CP104
Depth (m)			7.30 - 7.30
Sample Type			Soil/Solid (S)
Date Sampled			13/10/2020
Sample Time			.
Date Received			15/10/2020
SDG Ref			201020-14
Lab Sample No.(s)			23067328
AGS Reference			
Component	**LOD/Units**	**Method**	
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100
2,4-Dimethylphenol	<100 µg/kg	TM157	<100
2,4-Dichlorophenol	<100 µg/kg	TM157	<100
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100
2-Chloronaphthalene	<100 µg/kg	TM157	<100
2-Methylnaphthalene	<100 µg/kg	TM157	<100
Acenaphthylene	<100 µg/kg	TM157	<100
Acenaphthene	<100 µg/kg	TM157	<100
Anthracene	<100 µg/kg	TM157	<100
Benzo(a)anthracene	<100 µg/kg	TM157	<100
Benzo(b)fluoranthene	<100 µg/kg	TM157	176
Benzo(k)fluoranthene	<100 µg/kg	TM157	<100
Benzo(a)pyrene	<100 µg/kg	TM157	<100
Benzo(g,h,i)perylene	<100 µg/kg	TM157	<100
Chrysene	<100 µg/kg	TM157	<100
Fluoranthene	<100 µg/kg	TM157	257
Fluorene	<100 µg/kg	TM157	<100
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	<100
Phenanthrene	<100 µg/kg	TM157	222
Pyrene	<100 µg/kg	TM157	269
Naphthalene	<100 µg/kg	TM157	<100
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142		
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020		
			Sample Time	.	.	.	.		
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			SDG Ref	201020-14	201020-14	201020-14	201020-14		
			Lab Sample No.(s)	23067328	23067357	23067353	23067337		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99.6	84.7	73.3	106		
Aliphatics >C5-C6	<10 µg/kg	TM089		46.8	10.9	35.4	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089		122	15.7	68.3	<10		
Aliphatics >C8-C10	<10 µg/kg	TM089		414	25.4	165	<10		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	5640	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		7190	<1000	129000	<1000		
Aliphatics >C16-C21	<1000 µg/kg	TM414		22800	2850	111000	<1000		
Aliphatics >C21-C35	<1000 µg/kg	TM414		140000	11300	74000	<1000		
Aliphatics >C35-C44	<1000 µg/kg	TM414		32700	1490	47300	<1000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		204000	16400	367000	<5000		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		321000	163000	461000	<10000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		18.7	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		14	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		276	16.9	110	<10		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		9410	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9750	4730	35900	<1000		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		7680	36000	14100	<1000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		89000	95500	41800	2890		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	10500	2260	<1000		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1610	1150	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		117000	147000	94600	<5000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		322000	163000	462000	<10000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		583	52	268	<50		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		309	<50	110	<50		
GRO >C5-C10	<20 µg/kg	TM089		892	52	378	<20		

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142		
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020		
			Sample Time	.	.	.	.		
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			SDG Ref	201020-14	201020-14	201020-14	201020-14		
			Lab Sample No.(s)	23067328	23067357	23067353	23067337		
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	110	108	102		
Toluene-d8**	%	TM116		97.9	98.3	99.2	96.6		
4-Bromofluorobenzene**	%	TM116		93.2	96.5	97.1	73.9		
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 M					
Chloromethane	<7 µg/kg	TM116		<140 #					
Vinyl Chloride	<6 µg/kg	TM116		<120 M					
Bromomethane	<10 µg/kg	TM116		<200 M					
Chloroethane	<10 µg/kg	TM116		<200 M					
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M					
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #					
Carbon Disulphide	<7 µg/kg	TM116		<140 M					
Dichloromethane	<10 µg/kg	TM116		<200 #					
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<10 M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M					
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M					
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M					
2,2-Dichloropropane	<10 µg/kg	TM116		<200					
Bromochloromethane	<10 µg/kg	TM116		<200 M					
Chloroform	<8 µg/kg	TM116		<160 M					
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M					
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M					
Carbontetrachloride	<10 µg/kg	TM116		<200 M					
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M					
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<9 M		
Trichloroethene	<9 µg/kg	TM116		<180 #					
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M					
Dibromomethane	<9 µg/kg	TM116		<180 M					
Bromodichloromethane	<7 µg/kg	TM116		<140 M					
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M					
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<7 M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200					
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M					
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142		
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020		
			Sample Time	.	.	.	.		
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			SDG Ref	201020-14	201020-14	201020-14	201020-14		
			Lab Sample No.(s)	23067328	23067357	23067353	23067337		
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 M					
Dibromochloromethane	<10 µg/kg	TM116		<200 M					
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M					
Chlorobenzene	<5 µg/kg	TM116		<100 M					
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M					
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<4 M		
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<10 #		
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<10 M		
Styrene	<10 µg/kg	TM116		<200 #					
Bromoform	<10 µg/kg	TM116		<200 M					
Isopropylbenzene	<5 µg/kg	TM116		<100 #					
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #					
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M					
Bromobenzene	<10 µg/kg	TM116		<200 M					
Propylbenzene	<10 µg/kg	TM116		<200 M					
2-Chlorotoluene	<9 µg/kg	TM116		<180 M					
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M					
4-Chlorotoluene	<10 µg/kg	TM116		<200 M					
tert-Butylbenzene	<14 µg/kg	TM116		<280 M					
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #					
sec-Butylbenzene	<10 µg/kg	TM116		<200					
4-Isopropyltoluene	<10 µg/kg	TM116		<200 M					
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M					
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M					
n-Butylbenzene	<11 µg/kg	TM116		<220					
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M					
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M					
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #					
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400					
Hexachlorobutadiene	<20 µg/kg	TM116		<400					
Naphthalene	<13 µg/kg	TM116		<260 M					
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #					
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP104	TP115	TP116	TP142		
			Depth (m)	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	13/10/2020	13/10/2020	13/10/2020	13/10/2020		
			Sample Time	.	.	.	.		
			Date Received	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			SDG Ref	201020-14	201020-14	201020-14	201020-14		
			Lab Sample No.(s)	23067328	23067357	23067353	23067337		
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.02		
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<40		

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP104 7.30 - 7.30 SOLID 13/10/2020 00:00:00 15/10/2020 05:00:00 201020-14 23067328 TM048	27/10/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP115 0.40 - 0.40 SOLID 13/10/2020 00:00:00 15/10/2020 05:00:00 201020-14 23067357 TM048	27/10/2020	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP116 2.20 - 2.20 SOLID 13/10/2020 00:00:00 15/10/2020 05:00:00 201020-14 23067353 TM048	27/10/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP142 2.70 - 2.70 SOLID 13/10/2020 00:00:00 15/10/2020 05:00:00 201020-14 23067337 TM048	27/10/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.5
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.5
Particle Size <4mm	>95%		

Case	
SDG	201020-14
Lab Sample Number(s)	230y7349
Sampled Date	13-Oct-2020
Customer Sample Ref.	TP146
Depth (m)	4.30 - 4.30

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	0.012	<0.01	0.12	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.012	<0.01	0.12	<0.1	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.065	<0.01	0.65	<0.1	-	-	-
Low Level Hexavalent Chromium	<0.003	<0.003	<0.03	<0.03	-	-	-
Sulphate (soluble)	112	<2	1120	<20	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-
Dissolved Organic Carbon	5.91	<3	59.1	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.0000828	<0.000005	0.000828	<0.00005	-	-	-
Arsenic	0.00153	<0.0005	0.0153	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	0.0000941	<0.000005	0.000941	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000232	<0.000005	0.000232	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	0.00000861	<0.000005	0.0000861	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.319	<0.01	3.19	<0.1	-	-	-
Phenanthrene (diss.filt)	0.00005	<0.000005	0.0005	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	80	<2	800	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	0.0000302	<0.000005	0.000302	<0.00005	-	-	-
Chrysene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene (diss.filt)	0.000019	<0.000005	0.00019	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.19
Conductivity (µS/cm)	324.00
Temperature (°C)	16.40
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates

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17:13:44 27/10/2020

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.5
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.5
Particle Size <4mm	>95%		

Case	
SDG	201020-14
Lab Sample Number(s)	230y7349
Sampled Date	13-Oct-2020
Customer Sample Ref.	TP146
Depth (m)	4.30 - 4.30

Eluate Analysis	**C_2 Conc^n in 10:1 eluate (mg/l)**		**A_2 10:1 conc^n leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chromium	0.00448	<0.001	0.0448	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Copper	0.00487	<0.0003	0.0487	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Lead	0.00139	<0.0002	0.0139	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS (diss.filt)	0.000308	<0.000082	0.00308	<0.00082	-	-	-
Nickel	0.00245	<0.0004	0.0245	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	70.3	<0.2	703	<2	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	0.053	<0.05	0.53	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C10-C12	0.02	<0.01	0.2	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	0.013	<0.01	0.13	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-

Leach Test Information

Date Prepared	22-Oct-2020
pH (pH Units)	8.19
Conductivity (µS/cm)	324.00
Temperature (°C)	16.40
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates

27/10/2020 17:14:10

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM0y2 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM11y	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM1y8	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM243		Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM25y	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201020-14	**Client Reference:**	LD10162	**Report Number:**	572888
Location:	Ten Acres Lane	**Order Number:**	LD1yy9	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23067328	23067357	23067353	23067337	23067349
Customer Sample Ref.	CP104	TP115	TP116	TP142	TP146
AGS Ref.					
Depth	7.30 - 7.30	0.40 - 0.40	2.20 - 2.20	2.70 - 2.70	4.30 - 4.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3					26-Oct-2020
Anions by Kone (soil)	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
Anions by Kone (w)					26-Oct-2020
Asbestos ID in Solid Samples	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
Boron Water Soluble	26-Oct-2020	26-Oct-2020	26-Oct-2020	26-Oct-2020	
CEN 10:1 Leachate (1 Stage)					24-Oct-2020
CEN Readings					25-Oct-2020
Cyanide Comp/Free/Total/Thiocyanate	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020
Dissolved Metals by ICP-MS					27-Oct-2020
Dissolved Organic/Inorganic Carbon					26-Oct-2020
Easily Liberated Sulphide	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
EPH CWG (Aliphatic) Filtered GC (W)					27-Oct-2020
EPH CWG (Aromatic) Filtered GC (W)					27-Oct-2020
EPH CWG GC (S)	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
GRO by GC-FID (S)	25-Oct-2020	25-Oct-2020	25-Oct-2020	25-Oct-2020	
GRO by GC-FID (W)					26-Oct-2020
Hexavalent Chromium (s)	26-Oct-2020	26-Oct-2020	26-Oct-2020	26-Oct-2020	
Low Level Hexavalent Chromium (w)					26-Oct-2020
Mercury Dissolved					27-Oct-2020
Metals in solid samples by OES	27-Oct-2020	26-Oct-2020	27-Oct-2020	26-Oct-2020	
Moisture at 105C					22-Oct-2020
PAH by GCMS	27-Oct-2020	26-Oct-2020	24-Oct-2020	24-Oct-2020	
PAH in waters by GC-MS (diss.filt)					26-Oct-2020
PCBs by GCMS	27-Oct-2020	27-Oct-2020			
pH	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
pH Value					27-Oct-2020
Phenols by HPLC (S)	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
Phenols by HPLC (W)					27-Oct-2020
Sample description	23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	22-Oct-2020
Semi Volatile Organic Compounds	26-Oct-2020				
Sulphide					27-Oct-2020
Total Organic Carbon	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
Total Sulphate	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
TPH CWG Filtered (W)					27-Oct-2020
TPH CWG GC (S)	27-Oct-2020	27-Oct-2020	27-Oct-2020	27-Oct-2020	
VOC MS (S)	24-Oct-2020	24-Oct-2020	24-Oct-2020	24-Oct-2020	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	12 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201023-143
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	575474

This report has been revised and directly supersedes 575469 in its entirety.

We received 10 samples on Friday October 16, 2020 and 5 of these samples were scheduled for analysis which was completed on Thursday November 12, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23103778	CP109		1.00 - 1.00	14/10/2020
23103782	CP109		3.50 - 3.50	14/10/2020
23103788	CP109		7.50 - 7.50	14/10/2020
23103810	TP114		0.70 - 0.70	14/10/2020
23103816	TP114		3.40 - 3.40	14/10/2020
23103806	TP128		3.60 - 3.60	14/10/2020
23103843	TP131		2.50 - 2.50	14/10/2020
2310379y	TP145		2.30 - 2.30	14/10/2020
23103823	TP145		3.80 - 3.80	14/10/2020
23103831	TP145		3.80 - 3.80	14/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23103788			23103816			23103806			23103796		23103823	
Customer Sample Reference			CP109			TP114			TP128			TP145		TP145	
AGS Reference															
Depth (m)			7.50 - 7.50			3.40 - 3.40			3.60 - 3.60			2.30 - 2.30		3.80 - 3.80	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 1										X				
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X			X			X					X	
Anions by Kone (w)	All	NDPs: 0 Tests: 1										X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X			X					X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1	X													
Boron Water Soluble	All	NDPs: 0 Tests: 4		X			X			X					X	
CEN Readings	All	NDPs: 0 Tests: 1										X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5		X			X			X		X			X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1										X				
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 1										X				
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4		X			X			X					X	
EPH CWG (Aliphatic) Filtered GC (W)	All	NDPs: 0 Tests: 1										X				
EPH CWG (Aromatic) Filtered GC (W)	All	NDPs: 0 Tests: 1										X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X					X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X			X			X					X

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23103788			23103816			23103806			23103796			23103823	
Customer Sample Reference			CP109			TP114			TP128			TP145			TP145	
AGS Reference																
Depth (m)			7.50 - 7.50			3.40 - 3.40			3.60 - 3.60			2.30 - 2.30			3.80 - 3.80	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1										X				
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4		X			X			X					X	
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 1										X				
Mercury Dissolved	All	NDPs: 0 Tests: 1										X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X			X			X					X	
PAH by GCMS	All	NDPs: 0 Tests: 4		X			X			X					X	
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 1										X				
PCBs by GCMS	All	NDPs: 0 Tests: 3					X			X					X	
pH	All	NDPs: 0 Tests: 4		X			X			X					X	
pH Value	All	NDPs: 0 Tests: 1										X				
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X			X			X					X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 1										X				
Sample description	All	NDPs: 0 Tests: 5		X			X			X			X		X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 2		X											X	
Sulphide	All	NDPs: 0 Tests: 1										X				

16:56:42 12/11/2020

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23103788			23103816			23103806			23103796			23103823						
Customer Sample Reference			CP109			TP114			TP128			TP145			TP145						
AGS Reference																					
Depth (m)			7.50 - 7.50			3.40 - 3.40			3.60 - 3.60			2.30 - 2.30			3.80 - 3.80						
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)				
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S				
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X			X						X					
Total Sulphate	All	NDPs: 0 Tests: 4		X			X			X						X					
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 1										X									
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X						X					

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23103788	CP109	7.50 - 7.50	Dark Brown	Sand	Stones	Brick
23103816	TP114	3.40 - 3.40	Black	Loamy Sand	Stones	Vegetation
23103806	TP128	3.60 - 3.60	Grey	Loamy Sand	Stones	Vegetation
23103796	TP145	2.30 - 2.30	Dark Brown	Silty Clay Loam	Stones	Oil/Petroleum
23103823	TP145	3.80 - 3.80	Black	Silt Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP114	TP128	TP145	TP145
			Depth (m)	7.50 - 7.50	3.40 - 3.40	3.60 - 3.60	2.30 - 2.30	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			Sample Time	.	.	.	.	.
			Date Received	16/10/2020	16/10/2020	16/10/2020	16/10/2020	16/10/2020
			SDG Ref	201023-143	201023-143	201023-143	201023-143	201023-143
			Lab Sample No.(s)	23103788	23103816	23103806	23103796	23103823
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		13	20	28	35	32
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M	<0.01 @ M		<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)		0.0345 @ M	0.0375 @ M	<0.01 @ M		<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	0.0625 @ M	<0.015 @ M		<0.015 @ M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 @ M	0.1 @ M	<0.035 @ M		<0.035 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132		0.759 #	11.5 #	7.69 #		19.8 #
pH	1 pH Units	TM133		9.27 M	6.19 M	7.23 M		7.5 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<1.2 #	<0.6 #		<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 @ M	79.5 @ M	<1 @ M		<1 @ M
PCB congener 28	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 52	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 101	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 118	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 138	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 153	<3 µg/kg	TM168			<3 M	<3 M		<60 M
PCB congener 180	<3 µg/kg	TM168			<3 M	<3 M		<60 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<21	<21		<420
Sulphide, Easily liberated	<15 mg/kg	TM180		41.8 @ M	332 @ M	<15 @ M		51.2 @ M
Arsenic	<0.6 mg/kg	TM181		22 M	45.4 M	309 M		72.5 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.574 M	0.069 M		0.692 M
Chromium	<0.9 mg/kg	TM181		585 M	884 M	36 M		28.4 M
Copper	<1.4 mg/kg	TM181		423 M	105 M	38.4 M		271 M
Lead	<0.7 mg/kg	TM181		30.1 M	28700 M	341 M		227 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	0.344 M	1.12 M		0.457 M
Nickel	<0.2 mg/kg	TM181		535 M	65.8 M	5.68 M		46.4 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	16.9 #		<1 #
Zinc	<1.9 mg/kg	TM181		283 M	384 M	79.4 M		338 M
Sulphate, Total	<48 mg/kg	TM221		6110 M	3510 M	19800 M		1140 M
Boron, water soluble	<1 mg/kg	TM222		15.3 M	5.75 M	1.73 M		2.74 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0683 M	0.329 M	0.0985 M		0.048 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		5.11 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #				
Additional Asbestos Components (Using TM048)		TM304		None #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP114	TP128	TP145	TP145
			Depth (m)	7.50 - 7.50	3.40 - 3.40	3.60 - 3.60	2.30 - 2.30	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
			Sample Time	.	.	.	.	.
			Date Received	16/10/2020	16/10/2020	16/10/2020	16/10/2020	16/10/2020
			SDG Ref	201023-143	201023-143	201023-143	201023-143	201023-143
			Lab Sample No.(s)	23103788	23103816	23103806	23103796	23103823
			AGS Reference					
Analysts Comments		TM304		N/C				
Asbestos Quantification - Total - %	<0.001 %	TM304		5.11 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP114	TP128	TP145		
			Depth (m)	7.50 - 7.50	3.40 - 3.40	3.60 - 3.60	3.80 - 3.80		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	14/10/2020	14/10/2020	14/10/2020	14/10/2020		
			Sample Time	.	.	.	.		
			Date Received	16/10/2020	16/10/2020	16/10/2020	16/10/2020		
			SDG Ref	201023-143	201023-143	201023-143	201023-143		
			Lab Sample No.(s)	23103788	23103816	23103806	23103823		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		88.9	89.6	91	79.1		
Acenaphthene-d10 % recovery**	%	TM218		87.6	94.5	95.3	87.7		
Phenanthrene-d10 % recovery**	%	TM218		90.2	100	96.5	90.5		
Chrysene-d12 % recovery**	%	TM218		85	88.8	87	84.5		
Perylene-d12 % recovery**	%	TM218		73.4	80	81.4	76.7		
Naphthalene	<9 µg/kg	TM218		38.2 @ M	63.9 @ M	<9 @ M	602 @ M		
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	16.5 @ M	<12 @ M	218 @ M		
Acenaphthene	<8 µg/kg	TM218		53 @ M	74 @ M	<8 @ M	1230 @ M		
Fluorene	<10 µg/kg	TM218		32.9 @ M	66 @ M	<10 @ M	956 @ M		
Phenanthrene	<15 µg/kg	TM218		158 @ M	685 @ M	34.3 @ M	3660 @ M		
Anthracene	<16 µg/kg	TM218		47.7 @ M	175 @ M	<16 @ M	1770 @ M		
Fluoranthene	<17 µg/kg	TM218		171 @ M	1110 @ M	73.9 @ M	13900 @ M		
Pyrene	<15 µg/kg	TM218		145 @ M	1020 @ M	57.4 @ M	13000 @ M		
Benz(a)anthracene	<14 µg/kg	TM218		58.9 @ M	507 @ M	55 @ M	3470 @ M		
Chrysene	<10 µg/kg	TM218		49.1 @ M	541 @ M	65.3 @ M	4550 @ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		31.8 @ M	698 @ M	95.4 @ M	7520 @ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		17.9 @ M	229 @ M	29.6 @ M	<70 @ M		
Benzo(a)pyrene	<15 µg/kg	TM218		42.1 @ M	493 @ M	34 @ M	3570 @ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		26.8 @ M	327 @ M	42.4 @ M	2820 @ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	54.4 @ M	<23 @ M	422 @ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		29 @ M	313 @ M	38.6 @ M	2760 @ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		901	6370	526	60400		

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP145				
			Depth (m)	7.50 - 7.50	3.80 - 3.80				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	14/10/2020	14/10/2020				
			Sample Time	.	.				
			Date Received	16/10/2020	16/10/2020				
			SDG Ref	201023-143	201023-143				
			Lab Sample No.(s)	23103788	23103823				
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<500				
Pentachlorophenol	<100 µg/kg	TM157		<100	<500				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<500				
Nitrobenzene	<100 µg/kg	TM157		<100	<500				
Isophorone	<100 µg/kg	TM157		<100	<500				
Hexachloroethane	<100 µg/kg	TM157		<100	<500				
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<500				
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<500				
Hexachlorobenzene	<100 µg/kg	TM157		<100	<500				
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<500				
Dimethyl phthalate	<100 µg/kg	TM157		<100	<500				
Diethyl phthalate	<100 µg/kg	TM157		<100	<500				
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<500				
Dibenzofuran	<100 µg/kg	TM157		<100	<500				
Carbazole	<100 µg/kg	TM157		<100	<500				
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<500				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<500				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<500				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<500				
Azobenzene	<100 µg/kg	TM157		<100	<500				
4-Nitrophenol	<100 µg/kg	TM157		<100	<500				
4-Nitroaniline	<100 µg/kg	TM157		<100	<500				
4-Methylphenol	<100 µg/kg	TM157		<100	<500				
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<500				
4-Chloroaniline	<100 µg/kg	TM157		<100	<500				
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<500				
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<500				
3-Nitroaniline	<100 µg/kg	TM157		<100	<500				
2-Nitrophenol	<100 µg/kg	TM157		<200	<1000				
2-Nitroaniline	<100 µg/kg	TM157		<200	<1000				
2-Methylphenol	<100 µg/kg	TM157		<100	<500				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<500				
2-Chlorophenol	<100 µg/kg	TM157		<100	<500				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP145				
			Depth (m)	7.50 - 7.50	3.80 - 3.80				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	14/10/2020	14/10/2020				
			Sample Time	.	.				
			Date Received	16/10/2020	16/10/2020				
			SDG Ref	201023-143	201023-143				
			Lab Sample No.(s)	23103788	23103823				
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<500				
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<500				
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<500				
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<500				
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<500				
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<500				
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<500				
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<500				
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<500				
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<500				
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<500				
Acenaphthylene	<100 µg/kg	TM157		<100	<500				
Acenaphthene	<100 µg/kg	TM157		<100	<500				
Anthracene	<100 µg/kg	TM157		<100	<500				
Benzo(a)anthracene	<100 µg/kg	TM157		<100	818				
Benzo(b)fluoranthene	<100 µg/kg	TM157		<100	774				
Benzo(k)fluoranthene	<100 µg/kg	TM157		<100	934				
Benzo(a)pyrene	<100 µg/kg	TM157		<100	<500				
Benzo(g,h,i)perylene	<100 µg/kg	TM157		<100	<500				
Chrysene	<100 µg/kg	TM157		115	1400				
Fluoranthene	<100 µg/kg	TM157		368	3150				
Fluorene	<100 µg/kg	TM157		<100	<500				
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		<100	<500				
Phenanthrene	<100 µg/kg	TM157		380	1280				
Pyrene	<100 µg/kg	TM157		311	2740				
Naphthalene	<100 µg/kg	TM157		127	<500				
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<500				
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<500				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	TP114	TP128	TP145		
			Depth (m)	7.50 - 7.50	3.40 - 3.40	3.60 - 3.60	3.80 - 3.80		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	14/10/2020	14/10/2020	14/10/2020	14/10/2020		
			Sample Time	.	.	.	.		
			Date Received	16/10/2020	16/10/2020	16/10/2020	16/10/2020		
			SDG Ref	201023-143	201023-143	201023-143	201023-143		
			Lab Sample No.(s)	23103788	23103816	23103806	23103823		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		97.6 @	111	94.3	81.2		
Aliphatics >C5-C6	<10 µg/kg	TM089		24.2 @	40	<10	14.6		
Aliphatics >C6-C8	<10 µg/kg	TM089		65.6 @	67.5	<10	73		
Aliphatics >C8-C10	<10 µg/kg	TM089		117 @	65	<10	101		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	1440		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	45300		
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	4210	<1000	541000		
Aliphatics >C21-C35	<1000 µg/kg	TM414		80800	37500	14600	3590000		
Aliphatics >C35-C44	<1000 µg/kg	TM414		38300	8330	2450	1610000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		120000	51100	17800	5790000		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		143000	110000	22700	7890000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		13.8 @	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 @	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		78.2 @	43.8	<10	67.2		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	27200		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1960	7550	<1000	88000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		18800	44600	3730	1980000		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2290	6730	<1000	3150		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	2580	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23000	59300	<5000	2100000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		144000	111000	17800	7890000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		207 @	173	<50	188		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		92 @	<50	<50	67.2		
GRO >C5-C10	<20 µg/kg	TM089		299 @	173	<20	256		

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	CP106 7.50 - 7.50 SOLID 14/10/2020 00:00:00 16/10/2020 05:00:00 201023-143 23103788 TM048	03/11/2020	James Richards	Fibre bundle and material typical of asbestos cement debris in soil	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP114 3.40 - 3.40 SOLID 14/10/2020 00:00:00 16/10/2020 05:00:00 201023-143 23103816 TM048	03/11/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP128 3.60 - 3.60 SOLID 14/10/2020 00:00:00 16/10/2020 05:00:00 201023-143 23103806 TM048	03/11/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP145 3.80 - 3.80 SOLID 14/10/2020 00:00:00 16/10/2020 05:00:00 201023-143 23103823 TM048	03/11/20	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	CP109	None (#)	N/C	5.1096 (#)	<0.001 (#)	5.1102 (#)
Depth (m)	7.50 - 7.50					
Sample Type	SOLID					
Date Sampled	14/10/2020 00:00:00					
Date Receieved	16/10/2020 05:00:00					
SDG	201023-143					
Original Sample	23103788					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.127	**Natural Moisture Content (%)**	40.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	71
Particle Size <4mm	>95%		

Case	
SDG	201023-143
Lab Sample Number(s)	2310379y
Sampled Date	14-Oct-2020
Customer Sample Ref.	TP145
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Low Level Hexavalent Chromium	<0.003	<0.003	<0.03	<0.03	-	-	-
Sulphate (soluble)	54.4	<2	544	<20	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-
Dissolved Organic Carbon	5.34	<3	53.4	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	0.0000253	<0.00001	0.000253	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.000222	<0.000005	0.00222	<0.00005	-	-	-
Arsenic	0.0734	<0.0005	0.734	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	0.000226	<0.000005	0.00226	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.00015	<0.000005	0.0015	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	0.0000154	<0.000005	0.000154	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.0427	<0.01	0.427	<0.1	-	-	-
Phenanthrene (diss.filt)	0.0000381	<0.000005	0.000381	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	49.5	<2	495	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	0.0000399	<0.000005	0.000399	<0.00005	-	-	-
Chrysene (diss.filt)	0.00000786	<0.000005	0.0000786	<0.00005	-	-	-
Pyrene (diss.filt)	0.000115	<0.000005	0.00115	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-

Leach Test Information

Date Prepared	31-Oct-2020
pH (pH Units)	8.07
Conductivity (µS/cm)	218.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.863

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.127	**Natural Moisture Content (%)**	40.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	71
Particle Size <4mm	>95%		

Case	
SDG	201023-143
Lab Sample Number(s)	2310379y
Sampled Date	14-Oct-2020
Customer Sample Ref.	TP145
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2 Conc^n in 10:1 eluate (mg/l)**		**A_2 10:1 conc^n leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Copper	0.00071	<0.0003	0.0071	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS (diss.filt)	0.00084	<0.000082	0.0084	<0.00082	-	-	-
Nickel	0.00106	<0.0004	0.0106	<0.004	-	-	-
Selenium	0.00114	<0.001	0.0114	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	40	<0.2	400	<2	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-

Leach Test Information

Date Prepared	31-Oct-2020
pH (pH Units)	8.07
Conductivity (µS/cm)	218.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.863

Mcerts Certification does not apply to leachates

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Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM0y2 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM1y8	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM243		Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM25y	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM331		Low Level Hexavalent Chromium
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201023-143	**Client Reference:**	LD10162	**Report Number:**	575474
Location:	Ten Acres Lane	**Order Number:**	LD1674	**Superseded Report:**	5754y9

Test Completion Dates

Lab Sample No(s)	23103788	23103816	23103806	23103796	23103823
Customer Sample Ref.	CP109	TP114	TP128	TP145	TP145
AGS Ref.					
Depth	7.50 - 7.50	3.40 - 3.40	3.60 - 3.60	2.30 - 2.30	3.80 - 3.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3				03-Nov-2020	
Anions by Kone (soil)	04-Nov-2020	04-Nov-2020	04-Nov-2020		04-Nov-2020
Anions by Kone (w)				03-Nov-2020	
Asbestos ID in Solid Samples	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
Asbestos Quantification - Full	12-Nov-2020				
Boron Water Soluble	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
CEN 10:1 Leachate (1 Stage)				31-Oct-2020	
CEN Readings				03-Nov-2020	
Cyanide Comp/Free/Total/Thiocyanate	03-Nov-2020	04-Nov-2020	03-Nov-2020	05-Nov-2020	03-Nov-2020
Dissolved Metals by ICP-MS				04-Nov-2020	
Dissolved Organic/Inorganic Carbon				05-Nov-2020	
Easily Liberated Sulphide	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
EPH CWG (Aliphatic) Filtered GC (W)				04-Nov-2020	
EPH CWG (Aromatic) Filtered GC (W)				04-Nov-2020	
EPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
GRO by GC-FID (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020		02-Nov-2020
GRO by GC-FID (W)				02-Nov-2020	
Hexavalent Chromium (s)	04-Nov-2020	04-Nov-2020	04-Nov-2020		04-Nov-2020
Low Level Hexavalent Chromium (w)				03-Nov-2020	
Mercury Dissolved				03-Nov-2020	
Metals in solid samples by OES	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
Moisture at 105C				31-Oct-2020	
PAH by GCMS	01-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
PAH in waters by GC-MS (diss.filt)				03-Nov-2020	
PCBs by GCMS		04-Nov-2020	04-Nov-2020		04-Nov-2020
pH	02-Nov-2020	02-Nov-2020	03-Nov-2020		02-Nov-2020
pH Value				03-Nov-2020	
Phenols by HPLC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
Phenols by HPLC (W)				04-Nov-2020	
Sample description	30-Oct-2020	30-Oct-2020	30-Oct-2020	30-Oct-2020	30-Oct-2020
Semi Volatile Organic Compounds	03-Nov-2020				03-Nov-2020
Sulphide				04-Nov-2020	
Total Organic Carbon	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
Total Sulphate	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020
TPH CWG Filtered (W)				04-Nov-2020	
TPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020		03-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	05 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201024-94
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	574318

We received 7 samples on Tuesday October 20, 2020 and 3 of these samples were scheduled for analysis which was completed on Thursday November 05, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23110937	CP112		8.00 - 8.00	16/10/2020
23110963	TP125		2.30 - 2.30	16/10/2020
23110967	TP125		3.20 - 3.20	16/10/2020
23110944	TP127		1.20 - 1.20	16/10/2020
23110952	TP127		4.35 - 4.35	16/10/2020
23110971	TP127		4.40	16/10/2020
23110957	TP135		0.75 - 0.75	16/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23110937			23110963			23110944		
Customer Sample Reference			CP112			TP125			TP127		
AGS Reference											
Depth (m)			8.00 - 8.00			2.30 - 2.30			1.20 - 1.20		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3		X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3	X			X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 3		X			X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3		X			X			X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 3		X			X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 3		X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 3			X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3		X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 3		X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 3		X			X			X	
PCBs by GCMS	All	NDPs: 0 Tests: 2					X			X	
pH	All	NDPs: 0 Tests: 3		X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3		X			X			X	
Sample description	All	NDPs: 0 Tests: 3		X			X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 2					X			X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23110937			23110963			23110944		
Customer Sample Reference			CP112			TP125			TP127		
AGS Reference											
Depth (m)			8.00 - 8.00			2.30 - 2.30			1.20 - 1.20		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S
Total Organic Carbon	All	NDPs: 0 Tests: 3		X			X			X	
Total Sulphate	All	NDPs: 0 Tests: 3		X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 3		X			X			X	
VOC MS (S)	All	NDPs: 0 Tests: 3			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23110937	CP112	8.00 - 8.00	Dark Brown	Sand	Stones	Vegetation
23110963	TP125	2.30 - 2.30	Dark Brown	Loamy Sand	Stones	Vegetation
23110944	TP127	1.20 - 1.20	Black	Loamy Sand	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.6	16	18			
Phenol	<0.01 mg/kg	TM062 (S)		9.53 @ M	<0.01 @ M	<0.01 @ M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.05 @ M	<0.01 @ M	<0.01 @ M			
Xylenols	<0.015 mg/kg	TM062 (S)		0.3 @ M	<0.015 @ M	<0.015 @ M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		9.83 @ M	<0.035 @ M	<0.035 @ M			
Soil Organic Matter (SOM)	<0.35 %	TM132		0.96 #	4.26 #	22.6 #			
pH	1 pH Units	TM133		8.48 M	7.62 M	6.13 M			
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #			
Cyanide, Total	<1 mg/kg	TM153		<1 @ M	<1 @ M	<1 @ M			
PCB congener 28	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 52	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 101	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 118	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 138	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 153	<3 µg/kg	TM168			<3 M	<3 M			
PCB congener 180	<3 µg/kg	TM168			<3 M	<3 M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<21	<21			
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	<15 @ M			
Arsenic	<0.6 mg/kg	TM181		24.7 M	29.1 M	26.1 M			
Cadmium	<0.02 mg/kg	TM181		0.0928 M	0.242 M	0.667 M			
Chromium	<0.9 mg/kg	TM181		3.6 M	15.5 M	17 M			
Copper	<1.4 mg/kg	TM181		9.55 M	102 M	325 M			
Lead	<0.7 mg/kg	TM181		33.9 M	139 M	322 M			
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.21 M	0.511 M			
Nickel	<0.2 mg/kg	TM181		9.21 M	42.8 M	28.9 M			
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #			
Zinc	<1.9 mg/kg	TM181		49.4 M	179 M	142 M			
Sulphate, Total	<48 mg/kg	TM221		456 M	440 M	683 M			
Boron, water soluble	<1 mg/kg	TM222		5.18 M	<1 M	1.99 M			
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.173 M	0.121 M	0.0795 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.7	78.6	73.2			
Acenaphthene-d10 % recovery**	%	TM218		99.5	79.5	78.2			
Phenanthrene-d10 % recovery**	%	TM218		107	81.6	83.4			
Chrysene-d12 % recovery**	%	TM218		104	83.2	81.4			
Perylene-d12 % recovery**	%	TM218		87.5	80.6	78.3			
Naphthalene	<9 µg/kg	TM218		27 @ M	16.4 @ M	276 @ M			
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	18.9 @ M	79.3 @ M			
Acenaphthene	<8 µg/kg	TM218		38.7 @ M	25.4 @ M	439 @ M			
Fluorene	<10 µg/kg	TM218		43.9 @ M	17.8 @ M	365 @ M			
Phenanthrene	<15 µg/kg	TM218		280 @ M	272 @ M	2920 @ M			
Anthracene	<16 µg/kg	TM218		64.2 @ M	51.9 @ M	685 @ M			
Fluoranthene	<17 µg/kg	TM218		315 @ M	557 @ M	4250 @ M			
Pyrene	<15 µg/kg	TM218		302 @ M	462 @ M	4170 @ M			
Benz(a)anthracene	<14 µg/kg	TM218		142 @ M	202 @ M	2070 @ M			
Chrysene	<10 µg/kg	TM218		148 @ M	284 @ M	2010 @ M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		148 @ M	442 @ M	2440 @ M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		44 @ M	121 @ M	949 @ M			
Benzo(a)pyrene	<15 µg/kg	TM218		106 @ M	195 @ M	2020 @ M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		53.3 @ M	217 @ M	1460 @ M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	35.5 @ M	275 @ M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		63.6 @ M	195 @ M	1280 @ M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1780	3110	25700			

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP125	TP127				
			Depth (m)	2.30 - 2.30	1.20 - 1.20				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	16/10/2020	16/10/2020				
			Sample Time	.	.				
			Date Received	20/10/2020	20/10/2020				
			SDG Ref	201024-94	201024-94				
			Lab Sample No.(s)	23110963	23110944				
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100				
Pentachlorophenol	<100 µg/kg	TM157		<100	<100				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100				
Nitrobenzene	<100 µg/kg	TM157		<100	<100				
Isophorone	<100 µg/kg	TM157		<100	<100				
Hexachloroethane	<100 µg/kg	TM157		<100	<100				
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<200				
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100				
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100				
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100				
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100				
Diethyl phthalate	<100 µg/kg	TM157		<100	<100				
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100				
Dibenzofuran	<100 µg/kg	TM157		<100	497				
Carbazole	<100 µg/kg	TM157		<100	222				
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100				
Azobenzene	<100 µg/kg	TM157		<100	<100				
4-Nitrophenol	<100 µg/kg	TM157		<100	<100				
4-Nitroaniline	<100 µg/kg	TM157		<100	<100				
4-Methylphenol	<100 µg/kg	TM157		<100	<100				
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100				
4-Chloroaniline	<100 µg/kg	TM157		<100	<100				
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100				
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100				
3-Nitroaniline	<100 µg/kg	TM157		<100	<100				
2-Nitrophenol	<100 µg/kg	TM157		<100	<100				
2-Nitroaniline	<100 µg/kg	TM157		<100	<100				
2-Methylphenol	<100 µg/kg	TM157		<100	<100				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100				
2-Chlorophenol	<100 µg/kg	TM157		<100	<100				

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP125	TP127				
			Depth (m)	2.30 - 2.30	1.20 - 1.20				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	16/10/2020	16/10/2020				
			Sample Time	.	.				
			Date Received	20/10/2020	20/10/2020				
			SDG Ref	201024-94	201024-94				
			Lab Sample No.(s)	23110963	23110944				
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<100				
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<100				
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<100				
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<100				
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<100				
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<100				
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<100				
2-Methylnaphthalene	<100 µg/kg	TM157		<100	467				
Acenaphthylene	<100 µg/kg	TM157		<100	<100				
Acenaphthene	<100 µg/kg	TM157		<100	981				
Anthracene	<100 µg/kg	TM157		<100	934				
Benzo(a)anthracene	<100 µg/kg	TM157		279	2060				
Benzo(b)fluoranthene	<100 µg/kg	TM157		463	2140				
Benzo(k)fluoranthene	<100 µg/kg	TM157		365	1730				
Benzo(a)pyrene	<100 µg/kg	TM157		237	1950				
Benzo(g,h,i)perylene	<100 µg/kg	TM157		175	1180				
Chrysene	<100 µg/kg	TM157		398	2230				
Fluoranthene	<100 µg/kg	TM157		938	4840				
Fluorene	<100 µg/kg	TM157		<100	741				
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		197	1330				
Phenanthrene	<100 µg/kg	TM157		541	4560				
Pyrene	<100 µg/kg	TM157		787	4320				
Naphthalene	<100 µg/kg	TM157		<100	595				
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	136				
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<100				

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		105	96.2	88.4			
Aliphatics >C5-C6	<10 µg/kg	TM089		18.9	<10	<10			
Aliphatics >C6-C8	<10 µg/kg	TM089		42.2	<10	<10			
Aliphatics >C8-C10	<10 µg/kg	TM089		393	<10	11.1			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	1330			
Aliphatics >C16-C21	<1000 µg/kg	TM414		1810	<1000	2190			
Aliphatics >C21-C35	<1000 µg/kg	TM414		5600	<1000	28300			
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	2440			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		8760	<5000	34400			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		12600	10200	165000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/kg	TM089		262	<10	<10			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	7340			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1170	2520	33700			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1540	5440	79900			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	9670			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1970			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	9050	131000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	165000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		454	<50	<50			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		262	<50	<50			
GRO >C5-C10	<20 µg/kg	TM089		716	<20	<20			

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	110	114			
Toluene-d8**	%	TM116		100	100	100			
4-Bromofluorobenzene**	%	TM116		91.9	85.9	86.6			
Dichlorodifluoromethane	<6 µg/kg	TM116			<120 M	<120 M			
Chloromethane	<7 µg/kg	TM116			<140 #	<140 #			
Vinyl Chloride	<6 µg/kg	TM116			<120 M	<120 M			
Bromomethane	<10 µg/kg	TM116			<200 M	<200 M			
Chloroethane	<10 µg/kg	TM116			<200 M	<200 M			
Trichlorofluorormethane	<6 µg/kg	TM116			<120 M	<120 M			
1,1-Dichloroethene	<10 µg/kg	TM116			<200 #	<200 #			
Carbon Disulphide	<7 µg/kg	TM116			<140 M	<140 M			
Dichloromethane	<10 µg/kg	TM116			<200 #	<200 #			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M			
trans-1,2-Dichloroethene	<10 µg/kg	TM116			<200 M	<200 M			
1,1-Dichloroethane	<8 µg/kg	TM116			<160 M	<160 M			
cis-1,2-Dichloroethene	<6 µg/kg	TM116			<120 M	<120 M			
2,2-Dichloropropane	<10 µg/kg	TM116			<200	<200			
Bromochloromethane	<10 µg/kg	TM116			<200 M	<200 M			
Chloroform	<8 µg/kg	TM116			<160 M	<160 M			
1,1,1-Trichloroethane	<7 µg/kg	TM116			<140 M	<140 M			
1,1-Dichloropropene	<10 µg/kg	TM116			<200 M	<200 M			
Carbontetrachloride	<10 µg/kg	TM116			<200 M	<200 M			
1,2-Dichloroethane	<5 µg/kg	TM116			<100 M	<100 M			
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M			
Trichloroethene	<9 µg/kg	TM116			<180 #	<180 #			
1,2-Dichloropropane	<10 µg/kg	TM116			<200 M	<200 M			
Dibromomethane	<9 µg/kg	TM116			<180 M	<180 M			
Bromodichloromethane	<7 µg/kg	TM116			<140 M	<140 M			
cis-1,3-Dichloropropene	<10 µg/kg	TM116			<200 M	<200 M			
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M			
trans-1,3-Dichloropropene	<10 µg/kg	TM116			<200	<200			
1,1,2-Trichloroethane	<10 µg/kg	TM116			<200 M	<200 M			
1,3-Dichloropropane	<7 µg/kg	TM116			<140 M	<140 M			

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116			<100 M	<100 M			
Dibromochloromethane	<10 µg/kg	TM116			<200 M	<200 M			
1,2-Dibromoethane	<10 µg/kg	TM116			<200 M	<200 M			
Chlorobenzene	<5 µg/kg	TM116			<100 M	<100 M			
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116			<200 M	<200 M			
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M			
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #			
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M			
Styrene	<10 µg/kg	TM116			<200 #	<200 #			
Bromoform	<10 µg/kg	TM116			<200 M	<200 M			
Isopropylbenzene	<5 µg/kg	TM116			<100 #	<100 #			
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116			<200 #	<200 #			
1,2,3-Trichloropropane	<16 µg/kg	TM116			<320 M	<320 M			
Bromobenzene	<10 µg/kg	TM116			<200 M	<200 M			
Propylbenzene	<10 µg/kg	TM116			<200 M	<200 M			
2-Chlorotoluene	<9 µg/kg	TM116			<180 M	<180 M			
1,3,5-Trimethylbenzene	<8 µg/kg	TM116			<160 M	<160 M			
4-Chlorotoluene	<10 µg/kg	TM116			<200 M	<200 M			
tert-Butylbenzene	<14 µg/kg	TM116			<280 M	<280 M			
1,2,4-Trimethylbenzene	<9 µg/kg	TM116			<180 #	<180 #			
sec-Butylbenzene	<10 µg/kg	TM116			<200	<200			
4-Isopropyltoluene	<10 µg/kg	TM116			<200 M	<200 M			
1,3-Dichlorobenzene	<8 µg/kg	TM116			<160 M	<160 M			
1,4-Dichlorobenzene	<5 µg/kg	TM116			<100 M	<100 M			
n-Butylbenzene	<11 µg/kg	TM116			<220	<220			
1,2-Dichlorobenzene	<10 µg/kg	TM116			<200 M	<200 M			
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116			<280 M	<280 M			
Tert-amyl methyl ether	<10 µg/kg	TM116			<200 #	<200 #			
1,2,4-Trichlorobenzene	<20 µg/kg	TM116			<400	<400			
Hexachlorobutadiene	<20 µg/kg	TM116			<400	<400			
Naphthalene	<13 µg/kg	TM116			<260 M	<260 M			
1,2,3-Trichlorobenzene	<20 µg/kg	TM116			<400 #	<400 #			
1,3,5-Trichlorobenzene	<20 µg/kg	TM116			<400	<400			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP112	TP125	TP127			
			Depth (m)	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	16/10/2020	16/10/2020	16/10/2020			
			Sample Time	.	.	.			
			Date Received	20/10/2020	20/10/2020	20/10/2020			
			SDG Ref	201024-94	201024-94	201024-94			
			Lab Sample No.(s)	23110937	23110963	23110944			
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4			
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800			

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP112 8.00 - 8.00 SOLID 16/10/2020 00:00:00 20/10/2020 09:00:00 201024-94 23110937 TM048	04/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP125 2.30 - 2.30 SOLID 16/10/2020 00:00:00 20/10/2020 09:00:00 201024-94 23110963 TM048	04/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP127 1.20 - 1.20 SOLID 16/10/2020 00:00:00 20/10/2020 09:00:00 201024-94 23110944 TM048	04/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201024-94	**Client Reference:**	LD10162	**Report Number:**	574318
Location:	Ten Acres Lane	**Order Number:**	LD1676	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23110937	23110963	23110944
Customer Sample Ref.	CP112	TP125	TP127
AGS Ref.			
Depth	8.00 - 8.00	2.30 - 2.30	1.20 - 1.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	04-Nov-2020	05-Nov-2020	05-Nov-2020
Asbestos ID in Solid Samples	04-Nov-2020	04-Nov-2020	04-Nov-2020
Boron Water Soluble	03-Nov-2020	04-Nov-2020	03-Nov-2020
Cyanide Comp/Free/Total/Thiocyanate	04-Nov-2020	04-Nov-2020	04-Nov-2020
Easily Liberated Sulphide	04-Nov-2020	03-Nov-2020	03-Nov-2020
EPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020
GRO by GC-FID (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020
Hexavalent Chromium (s)	04-Nov-2020	04-Nov-2020	04-Nov-2020
Metals in solid samples by OES	03-Nov-2020	03-Nov-2020	03-Nov-2020
PAH by GCMS	02-Nov-2020	04-Nov-2020	04-Nov-2020
PCBs by GCMS		04-Nov-2020	04-Nov-2020
pH	03-Nov-2020	04-Nov-2020	03-Nov-2020
Phenols by HPLC (S)	05-Nov-2020	05-Nov-2020	05-Nov-2020
Sample description	30-Oct-2020	31-Oct-2020	30-Oct-2020
Semi Volatile Organic Compounds		03-Nov-2020	03-Nov-2020
Total Organic Carbon	03-Nov-2020	03-Nov-2020	03-Nov-2020
Total Sulphate	03-Nov-2020	03-Nov-2020	03-Nov-2020
TPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020
VOC MS (S)	02-Nov-2020	03-Nov-2020	02-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	05 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201026-6
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	574319

We received 9 samples on Monday October 26, 2020 and 4 of these samples were scheduled for analysis which was completed on Thursday November 05, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23114666	CP112		1.50 - 1.50	15/10/2020
23114670	CP112		3.00 - 3.00	15/10/2020
23114633	TP117		1.70 - 1.70	15/10/2020
23114642	TP117		1.80 - 1.80	15/10/2020
23114638	TP117		4.20 - 4.20	15/10/2020
23114658	TP118		0.50 - 0.50	15/10/2020
23114653	TP118		1.80 - 1.80	15/10/2020
23114662	TP130		0.30 - 0.30	15/10/2020
23114649	TP134		0.20 - 0.20	15/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23114638			23114653			23114662			23114649	
Customer Sample Reference			TP117			TP118			TP130			TP134	
AGS Reference													
Depth (m)			4.20 - 4.20			1.80 - 1.80			0.30 - 0.30			0.20 - 0.20	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X			X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X			X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 4		X			X			X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 4		X			X			X			X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4		X			X			X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X			X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4		X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X			X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 4		X			X			X			X	
PCBs by GCMS	All	NDPs: 0 Tests: 2		X			X							
pH	All	NDPs: 0 Tests: 4		X			X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
Sample description	All	NDPs: 0 Tests: 4		X			X			X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 1		X										

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23114638			23114653			23114662			23114649		
Customer Sample Reference			TP117			TP118			TP130			TP134		
AGS Reference														
Depth (m)			4.20 - 4.20			1.80 - 1.80			0.30 - 0.30			0.20 - 0.20		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X			X			X	
Total Sulphate	All	NDPs: 0 Tests: 4		X			X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
VOC MS (S)	All	NDPs: 0 Tests: 4			X			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23114638	TP117	4.20 - 4.20	Black	Loamy Sand	Vegetation	Stones
23114653	TP118	1.80 - 1.80	Dark Brown	Sandy Silt Loam	None	Stones
23114662	TP130	0.30 - 0.30	Dark Brown	Loamy Sand	Vegetation	Stones
23114649	TP134	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Vegetation	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		40	18	11	23		
Phenol	<0.01 mg/kg	TM062 (S)		1.37 @ M	<0.01 @ M	<0.01 @ M	<0.01 @ M		
Cresols	<0.01 mg/kg	TM062 (S)		6.16 @ M	<0.01 @ M	<0.01 @ M	<0.01 @ M		
Xylenols	<0.015 mg/kg	TM062 (S)		3.22 @ M	<0.015 @ M	<0.015 @ M	<0.015 @ M		
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		10.8 @ M	<0.035 @ M	<0.035 @ M	<0.035 @ M		
Soil Organic Matter (SOM)	<0.35 %	TM132		46.9 #	2.47 #	3.97 #	5.47 #		
pH	1 pH Units	TM133		6.94 M	7.59 M	8.1 M	8.58 M		
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #		
Cyanide, Total	<1 mg/kg	TM153		4.83 @ M	<1 @ M	<1 @ M	<1 @ M		
PCB congener 28	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 52	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 101	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 118	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 138	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 153	<3 µg/kg	TM168		<60 M	<3 M				
PCB congener 180	<3 µg/kg	TM168		<60 M	<3 M				
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<420	<21				
Sulphide, Easily liberated	<15 mg/kg	TM180		317 @ M	<15 @ M	<15 @ M	<15 @ M		
Arsenic	<0.6 mg/kg	TM181		35.3 M	16.7 M	13.8 M	16.2 M		
Cadmium	<0.02 mg/kg	TM181		0.383 M	0.0964 M	1.44 M	0.354 M		
Chromium	<0.9 mg/kg	TM181		11.1 M	18.3 M	16.1 M	19.9 M		
Copper	<1.4 mg/kg	TM181		143 M	36.3 M	83.5 M	101 M		
Lead	<0.7 mg/kg	TM181		283 M	35.9 M	193 M	204 M		
Mercury	<0.14 mg/kg	TM181		1.43 M	0.141 M	0.693 M	0.248 M		
Nickel	<0.2 mg/kg	TM181		28.1 M	30.5 M	27.2 M	39.5 M		
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #		
Zinc	<1.9 mg/kg	TM181		186 M	69.5 M	294 M	297 M		
Sulphate, Total	<48 mg/kg	TM221		1010 M	206 M	1260 M	257 M		
Boron, water soluble	<1 mg/kg	TM222		2.47 M	<1 M	<1 M	<1 M		
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.079 M	0.0563 M	0.451 M	0.0178 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		111	88.6	85.7	84.3		
Acenaphthene-d10 % recovery**	%	TM218		118	87	86.8	87.1		
Phenanthrene-d10 % recovery**	%	TM218		99.8	86.5	91.4	85.7		
Chrysene-d12 % recovery**	%	TM218		89.6	83.1	94.1	90.9		
Perylene-d12 % recovery**	%	TM218		81	81.3	94.4	89.5		
Naphthalene	<9 µg/kg	TM218		279000 @ M	264 @ M	109 @ M	2300 @ M		
Acenaphthylene	<12 µg/kg	TM218		2780 @ M	94.9 @ M	52.8 @ M	232 @ M		
Acenaphthene	<8 µg/kg	TM218		341000 @ M	198 @ M	249 @ M	1420 @ M		
Fluorene	<10 µg/kg	TM218		322000 @ M	228 @ M	186 @ M	1200 @ M		
Phenanthrene	<15 µg/kg	TM218		1550000 @ M	1570 @ M	1920 @ M	10000 @ M		
Anthracene	<16 µg/kg	TM218		467000 @ M	333 @ M	411 @ M	2150 @ M		
Fluoranthene	<17 µg/kg	TM218		1290000 @ M	1710 @ M	3000 @ M	9640 @ M		
Pyrene	<15 µg/kg	TM218		1120000 @ M	1650 @ M	2800 @ M	9260 @ M		
Benz(a)anthracene	<14 µg/kg	TM218		432000 @ M	749 @ M	1330 @ M	4720 @ M		
Chrysene	<10 µg/kg	TM218		432000 @ M	726 @ M	1310 @ M	4550 @ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		461000 @ M	931 @ M	1860 @ M	4990 @ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		173000 @ M	351 @ M	594 @ M	2050 @ M		
Benzo(a)pyrene	<15 µg/kg	TM218		376000 @ M	692 @ M	1440 @ M	4290 @ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		255000 @ M	446 @ M	1150 @ M	2920 @ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		51600 @ M	67.7 @ M	202 @ M	541 @ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		208000 @ M	442 @ M	1070 @ M	2550 @ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		7770000	10400	17700	62900		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP117						
Depth (m)	4.20 - 4.20						
Sample Type	Soil/Solid (S)						
Date Sampled	15/10/2020						
Sample Time	.						
Date Received	26/10/2020						
SDG Ref	201026-6						
Lab Sample No.(s)	23114638						
AGS Reference							
Component	**LOD/Units**	**Method**					
Phenol	<100 µg/kg	TM157	<2000				
Pentachlorophenol	<100 µg/kg	TM157	<2000				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157	<2000				
Nitrobenzene	<100 µg/kg	TM157	<2000				
Isophorone	<100 µg/kg	TM157	<2000				
Hexachloroethane	<100 µg/kg	TM157	<2000				
Hexachlorocyclopentadiene	<100 µg/kg	TM157	<4000				
Hexachlorobutadiene	<100 µg/kg	TM157	<2000				
Hexachlorobenzene	<100 µg/kg	TM157	<2000				
n-Dioctyl phthalate	<100 µg/kg	TM157	<2000				
Dimethyl phthalate	<100 µg/kg	TM157	<2000				
Diethyl phthalate	<100 µg/kg	TM157	<2000				
n-Dibutyl phthalate	<100 µg/kg	TM157	<2000				
Dibenzofuran	<100 µg/kg	TM157	114000				
Carbazole	<100 µg/kg	TM157	47300				
Butylbenzyl phthalate	<100 µg/kg	TM157	<2000				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157	<2000				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157	<2000				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157	<2000				
Azobenzene	<100 µg/kg	TM157	<2000				
4-Nitrophenol	<100 µg/kg	TM157	<2000				
4-Nitroaniline	<100 µg/kg	TM157	<2000				
4-Methylphenol	<100 µg/kg	TM157	<2000				
4-Chlorophenylphenylether	<100 µg/kg	TM157	<2000				
4-Chloroaniline	<100 µg/kg	TM157	<2000				
4-Chloro-3-methylphenol	<100 µg/kg	TM157	<2000				
4-Bromophenylphenylether	<100 µg/kg	TM157	<2000				
3-Nitroaniline	<100 µg/kg	TM157	<2000				
2-Nitrophenol	<100 µg/kg	TM157	<2000				
2-Nitroaniline	<100 µg/kg	TM157	<2000				
2-Methylphenol	<100 µg/kg	TM157	<2000				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157	<2000				
2-Chlorophenol	<100 µg/kg	TM157	<2000				

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

		Customer Sample Ref.	TP117
		Depth (m)	4.20 - 4.20
		Sample Type	Soil/Solid (S)
		Date Sampled	15/10/2020
		Sample Time	.
		Date Received	26/10/2020
		SDG Ref	201026-6
		Lab Sample No.(s)	23114638
		AGS Reference	
Component	**LOD/Units**	**Method**	
2,6-Dinitrotoluene	<100 µg/kg	TM157	<2000
2,4-Dinitrotoluene	<100 µg/kg	TM157	<2000
2,4-Dimethylphenol	<100 µg/kg	TM157	<2000
2,4-Dichlorophenol	<100 µg/kg	TM157	<2000
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<2000
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<2000
1,4-Dichlorobenzene	<100 µg/kg	TM157	<2000
1,3-Dichlorobenzene	<100 µg/kg	TM157	<2000
1,2-Dichlorobenzene	<100 µg/kg	TM157	<2000
2-Chloronaphthalene	<100 µg/kg	TM157	<2000
2-Methylnaphthalene	<100 µg/kg	TM157	97400
Acenaphthylene	<100 µg/kg	TM157	<2000
Acenaphthene	<100 µg/kg	TM157	174000
Anthracene	<100 µg/kg	TM157	196000
Benzo(a)anthracene	<100 µg/kg	TM157	196000
Benzo(b)fluoranthene	<100 µg/kg	TM157	197000
Benzo(k)fluoranthene	<100 µg/kg	TM157	155000
Benzo(a)pyrene	<100 µg/kg	TM157	192000
Benzo(g,h,i)perylene	<100 µg/kg	TM157	111000
Chrysene	<100 µg/kg	TM157	196000
Fluoranthene	<100 µg/kg	TM157	621000
Fluorene	<100 µg/kg	TM157	152000
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	133000
Phenanthrene	<100 µg/kg	TM157	725000
Pyrene	<100 µg/kg	TM157	513000
Naphthalene	<100 µg/kg	TM157	144000
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	11300
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<2000

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		93.3	71.1	93	92.7		
Aliphatics >C5-C6	<10 µg/kg	TM089		142	13.3	<10	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089		853	30.3	<10	36.7		
Aliphatics >C8-C10	<10 µg/kg	TM089		5520	56.9	<10	49.8		
Aliphatics >C10-C12	<1000 µg/kg	TM414		20600	<1000	<1000	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		48100	<1000	<1000	1890		
Aliphatics >C16-C21	<1000 µg/kg	TM414		60000	<1000	2400	2270		
Aliphatics >C21-C35	<1000 µg/kg	TM414		388000	1750	14300	6620		
Aliphatics >C35-C44	<1000 µg/kg	TM414		129000	<1000	2340	<1000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		646000	<5000	19300	12200		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		23800000	<10000	65500	568000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		165	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		134	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		3680	38.7	<10	32.8		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		459000	<1000	<1000	28800		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2610000	<1000	<1000	63700		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		8780000	2320	7020	181000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		10200000	4040	34900	257000		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1050000	<1000	3660	25500		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		157000	<1000	<1000	2770		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23100000	7360	46200	556000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		23800000	<10000	65500	568000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		6510	100	<50	86.5		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		3980	<50	<50	<50		
GRO >C5-C10	<20 µg/kg	TM089		10500	100	<20	86.5		

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
Dibromofluoromethane**	%	TM116		118	113	113	113		
Toluene-d8**	%	TM116		98.4	100	101	101		
4-Bromofluorobenzene**	%	TM116		80.6	77.4	87.1	86.1		
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 M					
Chloromethane	<7 µg/kg	TM116		<140 #					
Vinyl Chloride	<6 µg/kg	TM116		<120 M					
Bromomethane	<10 µg/kg	TM116		<200 M					
Chloroethane	<10 µg/kg	TM116		<200 M					
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M					
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #					
Carbon Disulphide	<7 µg/kg	TM116		<140 M					
Dichloromethane	<10 µg/kg	TM116		<200 #					
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<100 M	<100 M	<100 M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M					
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M					
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M					
2,2-Dichloropropane	<10 µg/kg	TM116		<200					
Bromochloromethane	<10 µg/kg	TM116		<200 M					
Chloroform	<8 µg/kg	TM116		<160 M					
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M					
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M					
Carbontetrachloride	<10 µg/kg	TM116		<200 M					
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M					
Benzene	<9 µg/kg	TM116		<180 M	<90 M	<90 M	<90 M		
Trichloroethene	<9 µg/kg	TM116		<180 #					
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M					
Dibromomethane	<9 µg/kg	TM116		<180 M					
Bromodichloromethane	<7 µg/kg	TM116		<140 M					
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M					
Toluene	<7 µg/kg	TM116		<140 M	<70 M	<70 M	<70 M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200					
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M					
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M					

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 M					
Dibromochloromethane	<10 µg/kg	TM116		<200 M					
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M					
Chlorobenzene	<5 µg/kg	TM116		<100 M					
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M					
Ethylbenzene	<4 µg/kg	TM116		360 M	<40 M	<40 M	<40 M		
p/m-Xylene	<10 µg/kg	TM116		<200 #	<100 #	<100 #	<100 #		
o-Xylene	<10 µg/kg	TM116		<200 M	<100 M	<100 M	<100 M		
Styrene	<10 µg/kg	TM116		<200 #					
Bromoform	<10 µg/kg	TM116		<200 M					
Isopropylbenzene	<5 µg/kg	TM116		<100 #					
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #					
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M					
Bromobenzene	<10 µg/kg	TM116		<200 M					
Propylbenzene	<10 µg/kg	TM116		<200 M					
2-Chlorotoluene	<9 µg/kg	TM116		<180 M					
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M					
4-Chlorotoluene	<10 µg/kg	TM116		<200 M					
tert-Butylbenzene	<14 µg/kg	TM116		<280 M					
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		653 #					
sec-Butylbenzene	<10 µg/kg	TM116		<200					
4-Isopropyltoluene	<10 µg/kg	TM116		<200 M					
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M					
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M					
n-Butylbenzene	<11 µg/kg	TM116		<220					
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M					
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M					
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #					
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400					
Hexachlorobutadiene	<20 µg/kg	TM116		<400					
Naphthalene	<13 µg/kg	TM116		83400 M					
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #					
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP117	TP118	TP130	TP134		
			Depth (m)	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/10/2020	15/10/2020	15/10/2020	15/10/2020		
			Sample Time	.	.	.	.		
			Date Received	26/10/2020	26/10/2020	26/10/2020	26/10/2020		
			SDG Ref	201026-6	201026-6	201026-6	201026-6		
			Lab Sample No.(s)	23114638	23114653	23114662	23114649		
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.2	<0.2	<0.2		
Sum of BTEX	<40 µg/kg	TM116		<800	<400	<400	<400		

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP117 4.20 - 4.20 SOLID 15/10/2020 00:00:00 26/10/2020 09:00:00 201026-6 23114638 TM048	04/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP118 1.80 - 1.80 SOLID 15/10/2020 00:00:00 26/10/2020 09:00:00 201026-6 23114653 TM048	04/11/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP130 0.30 - 0.30 SOLID 15/10/2020 00:00:00 26/10/2020 09:00:00 201026-6 23114662 TM048	04/11/2020	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP134 0.20 - 0.20 SOLID 15/10/2020 00:00:00 26/10/2020 09:00:00 201026-6 23114649 TM048	04/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201026-6	**Client Reference:**	LD10162	**Report Number:**	574319
Location:	Ten Acres Lane	**Order Number:**	LD1675	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23114638	23114653	23114662	23114649
Customer Sample Ref.	TP117	TP118	TP130	TP134
AGS Ref.				
Depth	4.20 - 4.20	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	05-Nov-2020	05-Nov-2020	05-Nov-2020	05-Nov-2020
Asbestos ID in Solid Samples	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020
Boron Water Soluble	03-Nov-2020	04-Nov-2020	03-Nov-2020	04-Nov-2020
Cyanide Comp/Free/Total/Thiocyanate	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Easily Liberated Sulphide	03-Nov-2020	03-Nov-2020	04-Nov-2020	03-Nov-2020
EPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
GRO by GC-FID (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020
Hexavalent Chromium (s)	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020
Metals in solid samples by OES	03-Nov-2020	04-Nov-2020	03-Nov-2020	04-Nov-2020
PAH by GCMS	04-Nov-2020	04-Nov-2020	03-Nov-2020	03-Nov-2020
PCBs by GCMS	04-Nov-2020	04-Nov-2020		
pH	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Phenols by HPLC (S)	04-Nov-2020	05-Nov-2020	04-Nov-2020	04-Nov-2020
Sample description	30-Oct-2020	30-Oct-2020	30-Oct-2020	30-Oct-2020
Semi Volatile Organic Compounds	03-Nov-2020			
Total Organic Carbon	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Total Sulphate	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
TPH CWG GC (S)	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
VOC MS (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201027-76
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	574679

We received 4 samples on Tuesday October 27, 2020 and 3 of these samples were scheduled for analysis which was completed on Monday November 09, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23122295	WS102		2.80 - 2.80	23/10/2020
23122288	WS107		1.40 - 1.40	23/10/2020
23122291	WS108		0.80 - 0.80	23/10/2020
23122301	WS119		1.50 - 1.50	23/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)		23122295		23122288		23122301	
			Customer Sample Reference		WS102		WS107		WS119	
			AGS Reference							
			Depth (m)		2.80 - 2.80		1.40 - 1.40		1.50 - 1.50	
			Container		250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type		S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3			X		X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3			X		X		X	
Boron Water Soluble	All	NDPs: 0 Tests: 3			X		X		X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3			X		X		X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 3			X		X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 3			X		X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 3				X		X		X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3			X		X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 3			X		X		X	
PAH by GCMS	All	NDPs: 0 Tests: 3			X		X			X
PCBs by GCMS	All	NDPs: 0 Tests: 1			X					
pH	All	NDPs: 0 Tests: 3			X		X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3			X		X		X	
Sample description	All	NDPs: 0 Tests: 3			X		X		X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 1			X					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23122295		23122288		23122301	
Customer Sample Reference			WS102		WS107		WS119	
AGS Reference								
Depth (m)			2.80 - 2.80		1.40 - 1.40		1.50 - 1.50	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S
Total Organic Carbon	All	NDPs: 0 Tests: 3	X		X		X	
Total Sulphate	All	NDPs: 0 Tests: 3	X		X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 3	X		X		X	
VOC MS (S)	All	NDPs: 0 Tests: 3		X		X		X

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23122295	WS102	2.80 - 2.80	Black	Sludge	Oil/Petroleum	None
23122288	WS107	1.40 - 1.40	Dark Brown	Silt Loam	Stones	Oil/Petroleum
23122301	WS119	1.50 - 1.50	Dark Brown	Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		42	37	17			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	0.0159 M	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		0.0346 #	0.0159 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		15.5 #	16.4 #	31.2 #			
pH	1 pH Units	TM133		7.22 #	6.79 M	7.2 M			
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<6 #	<0.6 #			
Cyanide, Total	<1 mg/kg	TM153		3.1 #	<1 M	<1 M			
PCB congener 28	<3 µg/kg	TM168		<15 #					
PCB congener 52	<3 µg/kg	TM168		<15 #					
PCB congener 101	<3 µg/kg	TM168		<15 #					
PCB congener 118	<3 µg/kg	TM168		<15 #					
PCB congener 138	<3 µg/kg	TM168		<15 #					
PCB congener 153	<3 µg/kg	TM168		<15 #					
PCB congener 180	<3 µg/kg	TM168		<15 #					
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<105					
Sulphide, Easily liberated	<15 mg/kg	TM180		54.5 @ #	84.2 @ M	<15 @ M			
Arsenic	<0.6 mg/kg	TM181		55.9 #	44.7 M	24.7 M			
Cadmium	<0.02 mg/kg	TM181		0.845 #	0.394 M	0.558 M			
Chromium	<0.9 mg/kg	TM181		35.5 #	22.1 M	<0.9 M			
Copper	<1.4 mg/kg	TM181		207 #	89.3 M	117 M			
Lead	<0.7 mg/kg	TM181		291 #	186 M	6.38 M			
Mercury	<0.14 mg/kg	TM181		0.334 #	0.44 M	<0.14 M			
Nickel	<0.2 mg/kg	TM181		45.5 #	27.9 M	50.2 M			
Selenium	<1 mg/kg	TM181		2 #	<1 #	<1 #			
Zinc	<1.9 mg/kg	TM181		279 #	92.1 M	15.7 M			
Sulphate, Total	<48 mg/kg	TM221		916 #	910 M	497 M			
Boron, water soluble	<1 mg/kg	TM222		3.73 #	3.07 M	<1 M			
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0663 #	<0.004 M	0.0399 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.4	86	76.6			
Acenaphthene-d10 % recovery**	%	TM218		79.3	82.4	76.1			
Phenanthrene-d10 % recovery**	%	TM218		82.5	85.6	65.9			
Chrysene-d12 % recovery**	%	TM218		85.6	91.1	55			
Perylene-d12 % recovery**	%	TM218		86.6	90.6	45.4			
Naphthalene	<9 µg/kg	TM218		3610 #	260 M	<9 M			
Acenaphthylene	<12 µg/kg	TM218		452 #	363 M	<12 M			
Acenaphthene	<8 µg/kg	TM218		7230 #	1200 M	<8 M			
Fluorene	<10 µg/kg	TM218		7840 #	871 M	<10 M			
Phenanthrene	<15 µg/kg	TM218		38100 #	3660 M	156 M			
Anthracene	<16 µg/kg	TM218		8050 #	599 M	51.6 M			
Fluoranthene	<17 µg/kg	TM218		29800 #	3650 M	320 M			
Pyrene	<15 µg/kg	TM218		24500 #	3570 M	294 M			
Benz(a)anthracene	<14 µg/kg	TM218		10000 #	1870 M	328 M			
Chrysene	<10 µg/kg	TM218		10500 #	1940 M	338 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		11800 #	2430 M	537 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		4160 #	911 M	209 M			
Benzo(a)pyrene	<15 µg/kg	TM218		9130 #	1750 M	444 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5720 #	1260 M	376 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		776 #	163 M	54.4 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4990 #	1130 M	314 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		177000	25600	3420			

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	WS102
Depth (m)	2.80 - 2.80
Sample Type	Soil/Solid (S)
Date Sampled	23/10/2020
Sample Time	.
Date Received	27/10/2020
SDG Ref	201027-76
Lab Sample No.(s)	23122295
AGS Reference	

Component	LOD/Units	Method	
Phenol	<100 µg/kg	TM157	<200
Pentachlorophenol	<100 µg/kg	TM157	<200
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157	<200
Nitrobenzene	<100 µg/kg	TM157	<200
Isophorone	<100 µg/kg	TM157	<200
Hexachloroethane	<100 µg/kg	TM157	<200
Hexachlorocyclopentadiene	<100 µg/kg	TM157	<1000
Hexachlorobutadiene	<100 µg/kg	TM157	<200
Hexachlorobenzene	<100 µg/kg	TM157	<200
n-Dioctyl phthalate	<100 µg/kg	TM157	<200
Dimethyl phthalate	<100 µg/kg	TM157	<200
Diethyl phthalate	<100 µg/kg	TM157	<200
n-Dibutyl phthalate	<100 µg/kg	TM157	<200
Dibenzofuran	<100 µg/kg	TM157	4130
Carbazole	<100 µg/kg	TM157	1720
Butylbenzyl phthalate	<100 µg/kg	TM157	<200
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157	<200
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157	<200
bis(2-Chloroethyl)ether	<100 µg/kg	TM157	<200
Azobenzene	<100 µg/kg	TM157	<200
4-Nitrophenol	<100 µg/kg	TM157	<200
4-Nitroaniline	<100 µg/kg	TM157	<200
4-Methylphenol	<100 µg/kg	TM157	<200
4-Chlorophenylphenylether	<100 µg/kg	TM157	<200
4-Chloroaniline	<100 µg/kg	TM157	<200
4-Chloro-3-methylphenol	<100 µg/kg	TM157	<200
4-Bromophenylphenylether	<100 µg/kg	TM157	<200
3-Nitroaniline	<100 µg/kg	TM157	<200
2-Nitrophenol	<100 µg/kg	TM157	<200
2-Nitroaniline	<100 µg/kg	TM157	<200
2-Methylphenol	<100 µg/kg	TM157	<200
1,2,4-Trichlorobenzene	<100 µg/kg	TM157	<200
2-Chlorophenol	<100 µg/kg	TM157	<200

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			WS102	2.80 - 2.80	Soil/Solid (S)	23/10/2020	.	27/10/2020	201027-76	23122295	
2,6-Dinitrotoluene	<100 µg/kg	TM157	<200								
2,4-Dinitrotoluene	<100 µg/kg	TM157	<200								
2,4-Dimethylphenol	<100 µg/kg	TM157	<200								
2,4-Dichlorophenol	<100 µg/kg	TM157	<200								
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<200								
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<200								
1,4-Dichlorobenzene	<100 µg/kg	TM157	<200								
1,3-Dichlorobenzene	<100 µg/kg	TM157	<200								
1,2-Dichlorobenzene	<100 µg/kg	TM157	<200								
2-Chloronaphthalene	<100 µg/kg	TM157	<200								
2-Methylnaphthalene	<100 µg/kg	TM157	2080								
Acenaphthylene	<100 µg/kg	TM157	561								
Acenaphthene	<100 µg/kg	TM157	4960								
Anthracene	<100 µg/kg	TM157	6480								
Benzo(a)anthracene	<100 µg/kg	TM157	8580								
Benzo(b)fluoranthene	<100 µg/kg	TM157	8300								
Benzo(k)fluoranthene	<100 µg/kg	TM157	6750								
Benzo(a)pyrene	<100 µg/kg	TM157	7440								
Benzo(g,h,i)perylene	<100 µg/kg	TM157	4010								
Chrysene	<100 µg/kg	TM157	8490								
Fluoranthene	<100 µg/kg	TM157	28900								
Fluorene	<100 µg/kg	TM157	5520								
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	4290								
Phenanthrene	<100 µg/kg	TM157	32100								
Pyrene	<100 µg/kg	TM157	21900								
Naphthalene	<100 µg/kg	TM157	1600								
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	521								
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<200								

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		83.6	91.6	90.8			
Aliphatics >C5-C6	<10 µg/kg	TM089		67.5	19.1	18.2			
Aliphatics >C6-C8	<10 µg/kg	TM089		223	44.5	23			
Aliphatics >C8-C10	<10 µg/kg	TM089		211	41.3	105			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		2370	<1000	<1000			
Aliphatics >C16-C21	<1000 µg/kg	TM414		7660	4730	<1000			
Aliphatics >C21-C35	<1000 µg/kg	TM414		146000	21000	<1000			
Aliphatics >C35-C44	<1000 µg/kg	TM414		74300	3630	<1000			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		230000	29700	<5000			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		697000	221000	<10000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/kg	TM089		140	27	70.2			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		3780	<1000	<1000			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		47100	10000	<1000			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		176000	41100	<1000			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		219000	128000	4560			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		21200	11600	<1000			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		3860	1470	<1000			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		467000	191000	6400			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		697000	221000	<10000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		502	105	146			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		140	<50	70.2			
GRO >C5-C10	<20 µg/kg	TM089		642	105	217			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
Dibromofluoromethane**	%	TM116		113	117	117			
Toluene-d8**	%	TM116		98.4	101	102			
4-Bromofluorobenzene**	%	TM116		82.9	95.5	99.6			
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 #					
Chloromethane	<7 µg/kg	TM116		<140 #					
Vinyl Chloride	<6 µg/kg	TM116		<120 #					
Bromomethane	<10 µg/kg	TM116		<200 #					
Chloroethane	<10 µg/kg	TM116		<200 #					
Trichlorofluorormethane	<6 µg/kg	TM116		<120 #					
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #					
Carbon Disulphide	<7 µg/kg	TM116		<140 #					
Dichloromethane	<10 µg/kg	TM116		<200 #					
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 #	<200 M	<200 M			
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 #					
1,1-Dichloroethane	<8 µg/kg	TM116		<160 #					
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 #					
2,2-Dichloropropane	<10 µg/kg	TM116		<200					
Bromochloromethane	<10 µg/kg	TM116		<200 #					
Chloroform	<8 µg/kg	TM116		<160 #					
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 #					
1,1-Dichloropropene	<10 µg/kg	TM116		<200 #					
Carbontetrachloride	<10 µg/kg	TM116		<200 #					
1,2-Dichloroethane	<5 µg/kg	TM116		<100 #					
Benzene	<9 µg/kg	TM116		<180 #	<180 M	<180 M			
Trichloroethene	<9 µg/kg	TM116		<180 #					
1,2-Dichloropropane	<10 µg/kg	TM116		<200 #					
Dibromomethane	<9 µg/kg	TM116		<180 #					
Bromodichloromethane	<7 µg/kg	TM116		<140 #					
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 #					
Toluene	<7 µg/kg	TM116		<140 #	<140 M	<140 M			
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200					
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 #					
1,3-Dichloropropane	<7 µg/kg	TM116		<140 #					

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 #					
Dibromochloromethane	<10 µg/kg	TM116		<200 #					
1,2-Dibromoethane	<10 µg/kg	TM116		<200 #					
Chlorobenzene	<5 µg/kg	TM116		<100 #					
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #					
Ethylbenzene	<4 µg/kg	TM116		<80 #	<80 M	<80 M			
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #			
o-Xylene	<10 µg/kg	TM116		<200 #	<200 M	<200 M			
Styrene	<10 µg/kg	TM116		<200 #					
Bromoform	<10 µg/kg	TM116		<200 #					
Isopropylbenzene	<5 µg/kg	TM116		<100 #					
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #					
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 #					
Bromobenzene	<10 µg/kg	TM116		<200 #					
Propylbenzene	<10 µg/kg	TM116		<200 #					
2-Chlorotoluene	<9 µg/kg	TM116		<180 #					
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 #					
4-Chlorotoluene	<10 µg/kg	TM116		<200 #					
tert-Butylbenzene	<14 µg/kg	TM116		<280 #					
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #					
sec-Butylbenzene	<10 µg/kg	TM116		<200					
4-Isopropyltoluene	<10 µg/kg	TM116		<200 #					
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 #					
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 #					
n-Butylbenzene	<11 µg/kg	TM116		<220					
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 #					
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 #					
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #					
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400					
Hexachlorobutadiene	<20 µg/kg	TM116		<400					
Naphthalene	<13 µg/kg	TM116		<260 #					
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #					
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS102	WS107	WS119			
			Depth (m)	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	23/10/2020	23/10/2020	23/10/2020			
			Sample Time	.	.	.			
			Date Received	27/10/2020	27/10/2020	27/10/2020			
			SDG Ref	201027-76	201027-76	201027-76			
			Lab Sample No.(s)	23122295	23122288	23122301			
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4			
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800			

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref.	WS102	05/11/20	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	2.80 - 2.80										
Sample Type	SOLID										
Date Sampled	23/10/2020 00:00:00										
Date Received	27/10/2020 05:00:00										
SDG	201027-76										
Original Sample	23122295										
Method Number	TM048										
Cust. Sample Ref.	WS107	05/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.40 - 1.40										
Sample Type	SOLID										
Date Sampled	23/10/2020 00:00:00										
Date Received	27/10/2020 05:00:00										
SDG	201027-76										
Original Sample	23122288										
Method Number	TM048										
Cust. Sample Ref.	WS119	05/11/2020	Christian Hallam	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.50 - 1.50										
Sample Type	SOLID										
Date Sampled	23/10/2020 00:00:00										
Date Received	27/10/2020 05:00:00										
SDG	201027-76										
Original Sample	23122301										
Method Number	TM048										

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201027-76	**Client Reference:**	LD10162	**Report Number:**	574679
Location:	Ten Acres Lane	**Order Number:**	LD1683	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23122295	23122288	23122301
Customer Sample Ref.	WS102	WS107	WS119
AGS Ref.			
Depth	2.80 - 2.80	1.40 - 1.40	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	05-Nov-2020	05-Nov-2020	05-Nov-2020
Asbestos ID in Solid Samples	05-Nov-2020	05-Nov-2020	05-Nov-2020
Boron Water Soluble	05-Nov-2020	04-Nov-2020	04-Nov-2020
Cyanide Comp/Free/Total/Thiocyanate	05-Nov-2020	05-Nov-2020	05-Nov-2020
Easily Liberated Sulphide	04-Nov-2020	04-Nov-2020	04-Nov-2020
EPH CWG GC (S)	04-Nov-2020	04-Nov-2020	04-Nov-2020
GRO by GC-FID (S)	03-Nov-2020	03-Nov-2020	02-Nov-2020
Hexavalent Chromium (s)	05-Nov-2020	05-Nov-2020	05-Nov-2020
Metals in solid samples by OES	04-Nov-2020	05-Nov-2020	05-Nov-2020
PAH by GCMS	05-Nov-2020	04-Nov-2020	09-Nov-2020
PCBs by GCMS	05-Nov-2020		
pH	04-Nov-2020	04-Nov-2020	04-Nov-2020
Phenols by HPLC (S)	06-Nov-2020	06-Nov-2020	06-Nov-2020
Sample description	31-Oct-2020	31-Oct-2020	31-Oct-2020
Semi Volatile Organic Compounds	04-Nov-2020		
Total Organic Carbon	05-Nov-2020	04-Nov-2020	05-Nov-2020
Total Sulphate	04-Nov-2020	04-Nov-2020	04-Nov-2020
TPH CWG GC (S)	04-Nov-2020	04-Nov-2020	04-Nov-2020
VOC MS (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	12 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201027-83
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	575456

This report has been revised and directly supersedes 574099 in its entirety.

We received 7 samples on Tuesday October 27, 2020 and 5 of these samples were scheduled for analysis which was completed on Thursday November 12, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23123528	WS103 ES1		0.85 - 0.87	23/10/2020
23123532	WS103 ES2		3.41 - 3.45	23/10/2020
23123536	WS105 ES1		2.50 - 2.50	23/10/2020
23123539	WS105 ES2		4.60 - 4.60	23/10/2020
23123553	WS111 ES1		0.35 - 0.35	23/10/2020
23123548	WS112 ES1		0.90 - 0.90	23/10/2020
23123543	WS113 ES1		0.85 - 0.85	23/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23123532		23123536		23123553			23123548		23123543	
Customer Sample Reference			WS103 ES2		WS105 ES1		WS111 ES1			WS112 ES1		WS113 ES1	
AGS Reference													
Depth (m)			3.41 - 3.45		2.50 - 2.50		0.35 - 0.35			0.90 - 0.90		0.85 - 0.85	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 5	X		X		X			X			X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1								X				
Boron Water Soluble	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 5	X		X			X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 5	X		X			X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5		X		X			X			X		X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 5	X		X			X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 5	X		X			X			X		X	
PCBs by GCMS	All	NDPs: 0 Tests: 1			X									
pH	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Sample description	All	NDPs: 0 Tests: 5	X		X			X			X		X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23123532		23123536		23123553			23123548		23123543	
Customer Sample Reference			WS103 ES2		WS105 ES1		WS111 ES1			WS112 ES1		WS113 ES1	
AGS Reference													
Depth (m)			3.41 - 3.45		2.50 - 2.50		0.35 - 0.35			0.90 - 0.90		0.85 - 0.85	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 2	X		X									
Total Organic Carbon	All	NDPs: 0 Tests: 5	X		X			X			X		X	
Total Sulphate	All	NDPs: 0 Tests: 5	X		X			X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 5	X		X			X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 5		X		X			X			X		X

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23123532	WS103 ES2	3.41 - 3.45	Dark Brown	Loamy Sand	N/A	Stones
23123536	WS105 ES1	2.50 - 2.50	Black	Sand	None	Stones
23123553	WS111 ES1	0.35 - 0.35	Black	Sand	None	Stones
23123548	WS112 ES1	0.90 - 0.90	Black	Sand	None	Stones
23123543	WS113 ES1	0.85 - 0.85	Cream	Clay	Vegetation	N/A

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		25	14	8.7	17	21
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0116 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.59 #	2.17 #	8.81 #	25.9 #	0.938 #
pH	1 pH Units	TM133		7.99 M	7.8 M	6.27 M	8.09 M	5.89 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		7.06 M	<1 M	<1 M	1.99 M	<1 M
PCB congener 28	<3 µg/kg	TM168			<15 M			
PCB congener 52	<3 µg/kg	TM168			<15 M			
PCB congener 101	<3 µg/kg	TM168			<15 M			
PCB congener 118	<3 µg/kg	TM168			<15 M			
PCB congener 138	<3 µg/kg	TM168			<15 M			
PCB congener 153	<3 µg/kg	TM168			<15 M			
PCB congener 180	<3 µg/kg	TM168			<15 M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<105			
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	306 @ M	<15 @ M	<15 @ M	<15 @ M
Arsenic	<0.6 mg/kg	TM181		21.2 M	7.25 M	60 M	40.9 M	9.79 M
Cadmium	<0.02 mg/kg	TM181		0.0571 M	0.295 M	<0.02 M	0.552 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		15 M	9.53 M	48.8 M	9.11 M	19.5 M
Copper	<1.4 mg/kg	TM181		30.2 M	26 M	23.9 M	121 M	11.6 M
Lead	<0.7 mg/kg	TM181		37.6 M	62.9 M	56.6 M	229 M	15.5 M
Mercury	<0.14 mg/kg	TM181		0.24 M	0.326 M	0.254 M	0.716 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		26.3 M	131 M	44.3 M	36.4 M	20.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #
Zinc	<1.9 mg/kg	TM181		59.8 M	438 M	36.3 M	444 M	32.2 M
Sulphate, Total	<48 mg/kg	TM221		626 M	5100 M	1830 M	716 M	665 M
Boron, water soluble	<1 mg/kg	TM222		1.67 M	8.54 M	1.97 M	<1 M	1.32 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.175 M	0.381 M	0.0497 M	0.0674 M	0.31 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					0.109 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #	
Additional Asbestos Components (Using TM048)		TM304					None #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Analysts Comments		TM304					N/C	
Asbestos Quantification - Total - %	<0.001 %	TM304					0.109 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		90.9	90.1	90	90.4	91
Acenaphthene-d10 % recovery**	%	TM218		93.2	96.8	93.4	95.2	91.8
Phenanthrene-d10 % recovery**	%	TM218		94.3	101	94.9	95.2	92.2
Chrysene-d12 % recovery**	%	TM218		83.1	101	78.3	75.8	80.3
Perylene-d12 % recovery**	%	TM218		81.6	92.3	77	72.8	80.4
Naphthalene	<9 µg/kg	TM218		26.6 M	62.7 M	2140 M	6040 M	<9 M
Acenaphthylene	<12 µg/kg	TM218		202 M	<60 M	318 M	1110 M	<12 M
Acenaphthene	<8 µg/kg	TM218		41.1 M	1700 M	4010 M	14600 M	<8 M
Fluorene	<10 µg/kg	TM218		206 M	1360 M	3140 M	12400 M	<10 M
Phenanthrene	<15 µg/kg	TM218		1380 M	16000 M	21100 M	84100 M	24.2 M
Anthracene	<16 µg/kg	TM218		558 M	4110 M	4480 M	17000 M	<16 M
Fluoranthene	<17 µg/kg	TM218		1670 M	18300 M	22100 M	108000 M	28.2 M
Pyrene	<15 µg/kg	TM218		1550 M	15800 M	21200 M	103000 M	27.7 M
Benz(a)anthracene	<14 µg/kg	TM218		1030 M	7700 M	9650 M	46800 M	<14 M
Chrysene	<10 µg/kg	TM218		858 M	6280 M	9690 M	45200 M	15.6 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		936 M	6760 M	10400 M	52800 M	23.3 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		320 M	2490 M	3370 M	17600 M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		732 M	6220 M	7440 M	39200 M	<15 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		397 M	3510 M	4420 M	28100 M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		76.4 M	712 M	749 M	3990 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		360 M	3530 M	4370 M	23500 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		10300	94500	129000	604000	119

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1				
			Depth (m)	3.41 - 3.45	2.50 - 2.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	23/10/2020	23/10/2020				
			Sample Time	.	.				
			Date Received	27/10/2020	27/10/2020				
			SDG Ref	201027-83	201027-83				
			Lab Sample No.(s)	23123532	23123536				
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100				
Pentachlorophenol	<100 µg/kg	TM157		<100	<100				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100				
Nitrobenzene	<100 µg/kg	TM157		<100	<100				
Isophorone	<100 µg/kg	TM157		<100	<100				
Hexachloroethane	<100 µg/kg	TM157		<100	<100				
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100				
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100				
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100				
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100				
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100				
Diethyl phthalate	<100 µg/kg	TM157		<100	<100				
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100				
Dibenzofuran	<100 µg/kg	TM157		<100	<100				
Carbazole	<100 µg/kg	TM157		<100	<100				
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	769				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100				
Azobenzene	<100 µg/kg	TM157		<100	<100				
4-Nitrophenol	<100 µg/kg	TM157		<100	<100				
4-Nitroaniline	<100 µg/kg	TM157		<100	<100				
4-Methylphenol	<100 µg/kg	TM157		<100	<100				
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100				
4-Chloroaniline	<100 µg/kg	TM157		<100	<100				
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100				
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100				
3-Nitroaniline	<100 µg/kg	TM157		<100	<100				
2-Nitrophenol	<100 µg/kg	TM157		<100	<100				
2-Nitroaniline	<100 µg/kg	TM157		<100	<100				
2-Methylphenol	<100 µg/kg	TM157		<100	<100				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100				
2-Chlorophenol	<100 µg/kg	TM157		<100	<100				

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1				
			Depth (m)	3.41 - 3.45	2.50 - 2.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	23/10/2020	23/10/2020				
			Sample Time	.	.				
			Date Received	27/10/2020	27/10/2020				
			SDG Ref	201027-83	201027-83				
			Lab Sample No.(s)	23123532	23123536				
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<100				
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	121				
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<100				
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<100				
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<100				
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<100				
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<100				
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<100				
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<100				
Acenaphthylene	<100 µg/kg	TM157		687	<100				
Acenaphthene	<100 µg/kg	TM157		<100	127				
Anthracene	<100 µg/kg	TM157		774	208				
Benzo(a)anthracene	<100 µg/kg	TM157		1780	502				
Benzo(b)fluoranthene	<100 µg/kg	TM157		1380	545				
Benzo(k)fluoranthene	<100 µg/kg	TM157		1430	420				
Benzo(a)pyrene	<100 µg/kg	TM157		1430	402				
Benzo(g,h,i)perylene	<100 µg/kg	TM157		737	271				
Chrysene	<100 µg/kg	TM157		1680	501				
Fluoranthene	<100 µg/kg	TM157		3120	1410				
Fluorene	<100 µg/kg	TM157		266	136				
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		522	246				
Phenanthrene	<100 µg/kg	TM157		1980	989				
Pyrene	<100 µg/kg	TM157		2540	1220				
Naphthalene	<100 µg/kg	TM157		<100	<100				
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<100				
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<100				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		84.8	106	78.5	78.9	113
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	111	177	60	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	157	251	175	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	485	136	196	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	14400	<1000	4260	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	221000	3720	7520	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	402000	2390	5590	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	368000	9170	7650	<1000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	98000	<1000	3810	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	1100000	16200	28800	<5000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		39100	1400000	65800	1590000	53300
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	324	90.9	131	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	1560	<1000	5660	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	93300	4280	78400	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		10600	113000	14300	449000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		25800	84000	29600	933000	3230
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	2350	<1000	99500	49200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	13600	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		38000	294000	49500	1570000	52400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		38000	1400000	66400	1600000	52400
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	753	564	431	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	324	90.9	131	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	1080	655	562	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Dibromofluoromethane**	%	TM116		111	121	110	117	112
Toluene-d8**	%	TM116		99.7	82.7	98.9	97.6	99.4
4-Bromofluorobenzene**	%	TM116		93	70.4	89.1	88.7	84.9
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 M	20.9 M			
Chloromethane	<7 µg/kg	TM116		<140 #	<7 #			
Vinyl Chloride	<6 µg/kg	TM116		<120 M	<6 M			
Bromomethane	<10 µg/kg	TM116		<200 M	<10 M			
Chloroethane	<10 µg/kg	TM116		<200 M	<10 M			
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M	<6 M			
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #	<10 #			
Carbon Disulphide	<7 µg/kg	TM116		<140 M	13.8 M			
Dichloromethane	<10 µg/kg	TM116		<200 #	<10 #			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<10 M	<200 M	<200 M	<10 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M	<10 M			
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M	<8 M			
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M	<6 M			
2,2-Dichloropropane	<10 µg/kg	TM116		<200	<10			
Bromochloromethane	<10 µg/kg	TM116		<200 M	<10 M			
Chloroform	<8 µg/kg	TM116		<160 M	<8 M			
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M	<7 M			
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M	<10 M			
Carbontetrachloride	<10 µg/kg	TM116		<200 M	<10 M			
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M	<5 M			
Benzene	<9 µg/kg	TM116		<180 M	<9 M	<180 M	<180 M	<9 M
Trichloroethene	<9 µg/kg	TM116		<180 #	<9 #			
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M	<10 M			
Dibromomethane	<9 µg/kg	TM116		<180 M	<9 M			
Bromodichloromethane	<7 µg/kg	TM116		<140 M	<7 M			
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M	<10 M			
Toluene	<7 µg/kg	TM116		<140 M	<7 M	<140 M	<140 M	<7 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200	<10			
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M	<10 M			
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M	<7 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Tetrachloroethene	<5 µg/kg	TM116		<100 M	<5 M			
Dibromochloromethane	<10 µg/kg	TM116		<200 M	<10 M			
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M	<10 M			
Chlorobenzene	<5 µg/kg	TM116		<100 M	40.1 M			
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M	<10 M			
Ethylbenzene	<4 µg/kg	TM116		<80 M	<4 M	<80 M	<80 M	<4 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<10 #	<200 #	<200 #	<10 #
o-Xylene	<10 µg/kg	TM116		<200 M	<10 M	<200 M	<200 M	<10 M
Styrene	<10 µg/kg	TM116		<200 #	<10 #			
Bromoform	<10 µg/kg	TM116		<200 M	<10 M			
Isopropylbenzene	<5 µg/kg	TM116		<100 #	<5 #			
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #	<10 #			
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M	<16 M			
Bromobenzene	<10 µg/kg	TM116		<200 M	<10 M			
Propylbenzene	<10 µg/kg	TM116		<200 M	<10 M			
2-Chlorotoluene	<9 µg/kg	TM116		<180 M	<9 M			
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M	<8 M			
4-Chlorotoluene	<10 µg/kg	TM116		<200 M	<10 M			
tert-Butylbenzene	<14 µg/kg	TM116		<280 M	<14 M			
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #	<9 #			
sec-Butylbenzene	<10 µg/kg	TM116		<200	<10			
4-Isopropyltoluene	<10 µg/kg	TM116		<200 M	<10 M			
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M	<8 M			
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M	<5 M			
n-Butylbenzene	<11 µg/kg	TM116		<220	<11			
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M	29 M			
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M	<14 M			
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #	<10 #			
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400	<20			
Hexachlorobutadiene	<20 µg/kg	TM116		<400	<20			
Naphthalene	<13 µg/kg	TM116		<260 M	<13 M			
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #	<20 #			
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<20			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
			Depth (m)	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
			Sample Time	.	.	.	.	.
			Date Received	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
			SDG Ref	201027-83	201027-83	201027-83	201027-83	201027-83
			Lab Sample No.(s)	23123532	23123536	23123553	23123548	23123543
			AGS Reference					
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.02	<0.4	<0.4	<0.02
Sum of BTEX	<40 µg/kg	TM116		<800	<40	<800	<800	<40

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS103 ES2 3.41 - 3.45 SOLID 23/10/2020 00:00:00 27/10/2020 09:00:00 201027-83 23123532 TM048	03/11/2020	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS105 ES1 2.50 - 2.50 SOLID 23/10/2020 00:00:00 27/10/2020 09:00:00 201027-83 23123536 TM048	03/11/2020	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS111 ES1 0.35 - 0.35 SOLID 23/10/2020 00:00:00 27/10/2020 09:00:00 201027-83 23123553 TM048	03/11/2020	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS112 ES1 0.90 - 0.90 SOLID 23/10/2020 00:00:00 27/10/2020 09:00:00 201027-83 23123548 TM048	03/11/2020	Paul Poynton	ACM debris in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS113 ES1 0.85 - 0.85 SOLID 23/10/2020 00:00:00 27/10/2020 09:00:00 201027-83 23123543 TM048	03/11/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	WS112 ES1	None (#)	N/C	0.1093 (#)	<0.001 (#)	0.1093 (#)
Depth (m)	0.90 - 0.90					
Sample Type	SOLID					
Date Sampled	23/10/2020 00:00:00					
Date Receieved	27/10/2020 09:00:00					
SDG	201027-83					
Original Sample	23123548					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201027-83	**Client Reference:**	LD10162	**Report Number:**	575456
Location:	Ten Acres Lane	**Order Number:**	LD1688	**Superseded Report:**	574099

Test Completion Dates

Lab Sample No(s)	23123532	23123536	23123553	23123548	23123543
Customer Sample Ref.	WS103 ES2	WS105 ES1	WS111 ES1	WS112 ES1	WS113 ES1
AGS Ref.					
Depth	3.41 - 3.45	2.50 - 2.50	0.35 - 0.35	0.90 - 0.90	0.85 - 0.85
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020
Asbestos ID in Solid Samples	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Asbestos Quantification - Full				12-Nov-2020	
Boron Water Soluble	03-Nov-2020	02-Nov-2020	03-Nov-2020	02-Nov-2020	03-Nov-2020
Cyanide Comp/Free/Total/Thiocyanate	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020
Easily Liberated Sulphide	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
EPH CWG GC (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020
GRO by GC-FID (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020
Hexavalent Chromium (s)	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Metals in solid samples by OES	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
PAH by GCMS	02-Nov-2020	01-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020
PCBs by GCMS		04-Nov-2020			
pH	02-Nov-2020	03-Nov-2020	03-Nov-2020	29-Oct-2020	03-Nov-2020
Phenols by HPLC (S)	04-Nov-2020	04-Nov-2020	04-Nov-2020	04-Nov-2020	03-Nov-2020
Sample description	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020
Semi Volatile Organic Compounds	02-Nov-2020	02-Nov-2020			
Total Organic Carbon	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Total Sulphate	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
TPH CWG GC (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020
VOC MS (S)	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020	02-Nov-2020

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201030-141
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	576327

This report has been revised and directly supersedes 574926 in its entirety.

We received 11 samples on Wednesday October 28, 2020 and 6 of these samples were scheduled for analysis which was completed on Thursday November 19, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23147571	CP101	ES	4.00 - 5.00	28/10/2020
23147576	CP103	ES	2.00 - 3.00	26/10/2020
23147564	CP103	ES	4.00 - 5.00	26/10/2020
23147580	CP103	ES	9.00	27/10/2020
23147554	NO ID			
23147601	WS101	ES	0.50 - 0.60	28/10/2020
23147605	WS101	ES	3.40 - 3.42	28/10/2020
23147615	WS104	ES	4.72 - 5.00	28/10/2020
23147609	WS106	ES	2.72 - 2.78	28/10/2020
23147585	WS109	ES	2.60 - 2.70	28/10/2020
23147593	WS109	ES	3.65 - 3.75	28/10/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Uns6ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23147571		23147576		23147605	23147615		23147609		23147593		
Customer Sample Reference			CP101		CP103		WS101	WS104		WS106		WS109		
AGS Reference			ES		ES		ES	ES		ES		ES		
Depth (m)			4.00 - 5.00		2.00 - 3.00		3.40 - 3.42	4.72 - 5.00		2.72 - 2.78		3.65 - 3.75		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 2	X							X				
Anions by Kone (soil)	All	NDPs: 0 Tests: 4				X		X			X		X	
Anions by Kone (w)	All	NDPs: 0 Tests: 2	X							X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4			X			X			X		X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1			X									
Boron Water Soluble	All	NDPs: 0 Tests: 4				X		X			X		X	
CEN Readings	All	NDPs: 0 Tests: 2	X							X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 6	X			X		X		X	X		X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 2	X							X				
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 2	X							X				
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4				X		X			X		X	
EPH CWG (Aliphatic) Filtered GC (W)	All	NDPs: 0 Tests: 1								X				
EPH CWG (Aromatic) Filtered GC (W)	All	NDPs: 0 Tests: 1								X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 4				X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4					X		X			X		X

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Uns6ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23147571		23147576		23147605	23147615	23147609		23147593		
Customer Sample Reference			CP101		CP103		WS101	WS104	WS106		WS109		
AGS Reference			ES		ES		ES	ES	ES		ES		
Depth (m)			4.00 - 5.00		2.00 - 3.00		3.40 - 3.42	4.72 - 5.00	2.72 - 2.78		3.65 - 3.75		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1							X					
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4				X		X			X		X	
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 2	X						X					
Mercury Dissolved	All	NDPs: 0 Tests: 2	X						X					
Metals in solid samples by OES	All	NDPs: 0 Tests: 4				X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 4				X		X			X		X	
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 2	X						X					
PCBs by GCMS	All	NDPs: 0 Tests: 2						X					X	
pH	All	NDPs: 0 Tests: 4				X		X			X		X	
pH Value	All	NDPs: 0 Tests: 2	X						X					
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4				X		X			X		X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 2	X						X					
Sample description	All	NDPs: 0 Tests: 6		X		X		X	X		X		X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 3				X				X			X	
Sulphide	All	NDPs: 0 Tests: 2	X						X					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -

S - Soil/Solid
UNS - Uns6ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23147571		23147576		23147605	23147615	23147609		23147593		
Customer Sample Reference			CP101		CP103		WS101	WS104	WS106		WS109		
AGS Reference			ES		ES		ES	ES	ES		ES		
Depth (m)			4.00 - 5.00		2.00 - 3.00		3.40 - 3.42	4.72 - 5.00	2.72 - 2.78		3.65 - 3.75		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Total Organic Carbon	All	NDPs: 0 Tests: 4				X		X			X		X	
Total Sulphate	All	NDPs: 0 Tests: 4				X		X			X		X	
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 1								X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 4				X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 4					X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23147571	CP101	4.00 - 5.00	Black	Loamy Sand	Vegetation	Stones
23147576	CP103	2.00 - 3.00	Dark Brown	Loamy Sand	Vegetation	Stones
23147605	WS101	3.40 - 3.42	Light Brown	Silt Loam	None	Stones
23147615	WS104	4.72 - 5.00	Black	Loamy Sand	Vegetation	Stones
23147609	WS106	2.72 - 2.78	Dark Brown	Sandy Loam	Stones	None
23147593	WS109	3.65 - 3.75	Dark Brown	Loamy Sand	None	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101	CP103	WS101	WS104	WS106	WS109
			Depth (m)	4.00 - 5.00	2.00 - 3.00	3.40 - 3.42	4.72 - 5.00	2.72 - 2.78	3.65 - 3.75
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/10/2020	26/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020
			SDG Ref	201030-141	201030-141	201030-141	201030-141	201030-141	201030-141
			Lab Sample No.(s)	23147571	23147576	23147605	23147615	23147609	23147593
			AGS Reference	ES	ES	ES	ES	ES	ES
Moisture Content Ratio (% of as received sample)	%	PM024		20	18	18	19	8.6	19
Phenol	<0.01 mg/kg	TM062 (S)			<0.01 @ M	<0.01 M		<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)			<0.01 @ M	<0.01 M		<0.01 M	0.332 M
Xylenols	<0.015 mg/kg	TM062 (S)			<0.015 @ M	<0.015 M		<0.015 M	0.221 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)			<0.035 @ M	<0.035 M		<0.035 M	0.554 M
Soil Organic Matter (SOM)	<0.35 %	TM132			8.53 #	1.09 #		0.538 #	6.71 #
pH	1 pH Units	TM133			8.31 M	8.59 M		7.96 M	8.63 M
Chromium, Hexavalent	<0.6 mg/kg	TM151			<0.6 #	<0.6 #		<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153			<1 M	<1 M		<1 M	1.72 M
PCB congener 28	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 52	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 101	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 118	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 138	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 153	<3 µg/kg	TM168				<3 M			<30 M
PCB congener 180	<3 µg/kg	TM168				<3 M			<30 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168				<21			<210
Sulphide, Easily liberated	<15 mg/kg	TM180			52.9 @ M	<15 ♦ M		<15 ♦ M	176 ♦ M
Arsenic	<0.6 mg/kg	TM181			17.2 M	6.27 M		5.34 M	10.5 M
Cadmium	<0.02 mg/kg	TM181			0.742 M	<0.02 M		0.185 M	0.157 M
Chromium	<0.9 mg/kg	TM181			23.6 M	10.5 M		11.9 M	14.7 M
Copper	<1.4 mg/kg	TM181			57.5 M	15.1 M		13.1 M	37.6 M
Lead	<0.7 mg/kg	TM181			250 M	7.17 M		11.9 M	63.1 M
Mercury	<0.14 mg/kg	TM181			<0.14 M	<0.14 M		<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181			27.3 M	17.3 M		25.7 M	28.7 M
Selenium	<1 mg/kg	TM181			<1 #	<1 #		<1 #	<1 #
Zinc	<1.9 mg/kg	TM181			444 M	47.3 M		53 M	62.4 M
Sulphate, Total	<48 mg/kg	TM221			1560 M	248 M		<48 M	471 M
Boron, water soluble	<1 mg/kg	TM222			<1 M	<1 M		<1 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243			0.324 M	0.0659 M		0.0119 M	0.0388 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			0.0046 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304			<0.001 #				
Additional Asbestos Components (Using TM048)		TM304			Amosite Detected #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Results Legend

#	ISO17025 accredited.
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*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
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1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101	CP103	WS101	WS104	WS106	WS109
			Depth (m)	4.00 - 5.00	2.00 - 3.00	3.40 - 3.42	4.72 - 5.00	2.72 - 2.78	3.65 - 3.75
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/10/2020	26/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020
			Sample Time	.	.	.	.	.	.
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020
			SDG Ref	201030-141	201030-141	201030-141	201030-141	201030-141	201030-141
			Lab Sample No.(s)	23147571	23147576	23147605	23147615	23147609	23147593
			AGS Reference	ES	ES	ES	ES	ES	ES
Analysts Comments		TM304		Loose fibres in soil.					
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0046 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

PAH by GCMS

Results Legend

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diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
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**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP103	WS101	WS106	WS109		
			Depth (m)	2.00 - 3.00	3.40 - 3.42	2.72 - 2.78	3.65 - 3.75		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	26/10/2020	28/10/2020	28/10/2020	28/10/2020		
			Sample Time	.	.	.	.		
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020		
			SDG Ref	201030-141	201030-141	201030-141	201030-141		
			Lab Sample No.(s)	23147576	23147605	23147609	23147593		
			AGS Reference	ES	ES	ES	ES		
Naphthalene-d8 % recovery**	%	TM218		81	80.6	94.8	79.4		
Acenaphthene-d10 % recovery**	%	TM218		79.6	76.9	91.1	82.6		
Phenanthrene-d10 % recovery**	%	TM218		83	77.9	93.3	88.2		
Chrysene-d12 % recovery**	%	TM218		102	70.4	84.1	84.6		
Perylene-d12 % recovery**	%	TM218		105	70.7	85.9	78.2		
Naphthalene	<9 µg/kg	TM218		214 M	<9 M	<9 M	22400 M		
Acenaphthylene	<12 µg/kg	TM218		900 M	<12 M	<12 M	820 M		
Acenaphthene	<8 µg/kg	TM218		2900 M	<8 M	<8 M	20500 M		
Fluorene	<10 µg/kg	TM218		2170 M	<10 M	<10 M	20000 M		
Phenanthrene	<15 µg/kg	TM218		11200 M	29.9 M	<15 M	98300 M		
Anthracene	<16 µg/kg	TM218		5360 M	<16 M	<16 M	24400 M		
Fluoranthene	<17 µg/kg	TM218		25200 M	<17 M	<17 M	79600 M		
Pyrene	<15 µg/kg	TM218		22100 M	21.6 M	<15 M	72100 M		
Benz(a)anthracene	<14 µg/kg	TM218		12400 M	<14 M	<14 M	25300 M		
Chrysene	<10 µg/kg	TM218		11000 M	<10 M	<10 M	22200 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		15700 M	<15 M	<15 M	18500 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		5620 M	<14 M	<14 M	8310 M		
Benzo(a)pyrene	<15 µg/kg	TM218		11300 M	<15 M	<15 M	21800 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		8930 M	<18 M	<18 M	13200 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		1450 M	<23 M	<23 M	1630 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		6640 M	<24 M	<24 M	12300 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		143000	<118	<118	461000		

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP103	WS106	WS109			
			Depth (m)	2.00 - 3.00	2.72 - 2.78	3.65 - 3.75			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	26/10/2020	28/10/2020	28/10/2020			
			Sample Time	.	.	.			
			Date Received	28/10/2020	28/10/2020	28/10/2020			
			SDG Ref	201030-141	201030-141	201030-141			
			Lab Sample No.(s)	23147576	23147609	23147593			
			AGS Reference	ES	ES	ES			
Phenol	<100 µg/kg	TM157		<200	<100	<500			
Pentachlorophenol	<100 µg/kg	TM157		<200	<100	<500			
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<200	<100	<500			
Nitrobenzene	<100 µg/kg	TM157		<200	<100	<500			
Isophorone	<100 µg/kg	TM157		<200	<100	<500			
Hexachloroethane	<100 µg/kg	TM157		<200	<100	<500			
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<100	<500			
Hexachlorobutadiene	<100 µg/kg	TM157		<200	<100	<500			
Hexachlorobenzene	<100 µg/kg	TM157		<200	<100	<500			
n-Dioctyl phthalate	<100 µg/kg	TM157		<200	<100	<500			
Dimethyl phthalate	<100 µg/kg	TM157		<200	<100	<500			
Diethyl phthalate	<100 µg/kg	TM157		<200	<100	<500			
n-Dibutyl phthalate	<100 µg/kg	TM157		<200	<100	<500			
Dibenzofuran	<100 µg/kg	TM157		268	<100	13200			
Carbazole	<100 µg/kg	TM157		<200	<100	6290			
Butylbenzyl phthalate	<100 µg/kg	TM157		<200	<100	<500			
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<200	<100	<500			
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<200	<100	<500			
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<200	<100	<500			
Azobenzene	<100 µg/kg	TM157		<200	<100	<500			
4-Nitrophenol	<100 µg/kg	TM157		<200	<100	<500			
4-Nitroaniline	<100 µg/kg	TM157		<200	<100	<500			
4-Methylphenol	<100 µg/kg	TM157		<200	<100	<500			
4-Chlorophenylphenylether	<100 µg/kg	TM157		<200	<100	<500			
4-Chloroaniline	<100 µg/kg	TM157		<200	<100	<500			
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<200	<100	<500			
4-Bromophenylphenylether	<100 µg/kg	TM157		<200	<100	<500			
3-Nitroaniline	<100 µg/kg	TM157		<200	<100	<500			
2-Nitrophenol	<100 µg/kg	TM157		<200	<100	<500			
2-Nitroaniline	<100 µg/kg	TM157		<200	<100	<500			
2-Methylphenol	<100 µg/kg	TM157		<200	<100	<500			
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<200	<100	<500			
2-Chlorophenol	<100 µg/kg	TM157		<200	<100	<500			

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Semi Volatile Organic Compounds

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP103	WS106	WS109			
			Depth (m)	2.00 - 3.00	2.72 - 2.78	3.65 - 3.75			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	26/10/2020	28/10/2020	28/10/2020			
			Sample Time	.	.	.			
			Date Received	28/10/2020	28/10/2020	28/10/2020			
			SDG Ref	201030-141	201030-141	201030-141			
			Lab Sample No.(s)	23147576	23147609	23147593			
			AGS Reference	ES	ES	ES			
2,6-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<500			
2,4-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<500			
2,4-Dimethylphenol	<100 µg/kg	TM157		<200	<100	<500			
2,4-Dichlorophenol	<100 µg/kg	TM157		<200	<100	<500			
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<500			
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<500			
1,4-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<500			
1,3-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<500			
1,2-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<500			
2-Chloronaphthalene	<100 µg/kg	TM157		<200	<100	<500			
2-Methylnaphthalene	<100 µg/kg	TM157		<200	<100	5810			
Acenaphthylene	<100 µg/kg	TM157		<200	<100	1590			
Acenaphthene	<100 µg/kg	TM157		927	<100	21100			
Anthracene	<100 µg/kg	TM157		793	<100	24100			
Benzo(a)anthracene	<100 µg/kg	TM157		2510	<100	25800			
Benzo(b)fluoranthene	<100 µg/kg	TM157		2570	<100	23000			
Benzo(k)fluoranthene	<100 µg/kg	TM157		2270	<100	20400			
Benzo(a)pyrene	<100 µg/kg	TM157		2980	<100	29100			
Benzo(g,h,i)perylene	<100 µg/kg	TM157		1730	<100	16800			
Chrysene	<100 µg/kg	TM157		2560	<100	26300			
Fluoranthene	<100 µg/kg	TM157		5100	<100	84800			
Fluorene	<100 µg/kg	TM157		451	<100	19800			
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		2180	<100	18100			
Phenanthrene	<100 µg/kg	TM157		1430	<100	92300			
Pyrene	<100 µg/kg	TM157		4380	<100	66500			
Naphthalene	<100 µg/kg	TM157		<200	<100	15000			
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		293	<100	2940			
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<200	<100	<500			

Validated

CERTIFICATE OF ANALYSIS

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Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

TPH CWG (S)

Results Legend

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			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	26/10/2020	28/10/2020	28/10/2020	28/10/2020		
			Sample Time	.	.	.	.		
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020		
			SDG Ref	201030-141	201030-141	201030-141	201030-141		
			Lab Sample No.(s)	23147576	23147605	23147609	23147593		
			AGS Reference	ES	ES	ES	ES		
GRO Surrogate % recovery**	%	TM089		107	82.9	128	91.6		
Aliphatics >C5-C6	<10 µg/kg	TM089		22	<10	<10	89.8		
Aliphatics >C6-C8	<10 µg/kg	TM089		53.7	<10	10.9	396		
Aliphatics >C8-C10	<10 µg/kg	TM089		686	<10	25.2	2850		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	1040		
Aliphatics >C12-C16	<1000 µg/kg	TM414		2610	<1000	<1000	2260		
Aliphatics >C16-C21	<1000 µg/kg	TM414		15800	<1000	<1000	2530		
Aliphatics >C21-C35	<1000 µg/kg	TM414		22200	<1000	<1000	3570		
Aliphatics >C35-C44	<1000 µg/kg	TM414		3110	<1000	<1000	<1000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		43700	<5000	<5000	9920		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		225000	<10000	<10000	1440000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	49.2		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	156		
Aromatics >EC8-EC10	<10 µg/kg	TM089		458	<10	16.4	1900		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	23000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		12800	<1000	<1000	157000		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		40100	<1000	<1000	513000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		116000	<1000	<1000	656000		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		11700	<1000	<1000	84400		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		2520	<1000	<1000	18600		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		181000	<5000	<5000	1430000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		226000	<10000	<10000	1450000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		761	<50	<50	3340		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		458	<50	<50	2110		
GRO >C5-C10	<20 µg/kg	TM089		1220	<20	<20	5440		

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

VOC MS (S)

Results Legend

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			Date Sampled	26/10/2020	28/10/2020	28/10/2020	28/10/2020		
			Sample Time	.	.	.	.		
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020		
			SDG Ref	201030-141	201030-141	201030-141	201030-141		
			Lab Sample No.(s)	23147576	23147605	23147609	23147593		
			AGS Reference	ES	ES	ES	ES		
Dibromofluoromethane**	%	TM116		118	109	110	122		
Toluene-d8**	%	TM116		96.2	89.7	93.2	96.9		
4-Bromofluorobenzene**	%	TM116		90.3	71.7	86	88.9		
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 M		<6 M	<120 M		
Chloromethane	<7 µg/kg	TM116		<140 #		<7 #	<140 #		
Vinyl Chloride	<6 µg/kg	TM116		<120 M		<6 M	<120 M		
Bromomethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Chloroethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M		<6 M	<120 M		
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #		<10 #	<200 #		
Carbon Disulphide	<7 µg/kg	TM116		<140 M		<7 M	<140 M		
Dichloromethane	<10 µg/kg	TM116		<200 #		<10 #	<200 #		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<10 M	<10 M	<200 M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M		<8 M	<160 M		
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M		<6 M	<120 M		
2,2-Dichloropropane	<10 µg/kg	TM116		<200		<10	<200		
Bromochloromethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Chloroform	<8 µg/kg	TM116		<160 M		<8 M	<160 M		
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M		<7 M	<140 M		
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Carbontetrachloride	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M		<5 M	<100 M		
Benzene	<9 µg/kg	TM116		<180 M	<9 M	<9 M	<180 M		
Trichloroethene	<9 µg/kg	TM116		<180 #		<9 #	<180 #		
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Dibromomethane	<9 µg/kg	TM116		<180 M		<9 M	<180 M		
Bromodichloromethane	<7 µg/kg	TM116		<140 M		<7 M	<140 M		
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Toluene	<7 µg/kg	TM116		<140 M	<7 M	<7 M	229 M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200		<10	<200		
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M		<7 M	<140 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP103	WS101	WS106	WS109		
			Depth (m)	2.00 - 3.00	3.40 - 3.42	2.72 - 2.78	3.65 - 3.75		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	26/10/2020	28/10/2020	28/10/2020	28/10/2020		
			Sample Time	.	.	.	.		
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020		
			SDG Ref	201030-141	201030-141	201030-141	201030-141		
			Lab Sample No.(s)	23147576	23147605	23147609	23147593		
			AGS Reference	ES	ES	ES	ES		
Tetrachloroethene	<5 µg/kg	TM116		<100 M		<5 M	<100 M		
Dibromochloromethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Chlorobenzene	<5 µg/kg	TM116		<100 M		<5 M	<100 M		
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Ethylbenzene	<4 µg/kg	TM116		<80 M	<4 M	<4 M	287 M		
p/m-Xylene	<10 µg/kg	TM116		<200 #	<10 #	<10 #	497 #		
o-Xylene	<10 µg/kg	TM116		<200 M	<10 M	<10 M	317 M		
Styrene	<10 µg/kg	TM116		<200 #		<10 #	<200 #		
Bromoform	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Isopropylbenzene	<5 µg/kg	TM116		<100 #		<5 #	<100 #		
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #		<10 #	<200 #		
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M		<16 M	<320 M		
Bromobenzene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
Propylbenzene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
2-Chlorotoluene	<9 µg/kg	TM116		<180 M		<9 M	<180 M		
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M		<8 M	204 M		
4-Chlorotoluene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
tert-Butylbenzene	<14 µg/kg	TM116		<280 M		<14 M	<280 M		
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #		<9 #	619 #		
sec-Butylbenzene	<10 µg/kg	TM116		<200		<10	<200		
4-Isopropyltoluene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M		<8 M	<160 M		
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M		<5 M	<100 M		
n-Butylbenzene	<11 µg/kg	TM116		<220		<11	<220		
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M		<10 M	<200 M		
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M		<14 M	<280 M		
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #		<10 #	<200 #		
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400		<20	<400		
Hexachlorobutadiene	<20 µg/kg	TM116		<400		<20	<400		
Naphthalene	<13 µg/kg	TM116		<260 M		<13 M	102000 3 M		
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #		<20 #	<400 #		
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400		<20	<400		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP103	WS101	WS106	WS109		
			Depth (m)	2.00 - 3.00	3.40 - 3.42	2.72 - 2.78	3.65 - 3.75		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	26/10/2020	28/10/2020	28/10/2020	28/10/2020		
			Sample Time	.	.	.	.		
			Date Received	28/10/2020	28/10/2020	28/10/2020	28/10/2020		
			SDG Ref	201030-141	201030-141	201030-141	201030-141		
			Lab Sample No.(s)	23147576	23147605	23147609	23147593		
			AGS Reference	ES	ES	ES	ES		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.02	<0.02	0.813		
Sum of BTEX	<40 µg/kg	TM116		<800	<40	<40	1330		

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP103ES 2.00 - 3.00 SOLID 26/10/2020 00:00:00 28/10/2020 05:00:00 201030-141 23147576 TM048	09/11/2020	James Richards	Fibre bundles and ACM debris in soil	Not Detected (#)	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS101ES 3.40 - 3.42 SOLID 28/10/2020 00:00:00 28/10/2020 05:00:00 201030-141 23147605 TM048	09/11/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS106ES 2.72 - 2.78 SOLID 28/10/2020 00:00:00 28/10/2020 05:00:00 201030-141 23147609 TM048	09/11/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS109ES 3.65 - 3.75 SOLID 28/10/2020 00:00:00 28/10/2020 05:00:00 201030-141 23147593 TM048	09/11/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	CP103ES	Amosite Detected (#)	Loose fibres in soil.	0.0046 (#)	<0.001 (#)	0.0046 (#)
Depth (m)	2.00 - 3.00					
Sample Type	SOLID					
Date Sampled	26/10/2020 00:00:00					
Date Received	28/10/2020 05:00:00					
SDG	201030-141					
Original Sample	23147576					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.102	**Natural Moisture Content (%)**	14.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87.6
Particle Size <4mm	>J5%		

Case	
SDG	201030-141
Lab Sample Number(s)	23147571
Sampled Date	28-Oct-2020
Customer Sample Ref.	CP101 ESZ
Depth (m)	4.00 - 5.00

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Low Level Hexavalent Chromium	0.00303	<0.003	0.0303	<0.03	-	-	-
Sulphate (soluble)	30.8	<2	308	<20	-	-	-
Sulphide	0.0532	<0.01	0.532	<0.1	-	-	-
Dissolved Organic Carbon	19.4	<3	194	<30	-	-	-
Mercury Dissolved (CVAF)	0.0000194	<0.00001	0.000194	<0.0001	-	-	-
Naphthalene (diss.filt)	0.0000236	<0.00001	0.000236	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.000009	<0.000005	0.00009	<0.00005	-	-	-
Arsenic	0.009	<0.0005	0.09	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000141	<0.000005	0.000141	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.0684	<0.01	0.684	<0.1	-	-	-
Phenanthrene (diss.filt)	0.00000978	<0.000005	0.0000978	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	22	<2	220	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene (diss.filt)	0.0000106	<0.000005	0.000106	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chromium	0.00418	<0.001	0.0418	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Copper	0.00295	<0.0003	0.0295	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Lead	0.00432	<0.0002	0.0432	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-

Leach Test Information

Date Prepared	04-Nov-2020
pH (pH Units)	9.17
Conductivity (µS/cm)	104.00
Temperature (°C)	21.10
Volume Leachant (Litres)	0.888

Mcerts Certification does not apply to leachates

19/11/2020 16:16:45

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.102	**Natural Moisture Content (%)**	14.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87.6
Particle Size <4mm	>J5%		

Case	
SDG	201030-141
Lab Sample Number(s)	23147571
Sampled Date	28-Oct-2020
Customer Sample Ref.	CP101 ESZ
Depth (m)	4.00 - 5.00

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
PAH 16 EPA Total by GCMS (diss.filt)	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
Nickel	0.00173	<0.0004	0.0173	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	10.9	<0.2	109	<2	-	-	-

Leach Test Information

Date Prepared	04-Nov-2020
pH (pH Units)	9.17
Conductivity (µS/cm)	104.00
Temperature (°C)	21.10
Volume Leachant (Litres)	0.888

Mcerts Certification does not apply to leachates
19/11/2020 16:16:45

16:16:32 19/11/2020

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.111	**Natural Moisture Content (%)**	23.J
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	80.7
Particle Size <4mm	>J5%		

Case	
SDG	201030-141
Lab Sample Number(s)	23147615
Sampled Date	28-Oct-2020
Customer Sample Ref.	WS104 ESZ
Depth (m)	4.72 - 5.00

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ali6hatics >C12-C1y	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Low Level Hexavalent Chromium	0.00424	<0.003	0.0424	<0.03	-	-	-
Sulphate (soluble)	30.3	<2	303	<20	-	-	-
Sulphide	<0.01	<0.01	<0.1	<0.1	-	-	-
Dissolved Organic Carbon	7.34	<3	73.4	<30	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Naphthalene (diss.filt)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthene (diss.filt)	0.00000889	<0.000005	0.0000889	<0.00005	-	-	-
Arsenic	0.0028	<0.0005	0.028	<0.005	-	-	-
Free Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Acenaphthylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenol by HPLC (W)	<0.002	<0.002	<0.02	<0.02	-	-	-
Cresols by HPLC (W)	<0.006	<0.006	<0.06	<0.06	-	-	-
Fluoranthene (diss.filt)	0.0000134	<0.000005	0.000134	<0.00005	-	-	-
Thiocyanate (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Xylenols by HPLC (W)	<0.008	<0.008	<0.08	<0.08	-	-	-
Boron	0.125	<0.01	1.25	<0.1	-	-	-
Phenanthrene (diss.filt)	0.0000111	<0.000005	0.000111	<0.00005	-	-	-
Total Alkalinity Filtered as CaCO3	90	<2	900	<20	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Fluorene (diss.filt)	0.00000508	<0.000005	0.0000508	<0.00005	-	-	-
Chrysene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene (diss.filt)	0.00000904	<0.000005	0.0000904	<0.00005	-	-	-
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	-	-	-

Leach Test Information

Date Prepared	04-Nov-2020
pH (pH Units)	7.82
Conductivity (µS/cm)	205.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.879

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Ten Acres Lane
Mass Sample taken (kg)	0.111	**Natural Moisture Content (%)**	23.J
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	80.7
Particle Size <4mm	>J5%		

Case	
SDG	201030-141
Lab Sample Number(s)	23147615
Sampled Date	28-Oct-2020
Customer Sample Ref.	WS104 ESZ
Depth (m)	4.72 - 5.00

Eluate Analysis	**C_2 Concⁿ in 10:1 eluate (mg/l)**		**A_2 10:1 concⁿ leached (mg/kg)**				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Benzo(a)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chromium	0.00316	<0.001	0.0316	<0.01	-	-	-
Benzo(b)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene (diss.filt)	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Copper	0.00227	<0.0003	0.0227	<0.003	-	-	-
Dibenzo(a,h)anthracene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Lead	0.000368	<0.0002	0.00368	<0.002	-	-	-
Benzo(g,h,i)perylene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS (diss.filt)	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Calcium (Dis.Filt) mg/l	33.6	<0.2	336	<2	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-

Leach Test Information

Date Prepared	04-Nov-2020
pH (pH Units)	7.82
Conductivity (µS/cm)	205.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.879

Mcerts Certification does not apply to leachates

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Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM243		Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM331		Low Level Hexavalent Chromium
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201030-141	**Client Reference:**	LD10162	**Report Number:**	576327
Location:	Ten Acres Lane	**Order Number:**	LD1689	**Superseded Report:**	574926

Test Completion Dates

Lab Sample No(s)	23147571	23147576	23147605	23147615	23147609	23147593
Customer Sample Ref.	CP101	CP103	WS101	WS104	WS106	WS109
AGS Ref.	ES	ES	ES	ES	ES	ES
Depth	4.00 - 5.00	2.00 - 3.00	3.40 - 3.42	4.72 - 5.00	2.72 - 2.78	3.65 - 3.75
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkalinity Filtered as CaCO3	06-Nov-2020			06-Nov-2020		
Anions by Kone (soil)		09-Nov-2020	09-Nov-2020		09-Nov-2020	09-Nov-2020
Anions by Kone (w)	09-Nov-2020			09-Nov-2020		
Asbestos ID in Solid Samples		09-Nov-2020	09-Nov-2020		09-Nov-2020	09-Nov-2020
Asbestos Quantification - Full		19-Nov-2020				
Boron Water Soluble		05-Nov-2020	05-Nov-2020		05-Nov-2020	09-Nov-2020
CEN 10:1 Leachate (1 Stage)	04-Nov-2020			04-Nov-2020		
CEN Readings	07-Nov-2020			07-Nov-2020		
Cyanide Comp/Free/Total/Thiocyanate	10-Nov-2020	06-Nov-2020	06-Nov-2020	10-Nov-2020	06-Nov-2020	06-Nov-2020
Dissolved Metals by ICP-MS	10-Nov-2020			10-Nov-2020		
Dissolved Organic/Inorganic Carbon	07-Nov-2020			07-Nov-2020		
Easily Liberated Sulphide		09-Nov-2020	09-Nov-2020		09-Nov-2020	09-Nov-2020
EPH CWG (Aliphatic) Filtered GC (W)				09-Nov-2020		
EPH CWG (Aromatic) Filtered GC (W)				09-Nov-2020		
EPH CWG GC (S)		06-Nov-2020	06-Nov-2020		06-Nov-2020	06-Nov-2020
GRO by GC-FID (S)		05-Nov-2020	04-Nov-2020		04-Nov-2020	05-Nov-2020
GRO by GC-FID (W)				09-Nov-2020		
Hexavalent Chromium (s)		09-Nov-2020	09-Nov-2020		10-Nov-2020	09-Nov-2020
Low Level Hexavalent Chromium (w)	09-Nov-2020			09-Nov-2020		
Mercury Dissolved	09-Nov-2020			06-Nov-2020		
Metals in solid samples by OES		06-Nov-2020	06-Nov-2020		06-Nov-2020	06-Nov-2020
Moisture at 105C	04-Nov-2020			04-Nov-2020		
PAH by GCMS		05-Nov-2020	06-Nov-2020		06-Nov-2020	06-Nov-2020
PAH in waters by GC-MS (diss.filt)	09-Nov-2020			09-Nov-2020		
PCBs by GCMS			06-Nov-2020			06-Nov-2020
pH		05-Nov-2020	05-Nov-2020		04-Nov-2020	04-Nov-2020
pH Value	09-Nov-2020			09-Nov-2020		
Phenols by HPLC (S)		10-Nov-2020	10-Nov-2020		10-Nov-2020	10-Nov-2020
Phenols by HPLC (W)	09-Nov-2020			10-Nov-2020		
Sample description	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020	03-Nov-2020
Semi Volatile Organic Compounds		06-Nov-2020			06-Nov-2020	06-Nov-2020
Sulphide	09-Nov-2020			09-Nov-2020		
Total Organic Carbon		06-Nov-2020	09-Nov-2020		06-Nov-2020	09-Nov-2020
Total Sulphate		09-Nov-2020	05-Nov-2020		09-Nov-2020	09-Nov-2020
TPH CWG Filtered (W)				09-Nov-2020		
TPH CWG GC (S)		06-Nov-2020	06-Nov-2020		06-Nov-2020	06-Nov-2020
VOC MS (S)		04-Nov-2020	04-Nov-2020		04-Nov-2020	06-Nov-2020

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
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Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	13 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201103-84
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	575502

We received 4 samples on Tuesday November 03, 2020 and 2 of these samples were scheduled for analysis which was completed on Friday November 13, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23170018	NO ID	A		
23170023	RH108		0.00 - 1.00	30/10/2020
23170030	RH108		5.00 - 6.00	30/10/2020
23170034	RH108		8.00 - 9.00	02/11/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)						23170023				23170030		
Customer Sample Reference						RH108				RH108		
AGS Reference												
Depth (m)						0.00 - 1.00				5.00 - 6.00		
Container						1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	
Sample Type						S	S	S	S	S	S	
Anions by Kone (soil)	All	NDPs: 0 Tests: 2					X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 2				X			X			
Boron Water Soluble	All	NDPs: 0 Tests: 2					X			X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 2					X			X		
Easily Liberated Sulphide	All	NDPs: 0 Tests: 2					X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 2					X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 2						X			X	
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 2					X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 2					X			X		
PAH by GCMS	All	NDPs: 0 Tests: 2					X			X		
pH	All	NDPs: 0 Tests: 2					X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 2					X			X		
Sample description	All	NDPs: 0 Tests: 2					X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 2					X			X		
Total Sulphate	All	NDPs: 0 Tests: 2					X			X		

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)									23170023		23170030
Customer Sample Reference									RH108		RH108
AGS Reference											
Depth (m)									0.00 - 1.00		5.00 - 6.00
Container									1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type									S	S	S	S	S	S
TPH CWG GC (S)	All	NDPs: 0 Tests: 2								X			X	
VOC MS (S)	All	NDPs: 0 Tests: 2									X			X

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23170023	RH108	0.00 - 1.00	Dark Brown	Loamy Sand	Stones	Vegetation
23170030	RH108	5.00 - 6.00	Dark Brown	Silt Loam	None	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH108	RH108				
			Depth (m)	0.00 - 1.00	5.00 - 6.00				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	30/10/2020	30/10/2020				
			Sample Time	.	.				
			Date Received	03/11/2020	03/11/2020				
			SDG Ref	201103-84	201103-84				
			Lab Sample No.(s)	23170023	23170030				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	10				
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132		37.4 #	1.34 #				
pH	1 pH Units	TM133		8.65 M	8.41 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #				
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M				
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M				
Arsenic	<0.6 mg/kg	TM181		18.1 M	6.97 M				
Cadmium	<0.02 mg/kg	TM181		0.379 M	0.128 M				
Chromium	<0.9 mg/kg	TM181		15.7 M	18.1 M				
Copper	<1.4 mg/kg	TM181		82.6 M	21.8 M				
Lead	<0.7 mg/kg	TM181		233 M	13.3 M				
Mercury	<0.14 mg/kg	TM181		0.368 M	<0.14 M				
Nickel	<0.2 mg/kg	TM181		30.1 M	32.4 M				
Selenium	<1 mg/kg	TM181		<1 #	<1 #				
Zinc	<1.9 mg/kg	TM181		233 M	63.5 M				
Sulphate, Total	<48 mg/kg	TM221		549 M	132 M				
Boron, water soluble	<1 mg/kg	TM222		<1 M	<1 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0767 M	0.0827 M				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH108	RH108				
			Depth (m)	0.00 - 1.00	5.00 - 6.00				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	30/10/2020	30/10/2020				
			Sample Time	.	.				
			Date Received	03/11/2020	03/11/2020				
			SDG Ref	201103-84	201103-84				
			Lab Sample No.(s)	23170023	23170030				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		84.1	79				
Acenaphthene-d10 % recovery**	%	TM218		91	84.1				
Phenanthrene-d10 % recovery**	%	TM218		94.7	85.4				
Chrysene-d12 % recovery**	%	TM218		89.5	82				
Perylene-d12 % recovery**	%	TM218		85.9	82.9				
Naphthalene	<9 µg/kg	TM218		318 M	33.5 M				
Acenaphthylene	<12 µg/kg	TM218		35 M	<12 M				
Acenaphthene	<8 µg/kg	TM218		283 M	46.1 M				
Fluorene	<10 µg/kg	TM218		231 M	33.8 M				
Phenanthrene	<15 µg/kg	TM218		1960 M	249 M				
Anthracene	<16 µg/kg	TM218		523 M	50.3 M				
Fluoranthene	<17 µg/kg	TM218		2470 M	240 M				
Pyrene	<15 µg/kg	TM218		2200 M	213 M				
Benz(a)anthracene	<14 µg/kg	TM218		1100 M	100 M				
Chrysene	<10 µg/kg	TM218		1070 M	93.8 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		1330 M	77.4 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		432 M	34.8 M				
Benzo(a)pyrene	<15 µg/kg	TM218		920 M	80.7 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		679 M	50.1 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		97.9 M	<23 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		567 M	52.4 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		14200	1360				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH108	RH108				
			Depth (m)	0.00 - 1.00	5.00 - 6.00				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	30/10/2020	30/10/2020				
			Sample Time	.	.				
			Date Received	03/11/2020	03/11/2020				
			SDG Ref	201103-84	201103-84				
			Lab Sample No.(s)	23170023	23170030				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		47.4 4	109				
Aliphatics >C5-C6	<10 µg/kg	TM089		15.1 4	<10				
Aliphatics >C6-C8	<10 µg/kg	TM089		63.8 4	33.6				
Aliphatics >C8-C10	<10 µg/kg	TM089		45.2 4	43.7				
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C21-C35	<1000 µg/kg	TM414		3440	1050				
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000				
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		5370	<5000				
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		33600	<10000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10				
Aromatics >EC8-EC10	<10 µg/kg	TM089		30.2 4	29.1				
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2270	<1000				
Aromatics > EC16-EC21	<1000 µg/kg	TM414		7670	<1000				
Aromatics > EC21-EC35	<1000 µg/kg	TM414		16800	1660				
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000				
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		28200	<5000				
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		33700	<10000				
Total Aliphatics >C5-C10	<50 µg/kg	TM089		124 4	77.3				
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50				
GRO >C5-C10	<20 µg/kg	TM089		124 4	77.3				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH108	RH108				
			Depth (m)	0.00 - 1.00	5.00 - 6.00				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	30/10/2020	30/10/2020				
			Sample Time	.	.				
			Date Received	03/11/2020	03/11/2020				
			SDG Ref	201103-84	201103-84				
			Lab Sample No.(s)	23170023	23170030				
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	110				
Toluene-d8**	%	TM116		95.5	89.8				
4-Bromofluorobenzene**	%	TM116		82.4	70.2				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<10 M				
Benzene	<9 µg/kg	TM116		<180 M	<9 M				
Toluene	<7 µg/kg	TM116		<140 M	<7 M				
Ethylbenzene	<4 µg/kg	TM116		<80 M	<4 M				
p/m-Xylene	<10 µg/kg	TM116		<200 #	<10 #				
o-Xylene	<10 µg/kg	TM116		<200 M	<10 M				
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.02				
Sum of BTEX	<40 µg/kg	TM116		<800	<40				

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH108 0.00 - 1.00 SOLID 30/10/2020 00:00:00 03/11/2020 09:00:00 201103-84 23170023 TM048	11/11/2020	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH108 5.00 - 6.00 SOLID 30/10/2020 00:00:00 03/11/2020 09:00:00 201103-84 23170030 TM048	12/11/2020	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201103-84	**Client Reference:**	LD10162	**Report Number:**	575502
Location:	Ten Acres Lane	**Order Number:**	LD1692	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23170023	23170030
Customer Sample Ref.	RH108	RH108
AGS Ref.		
Depth	0.00 - 1.00	5.00 - 6.00
Type	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	12-Nov-2020	12-Nov-2020
Asbestos ID in Solid Samples	11-Nov-2020	12-Nov-2020
Boron Water Soluble	10-Nov-2020	10-Nov-2020
Cyanide Comp/Free/Total/Thiocyanate	10-Nov-2020	10-Nov-2020
Easily Liberated Sulphide	11-Nov-2020	11-Nov-2020
EPH CWG GC (S)	09-Nov-2020	09-Nov-2020
GRO by GC-FID (S)	06-Nov-2020	06-Nov-2020
Hexavalent Chromium (s)	12-Nov-2020	12-Nov-2020
Metals in solid samples by OES	10-Nov-2020	10-Nov-2020
PAH by GCMS	09-Nov-2020	06-Nov-2020
pH	06-Nov-2020	06-Nov-2020
Phenols by HPLC (S)	12-Nov-2020	13-Nov-2020
Sample description	05-Nov-2020	05-Nov-2020
Total Organic Carbon	10-Nov-2020	10-Nov-2020
Total Sulphate	11-Nov-2020	11-Nov-2020
TPH CWG GC (S)	09-Nov-2020	09-Nov-2020
VOC MS (S)	06-Nov-2020	06-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	18 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201106-125
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	576141

We received 12 samples on Friday November 06, 2020 and 12 of these samples were scheduled for analysis which was completed on Tuesday November 17, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23193673	CP108		0.50 - 0.50	04/11/2020
23193677	CP108		1.80 - 1.80	04/11/2020
23193681	TP108		2.30 - 2.30	04/11/2020
23193659	TP123		0.80 - 0.80	04/11/2020
23193666	TP123		2.40 - 2.40	04/11/2020
23193692	TP128		3.60 - 3.60	04/11/2020
23193637	TP137		1.20 - 1.20	04/11/2020
23193697	TP139		1.50 - 1.50	04/11/2020
23193651	TP139		2.40 - 2.40	04/11/2020
23193663	TP141		0.50 - 0.50	04/11/2020
23193695	TP145		2.30 - 2.30	04/11/2020
23193656	TP145		3.80 - 3.80	04/11/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23193673	23193677	23193681	23193659	23193666	23193692	23193637	23193697	23193651	23193663	23193695							
Customer Sample Reference			CP108	CP108	TP108	TP123	TP123	TP128	TP137	TP139	TP139	TP141	TP145							
AGS Reference																				
Depth (m)			0.50 - 0.50	1.80 - 1.80	2.30 - 2.30	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	2.30 - 2.30							
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 9	X		X		X	X			X		X				X			
GRO by GC-FID (S)	All	NDPs: 0 Tests: 9		X			X		X	X		X				X		X		X
PAH by GCMS	All	NDPs: 0 Tests: 10	X		X		X		X	X		X	X		X				X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 12	X		X	X	X		X	X		X	X		X		X		X	
Sample description	All	NDPs: 0 Tests: 10	X		X	X	X		X	X		X	X		X					
VOC MS (S)	All	NDPs: 0 Tests: 10		X			X		X	X		X		X		X		X		X

23193656		TP145		3.80 - 3.80	
				60g VOC (ALE215)	
250g Amber Jar (ALE210)					
S	S			S	S
X					
	X				
X					
X					
X					
	X				

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23193673	CP108	0.50 - 0.50	Dark Brown	Sandy Clay Loam	Stones	N/A
23193677	CP108	1.80 - 1.80	Dark Brown	Sandy Loam	Stones	Tar
23193681	TP108	2.30 - 2.30	Black	Silt Loam	None	None
23193659	TP123	0.80 - 0.80	Dark Brown	Loamy Sand	Stones	Vegetation
23193666	TP123	2.40 - 2.40	Dark Brown	Sand	Stones	None
23193692	TP128	3.60 - 3.60	Cream	Silt Loam	Vegetation	Stones
23193637	TP137	1.20 - 1.20	Dark Brown	Sandy Loam	Stones	Vegetation
23193651	TP139	2.40 - 2.40	Dark Brown	Sandy Clay	Stones	Tar
23193697	TP139	1.50 - 1.50	Dark Brown	Sand	Stones	N/A
23193663	TP141	0.50 - 0.50	Dark Brown	Clay Loam	Vegetation	Stones
23193656	TP145	3.80 - 3.80	Dark Brown	Clay Loam	None	Stones
23193695	TP145	2.30 - 2.30	Black	Loamy Sand	Vegetation	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP108	TP108	TP123	TP123	TP128
			Depth (m)	0.50 - 0.50	1.80 - 1.80	2.30 - 2.30	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193673	23193677	23193681	23193659	23193666	23193692
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	26	33	17	29	34
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0135 M	<0.01 M	0.0447 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M		<1 M	45.1 M	<1 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP137	TP139	TP139	TP141	TP145	TP145
			Depth (m)	1.20 - 1.20	1.50 - 1.50	2.40 - 2.40	0.50 - 0.50	2.30 - 2.30	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	.	.	00:00:00	.	00:00:00
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193637	23193697	23193651	23193663	23193695	23193656
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	30	22	20	34	20
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0125 M	0.0304 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	0.532 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	0.562 M	<0.035 M
Cyanide, Total	<1 mg/kg	TM153			51.9 M	<1 M		<1 M	<1 M

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

GRO 7y GC-FID (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	TP108	TP123	TP123	TP128	TP139
			Depth (m)	0.50 - 0.50	2.30 - 2.30	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193673	23193681	23193659	23193666	23193692	23193651
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		126	33.9 4	98.3	112 2	101	111
GRO TOT (Moisture Corrected)	<100 µg/kg	TM089		<100 M	1320 4	159 M	173 2 M	<100 M	<100 M
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	71.5 4	<10	<10 2	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		12.2	246 4	23	25.6 2	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		14.9	210 4	50.8	28.4 2	<10	<10
Aliphatics >C10-C12	<10 µg/kg	TM089		14.9	389 4	25.4	56.8 2	<10	<10
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10 2	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10 2	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	140 4	33.9	18.5 2	<10	<10
Aromatics >EC10-EC12	<10 µg/kg	TM089		<10	259 4	16.9	38.3 2	<10	<10
Total Aliphatics >C5-C12	<50 µg/kg	TM089		<50	916 4	99.2	111 2	<50	<50
Total Aromatics >EC5-EC12	<50 µg/kg	TM089		<50	399 4	50.8	56.8 2	<50	<50

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

GRO 7y GC-FID (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP141	TP145	TP145			
			Depth (m)	0.50 - 0.50	2.30 - 2.30	3.80 - 3.80			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	04/11/2020	04/11/2020	04/11/2020			
			Sample Time	00:00:00	.	00:00:00			
			Date Received	06/11/2020	06/11/2020	06/11/2020			
			SDG Ref	201106-125	201106-125	201106-125			
			Lab Sample No.(s)	23193663	23193695	23193656			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		76.4	89	88.8			
GRO TOT (Moisture Corrected)	<100 µg/kg	TM089		1880 M	1150 M	907 M			
Aliphatics >C5-C6	<10 µg/kg	TM089		11.3	44.1	27.5			
Aliphatics >C6-C8	<10 µg/kg	TM089		58.8	210	67.5			
Aliphatics >C8-C10	<10 µg/kg	TM089		224	345	153			
Aliphatics >C10-C12	<10 µg/kg	TM089		855	192	334			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/kg	TM089		10	<10	<10			
Aromatics >EC8-EC10	<10 µg/kg	TM089		149	230	101			
Aromatics >EC10-EC12	<10 µg/kg	TM089		570	128	223			
Total Aliphatics >C5-C12	<50 µg/kg	TM089		1150	790	581			
Total Aromatics >EC5-EC12	<50 µg/kg	TM089		729	357	324			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP108	TP123	TP123	TP128	TP137
			Depth (m)	0.50 - 0.50	1.80 - 1.80	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193673	23193677	23193659	23193666	23193692	23193637
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.3	79.1	79.4	74.6	75	82.4
Acenaphthene-d10 % recovery**	%	TM218		81.5	81.4	83.6	80.2	78.5	84.2
Phenanthrene-d10 % recovery**	%	TM218		81.6	84	82	76.4	78	82.7
Chrysene-d12 % recovery**	%	TM218		85.7	92	81.7	83.4	80.9	84.3
Perylene-d12 % recovery**	%	TM218		83.7	89.4	71.1	84	81.6	71.6
Naphthalene	<9 µg/kg	TM218		289 M	127 M	56.8 M	1250 M	313 M	29.7 M
Acenaphthylene	<12 µg/kg	TM218		66.2 M	131 M	381 M	1370 M	272 M	<12 M
Acenaphthene	<8 µg/kg	TM218		240 M	324 M	75.5 M	1870 M	103 M	191 M
Fluorene	<10 µg/kg	TM218		214 M	385 M	84.4 M	3770 M	244 M	188 M
Phenanthrene	<15 µg/kg	TM218		2460 M	3590 M	873 M	34100 M	1310 M	2330 M
Anthracene	<16 µg/kg	TM218		755 M	843 M	295 M	13500 M	367 M	613 M
Fluoranthene	<17 µg/kg	TM218		3230 M	5030 M	1500 M	43700 M	1440 M	2210 M
Pyrene	<15 µg/kg	TM218		3350 M	4900 M	1540 M	40000 M	1360 M	1860 M
Benz(a)anthracene	<14 µg/kg	TM218		2590 M	2540 M	1210 M	35000 M	656 M	1160 M
Chrysene	<10 µg/kg	TM218		2360 M	2530 M	1170 M	30600 M	691 M	1120 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		3280 M	1590 M	1320 M	26700 M	844 M	1160 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1340 M	934 M	488 M	11200 M	290 M	394 M
Benzo(a)pyrene	<15 µg/kg	TM218		3650 M	2300 M	1210 M	35000 M	656 M	876 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2380 M	1400 M	879 M	21400 M	497 M	498 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		391 M	272 M	234 M	4830 M	87.9 M	109 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2140 M	1360 M	900 M	17900 M	543 M	503 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		28700	28300	12200	322000	9680	13200

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP139	TP139	TP145	TP145		
			Depth (m)	1.50 - 1.50	2.40 - 2.40	2.30 - 2.30	3.80 - 3.80		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020		
			Sample Time	.	.	.	00:00:00		
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020		
			SDG Ref	201106-125	201106-125	201106-125	201106-125		
			Lab Sample No.(s)	23193697	23193651	23193695	23193656		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		79.1	83.8	81.5	76.9		
Acenaphthene-d10 % recovery**	%	TM218		81	86.9	88.9	79.7		
Phenanthrene-d10 % recovery**	%	TM218		75.2	88.1	93.1	81.3		
Chrysene-d12 % recovery**	%	TM218		73.5	89.3	95	86.3		
Perylene-d12 % recovery**	%	TM218		70.2	83.4	86.8	88.4		
Naphthalene	<9 µg/kg	TM218		72.8 M	<9 M	259 M	672 M		
Acenaphthylene	<12 µg/kg	TM218		38.5 M	<12 M	<120 M	153 M		
Acenaphthene	<8 µg/kg	TM218		38.8 M	<8 M	878 M	2860 M		
Fluorene	<10 µg/kg	TM218		41 M	<10 M	791 M	2280 M		
Phenanthrene	<15 µg/kg	TM218		459 M	80.1 M	4560 M	16000 M		
Anthracene	<16 µg/kg	TM218		111 M	<16 M	1930 M	4120 M		
Fluoranthene	<17 µg/kg	TM218		722 M	99 M	19800 M	23000 M		
Pyrene	<15 µg/kg	TM218		696 M	135 M	19000 M	20800 M		
Benz(a)anthracene	<14 µg/kg	TM218		381 M	67.3 M	7420 M	9510 M		
Chrysene	<10 µg/kg	TM218		408 M	78.4 M	7050 M	9230 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		427 M	112 M	7740 M	10900 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		179 M	26.2 M	3100 M	3880 M		
Benzo(a)pyrene	<15 µg/kg	TM218		402 M	49.3 M	6980 M	9070 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		319 M	47.8 M	5130 M	5540 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		56.3 M	<23 M	826 M	973 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		315 M	53.9 M	5820 M	5270 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4670	749	91200	124000		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	TP108	TP123	TP123	TP128	TP139
			Depth (m)	0.50 - 0.50	2.30 - 2.30	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193673	23193681	23193659	23193666	23193692	23193697
			AGS Reference						
Toluene-d8**	%	TM116							99.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 2 M	<200 M	
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 2 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 2 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 2 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 2 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 2 M	<200 M	<200 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4 2	<0.4	
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800 2	<800	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP139	TP141	TP145	TP145
			Depth (m)	2.40 - 2.40	0.50 - 0.50	2.30 - 2.30	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/11/2020	04/11/2020	04/11/2020	04/11/2020
			Sample Time	.	00:00:00	.	00:00:00
			Date Received	06/11/2020	06/11/2020	06/11/2020	06/11/2020
			SDG Ref	201106-125	201106-125	201106-125	201106-125
			Lab Sample No.(s)	23193651	23193663	23193695	23193656
			AGS Reference				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<9 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<7 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<10 M	<200 M	<200 M	<200 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<40	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201106-125	**Client Reference:**	LD10162	**Report Number:**	576141
Location:	Ten Acres Lane	**Order Number:**	LD1706	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23193673	23193677	23193681	23193659	23193666	23193692	23193637	23193651	23193697	23193663
Customer Sample Ref.	CP108	CP108	TP108	TP123	TP123	TP128	TP137	TP139	TP139	TP141
AGS Ref.										
Depth	0.50 - 0.50	1.80 - 1.80	2.30 - 2.30	0.80 - 0.80	2.40 - 2.40	3.60 - 3.60	1.20 - 1.20	2.40 - 2.40	1.50 - 1.50	0.50 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Cyanide Comp/Free/Total/Thiocyanate	13-Nov-2020	13-Nov-2020		13-Nov-2020	13-Nov-2020	12-Nov-2020		13-Nov-2020	13-Nov-2020	
GRO by GC-FID (S)	13-Nov-2020		13-Nov-2020	13-Nov-2020	12-Nov-2020	13-Nov-2020		13-Nov-2020		11-Nov-2020
PAH by GCMS	12-Nov-2020	12-Nov-2020		12-Nov-2020	12-Nov-2020	12-Nov-2020	12-Nov-2020	12-Nov-2020	12-Nov-2020	
Phenols by HPLC (S)	17-Nov-2020	13-Nov-2020	16-Nov-2020	13-Nov-2020	17-Nov-2020	17-Nov-2020	17-Nov-2020	17-Nov-2020	17-Nov-2020	17-Nov-2020
Sample description	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020
VOC MS (S)	12-Nov-2020		12-Nov-2020	12-Nov-2020	13-Nov-2020	12-Nov-2020		12-Nov-2020	12-Nov-2020	12-Nov-2020

Lab Sample No(s)	23193656	23193695
Customer Sample Ref.	TP145	TP145
AGS Ref.		
Depth	3.80 - 3.80	2.30 - 2.30
Type	Soil/Solid (S)	Soil/Solid (S)
Cyanide Comp/Free/Total/Thiocyanate	12-Nov-2020	12-Nov-2020
GRO by GC-FID (S)	13-Nov-2020	11-Nov-2020
PAH by GCMS	12-Nov-2020	12-Nov-2020
Phenols by HPLC (S)	17-Nov-2020	17-Nov-2020
Sample description	10-Nov-2020	10-Nov-2020
VOC MS (S)	12-Nov-2020	12-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	18 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201107-75
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	575935

We received 11 samples on Saturday November 07, 2020 and 10 of these samples were scheduled for analysis which was completed on Wednesday November 18, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23200572	CP104		1.30 - 1.30	05/11/2020
23200610	CP113		0.80 - 0.80	05/11/2020
23200602	TP102		1.60 - 1.60	05/11/2020
23200596	TP114		3.40 - 3.40	05/11/2020
23200618	TP126		0.50 - 0.50	05/11/2020
23200615	TP136		0.80 - 0.80	05/11/2020
23200581	TP138		1.60 - 1.60	05/11/2020
23200577	TP144		0.40 - 0.40	05/11/2020
23200621	TP149		0.50 - 0.50	05/11/2020
23200628	TP149		1.60 - 1.60	05/11/2020
23200586	TP150		2.20 - 2.20	05/11/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23200610	CP113		0.80 - 0.80	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23200602	TP102		1.60 - 1.60	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23200596	TP114		3.40 - 3.40	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23200618	TP126		0.50 - 0.50	250g Amber Jar (ALE210)	S
			23200615	TP136		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23200581	TP138		1.60 - 1.60	250g Amber Jar (ALE210)	S
			23200577	TP144		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23200621	TP149		0.50 - 0.50	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23200628	TP149		1.60 - 1.60	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23200586	TP150		2.20 - 2.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 1						
								X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 6						
				X		X		X
				X		X		X
								X
								X
								X
								X
PAH by GCMS	All	NDPs: 0 Tests: 6						
								X
								X
								X
								X
								X
								X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 8						
			X		X		X	
			X		X		X	
								X
								X
								X
								X
								X
								X
Sample description	All	NDPs: 0 Tests: 10						
			X		X		X	
			X		X		X	
								X
								X
								X
								X
								X
								X
								X
VOC MS (S)	All	NDPs: 0 Tests: 6						
				X		X		X
				X		X		X
								X
								X
								X
								X
								X
								X
								X

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23200610	CP113	0.80 - 0.80	Dark Brown	Loamy Sand	None	Stones
23200602	TP102	1.60 - 1.60	Dark Brown	Clay Loam	Vegetation	Stones
23200596	TP114	3.40 - 3.40	Dark Brown	Sandy Loam	Vegetation	Stones
23200618	TP126	0.50 - 0.50	Dark Brown	Loamy Sand	None	Stones
23200615	TP136	0.80 - 0.80	Dark Brown	Loamy Sand	Vegetation	Stones
23200581	TP138	1.60 - 1.60	Dark Brown	Loamy Sand	Vegetation	Stones
23200577	TP144	0.40 - 0.40	Dark Brown	Clay Loam	Vegetation	Stones
23200621	TP149	0.50 - 0.50	Black	Stone/Soil	Vegetation	Stones
23200628	TP149	1.60 - 1.60	Dark Brown	Loamy Sand	None	Stones
23200586	TP150	2.20 - 2.20	Dark Brown	Loamy Sand	Vegetation	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP102	TP114	TP126	TP136	TP138
			Depth (m)	0.80 - 0.80	1.60 - 1.60	3.40 - 3.40	0.50 - 0.50	0.80 - 0.80	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
			SDG Ref	201107-75	201107-75	201107-75	201107-75	201107-75	201107-75
			Lab Sample No.(s)	23200610	23200602	23200596	23200618	23200615	23200581
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	15	13	19	17	21
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M		<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0118 M	<0.01 M		<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	0.0236 M	<0.015 M		<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M		<0.035 M	<0.035 M
Cyanide, Total	<1 mg/kg	TM153				<1 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP144	TP149	TP149	TP150		
			Depth (m)	0.40 - 0.40	0.50 - 0.50	1.60 - 1.60	2.20 - 2.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020		
			Sample Time	.	.	.	.		
			Date Received	07/11/2020	07/11/2020	07/11/2020	07/11/2020		
			SDG Ref	201107-75	201107-75	201107-75	201107-75		
			Lab Sample No.(s)	23200577	23200621	23200628	23200586		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	22	15	20		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

GRO by GC-FID (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP102	TP114	TP149	TP149	TP150
			Depth (m)	0.80 - 0.80	1.60 - 1.60	3.40 - 3.40	0.50 - 0.50	1.60 - 1.60	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
			SDG Ref	201107-75	201107-75	201107-75	201107-75	201107-75	201107-75
			Lab Sample No.(s)	23200610	23200602	23200596	23200621	23200628	23200586
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		102	75.8	77	71.7	113	79.6
GRO TOT (Moisture Corrected)	<100 µg/kg	TM089		<100 M	118 M	<100 M	388 #	<100 M	1610 M
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	17.6
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	16.5	<10	28.4	<10	79.4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	33	<10	49	<10	154
Aliphatics >C10-C12	<10 µg/kg	TM089		<10	24.8	<10	161	<10	755
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	22.4	<10	32.3	<10	102
Aromatics >EC10-EC12	<10 µg/kg	TM089		<10	16.5	<10	107	<10	503
Total Aliphatics >C5-C12	<50 µg/kg	TM089		<50	74.3	<50	239	<50	1010
Total Aromatics >EC5-EC12	<50 µg/kg	TM089		<50	<50	<50	139	<50	605

Validated

CERTIFICATE OF ANALYSIS

SDG: 201107-75 **Client Reference:** LD10162 **Report Number:** 575935
Location: Ten Acres Lane **Order Number:** **Superseded Report:**

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP114	TP126	TP136	TP144	TP149	TP149
			Depth (m)	3.40 - 3.40	0.50 - 0.50	0.80 - 0.80	0.40 - 0.40	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
			SDG Ref	201107-75	201107-75	201107-75	201107-75	201107-75	201107-75
			Lab Sample No.(s)	23200596	23200618	23200615	23200577	23200621	23200628
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.4	75	84.8	81.3	79.8	89.3
Acenaphthene-d10 % recovery**	%	TM218		89.3	84.7	89	87.8	84.8	92.5
Phenanthrene-d10 % recovery**	%	TM218		88.8	87.4	88.7	86.2	90.8	96
Chrysene-d12 % recovery**	%	TM218		83.7	78.8	84.9	85.9	93.5	102
Perylene-d12 % recovery**	%	TM218		83.5	75.1	85.2	86.9	88.1	103
Naphthalene	<9 µg/kg	TM218		18.7 M	17500 M	<9 M	207 M	443 #	13.2 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	997 M	<12 M	<60 M	75.1 #	<12 M
Acenaphthene	<8 µg/kg	TM218		<8 M	80200 M	<8 M	1750 M	1690 #	<8 M
Fluorene	<10 µg/kg	TM218		<10 M	62400 M	<10 M	1080 M	1380 #	<10 M
Phenanthrene	<15 µg/kg	TM218		94.2 M	365000 M	46.7 M	10800 M	18500 #	<15 M
Anthracene	<16 µg/kg	TM218		<16 M	97400 M	<16 M	3290 M	4690 #	<16 M
Fluoranthene	<17 µg/kg	TM218		152 M	400000 M	66.4 M	16400 M	28700 #	<17 M
Pyrene	<15 µg/kg	TM218		148 M	340000 M	65.9 M	12700 M	26400 #	<15 M
Benz(a)anthracene	<14 µg/kg	TM218		79.8 M	134000 M	31 M	6420 M	13000 #	<14 M
Chrysene	<10 µg/kg	TM218		86.1 M	144000 M	33.3 M	5610 M	12900 #	<10 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		121 M	159000 M	35.8 M	7200 M	12300 #	<15 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		37.2 M	53800 M	<14 M	2590 M	4460 #	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		78.6 M	123000 M	24.8 M	5700 M	10700 #	<15 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		58.5 M	79600 M	<18 M	3710 M	6600 #	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	16400 M	<23 M	730 M	1500 #	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		69.6 M	72700 M	<24 M	3690 M	6280 #	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		944	2150000	304	81900	150000	<118

Validated

CERTIFICATE OF ANALYSIS

SDG: 201107-75 **Client Reference:** LD10162 **Report Number:** 575935
Location: Ten Acres Lane **Order Number:** **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP113	TP102	TP114	TP149	TP149	TP150
			Depth (m)	0.80 - 0.80	1.60 - 1.60	3.40 - 3.40	0.50 - 0.50	1.60 - 1.60	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020
			SDG Ref	201107-75	201107-75	201107-75	201107-75	201107-75	201107-75
			Lab Sample No.(s)	23200610	23200602	23200596	23200621	23200628	23200586
			AGS Reference						
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<200 M	<200 M	<200 #	<10 M	<200 M
Benzene	<9 µg/kg	TM116		<9 M	<180 M	<180 M	<180 #	<9 M	<180 M
Toluene	<7 µg/kg	TM116		<7 M	<140 M	<140 M	<140 #	<7 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<80 M	<80 M	<80 #	<4 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<200 #	<200 #	<200 #	<10 #	<200 #
o-Xylene	<10 µg/kg	TM116		<10 M	<200 M	<200 M	<200 #	<10 M	<200 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.4	<0.4	<0.4	<0.02	<0.4
Sum of BTEX	<40 µg/kg	TM116		<40	<800	<800	<800	<40	<800

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

Validated

CERTIFICATE OF ANALYSIS

SDG:	201107-75	**Client Reference:**	LD10162	**Report Number:**	575935
Location:	Ten Acres Lane	**Order Number:**		**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23200610	23200602	23200596	23200618	23200615	23200581	23200577	23200621	23200628	23200586
Customer Sample Ref.	CP113	TP102	TP114	TP126	TP136	TP138	TP144	TP149	TP149	TP150
AGS Ref.										
Depth	0.80 - 0.80	1.60 - 1.60	3.40 - 3.40	0.50 - 0.50	0.80 - 0.80	1.60 - 1.60	0.40 - 0.40	0.50 - 0.50	1.60 - 1.60	2.20 - 2.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Cyanide Comp/Free/Total/Thiocyanate			13-Nov-2020							
GRO by GC-FID (S)	13-Nov-2020	13-Nov-2020	13-Nov-2020					13-Nov-2020	13-Nov-2020	13-Nov-2020
PAH by GCMS			16-Nov-2020	13-Nov-2020	16-Nov-2020		16-Nov-2020	13-Nov-2020	13-Nov-2020	
Phenols by HPLC (S)	18-Nov-2020	18-Nov-2020	18-Nov-2020		17-Nov-2020	18-Nov-2020	18-Nov-2020	18-Nov-2020	18-Nov-2020	
Sample description	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020	10-Nov-2020
VOC MS (S)	13-Nov-2020	13-Nov-2020	13-Nov-2020					13-Nov-2020	13-Nov-2020	12-Nov-2020

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
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LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	17 November 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201111-40
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	575848

We received 3 samples on Wednesday November 11, 2020 and 3 of these samples were scheduled for analysis which was completed on Tuesday November 17, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23216356	TP118		1.80 - 1.80	06/11/2020
23216353	TP130		0.30 - 0.30	06/11/2020
23216344	TP134		0.20 - 0.20	06/11/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23216356	23216353	23216344
Customer Sample Reference			TP118	TP130	TP134
AGS Reference					
Depth (m)			1.80 - 1.80	0.30 - 0.30	0.20 - 0.20
Container			250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)
Sample Type			S	S	S
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 3	X	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3	X	X	X
Sample description	All	NDPs: 0 Tests: 3	X	X	X

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23216356	TP118	1.80 - 1.80	Grey	Loamy Sand	Stones	None
23216353	TP130	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	Vegetation
23216344	TP134	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP118	TP130	TP134			
			Depth (m)	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	06/11/2020	06/11/2020	06/11/2020			
			Sample Time	.	.	.			
			Date Received	11/11/2020	11/11/2020	11/11/2020			
			SDG Ref	201111-40	201111-40	201111-40			
			Lab Sample No.(s)	23216356	23216353	23216344			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.6	20	21			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M			
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP118	TP130	TP134			
			Depth (m)	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	06/11/2020	06/11/2020	06/11/2020			
			Sample Time	.	.	.			
			Date Received	11/11/2020	11/11/2020	11/11/2020			
			SDG Ref	201111-40	201111-40	201111-40			
			Lab Sample No.(s)	23216356	23216353	23216344			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.9	95.2	92			
Acenaphthene-d10 % recovery**	%	TM218		105	94.8	90.5			
Phenanthrene-d10 % recovery**	%	TM218		101	96.2	85			
Chrysene-d12 % recovery**	%	TM218		93.9	96.5	71.5			
Perylene-d12 % recovery**	%	TM218		86.3	99.9	71			
Naphthalene	<9 µg/kg	TM218		39 M	5470 M	<450 M			
Acenaphthylene	<12 µg/kg	TM218		15 M	<60 M	<600 M			
Acenaphthene	<8 µg/kg	TM218		81.7 M	2200 M	<400 M			
Fluorene	<10 µg/kg	TM218		75 M	1490 M	<500 M			
Phenanthrene	<15 µg/kg	TM218		538 M	10800 M	<750 M			
Anthracene	<16 µg/kg	TM218		173 M	2490 M	<800 M			
Fluoranthene	<17 µg/kg	TM218		1070 M	8180 M	<850 M			
Pyrene	<15 µg/kg	TM218		1040 M	7480 M	<750 M			
Benz(a)anthracene	<14 µg/kg	TM218		448 M	3720 M	<700 M			
Chrysene	<10 µg/kg	TM218		399 M	3380 M	<500 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		585 M	3800 M	1360 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		227 M	1340 M	<700 M			
Benzo(a)pyrene	<15 µg/kg	TM218		417 M	2990 M	<750 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		275 M	1750 M	1950 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		47 M	362 M	<1150 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		230 M	1600 M	<1200 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5650	57100	<5900			

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Table of Results - Appen5ix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201111-40	**Client Reference:**	LD10162	**Report Number:**	575848
Location:	Ten Acres Lane	**Order Number:**	LD1708	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23216356	23216353	23216344
Customer Sample Ref.	TP118	TP130	TP134
AGS Ref.			
Depth	1.80 - 1.80	0.30 - 0.30	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Cyanide Comp/Free/Total/Thiocyanate	16-Nov-2020	16-Nov-2020	16-Nov-2020
PAH by GCMS	17-Nov-2020	17-Nov-2020	17-Nov-2020
Phenols by HPLC (S)	17-Nov-2020	17-Nov-2020	17-Nov-2020
Sample description	12-Nov-2020	12-Nov-2020	12-Nov-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	12 June 2021
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201204-111
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	601714

This report has been revised and directly supersedes 600162 in its entirety.

We received 12 samples on Friday December 04, 2020 and 11 of these samples were scheduled for analysis which was completed on Tuesday June 01, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Receiveh Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampleh Date
23366904	CP107		0.00 - 0.00	02/12/2020
23367032	CP108		0.00 - 0.00	02/12/2020
23366986	CP109		0.00 - 0.00	02/12/2020
23366948	CP110		0.00 - 0.00	02/12/2020
23367170	CP103 (1)		0.00 - 0.00	02/12/2020
23366928	CP103 (2)		0.00 - 0.00	02/12/2020
23367187	NO ID			
23367050	RH101		0.00 - 0.00	02/12/2020
23367006	RH102		0.00 - 0.00	02/12/2020
23367152	SW01		0.00 - 0.00	02/12/2020
23367130	SW02		0.00 - 0.00	02/12/2020
23367087	SW03		0.00 - 0.00	02/12/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)						23366904						23367032						23366986						23366948	
Customer Sample Reference						CP107						CP108						CP109						CP110	
AGS Reference																									
Depth (m)						0.00 - 0.00						0.00 - 0.00						0.00 - 0.00						0.00 - 0.00	
Container						500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	
Sample Type						GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 11				X						X						X						X	
Anions by Kone (w)	All	NDPs: 0 Tests: 11				X						X						X						X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 11			X						X						X								
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 11		X									X						X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 11	X								X						X						X		
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11	X								X						X						X		
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11	X								X						X						X		
GRO by GC-FID (W)	All	NDPs: 0 Tests: 11				X							X						X						
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 11	X								X						X						X		
Mercury Dissolved	All	NDPs: 0 Tests: 11		X									X						X						
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 11	X								X						X						X		
Redox Potential	All	NDPs: 0 Tests: 11	X								X						X						X		
Sulphide	All	NDPs: 0 Tests: 11							X							X						X			
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 11	X								X						X						X		
TPH CWG (W)	All	NDPs: 0 Tests: 11	X								X						X						X		

23367050	RH101		0.00 - 0.00	Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				500ml Plastic (ALE208)	GW	X	X							X						
				0.5l glass bottle (ALE227)	GW					X	X	X				X	X		X	X
23366928	CP103 (2)		0.00 - 0.00	ZnAc (ALE246)	GW													X		
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				500ml Plastic (ALE208)	GW	X	X							X						
				0.5l glass bottle (ALE227)	GW					X	X	X				X	X		X	X
23367170	CP103 (1)		0.00 - 0.00	ZnAc (ALE246)	GW													X		
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				500ml Plastic (ALE208)	GW	X	X							X						
				0.5l glass bottle (ALE227)	GW					X	X	X				X	X		X	X
23366948	CP110		0.00 - 0.00	ZnAc (ALE246)	GW													X		
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)							23366904						23367032						23366986		23366948
Customer Sample Reference							CP107						CP108						CP109		CP110
AGS Reference																					
Depth (m)							0.00 - 0.00						0.00 - 0.00						0.00 - 0.00		0.00 - 0.00
Container			500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOC MS (W)	All	NDPs: 0 Tests: 11				X						X						X			

12:46:56 12/06/2021

23367050					
RH101					
0.00 - 0.00					
Vial (ALE297)	GW	X			
NaOH (ALE245)	GW				
HNO3 Filtered (ALE204)	GW				
500ml Plastic (ALE208)	GW				
0.5l glass bottle (ALE227)	GW				
ZnAc (ALE246)	GW				

23366928					
CP103 (2)					
0.00 - 0.00					
Vial (ALE297)	GW	X			
NaOH (ALE245)	GW				
HNO3 Filtered (ALE204)	GW				
500ml Plastic (ALE208)	GW				
0.5l glass bottle (ALE227)	GW				
ZnAc (ALE246)	GW				

23367170					
CP103 (1)					
0.00 - 0.00					
Vial (ALE297)	GW	X			
NaOH (ALE245)	GW				
HNO3 Filtered (ALE204)	GW				
500ml Plastic (ALE208)	GW				
0.5l glass bottle (ALE227)	GW				
ZnAc (ALE246)	GW				

23366948					
CP110					
0.00 - 0.00					
Vial (ALE297)	GW	X			
NaOH (ALE245)	GW				
HNO3 Filtered (ALE204)	GW				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23367050	23367006							23367152							23367130				
Customer Sample Reference			RH101	RH102							SW01							SW02				
AGS Reference																						
Depth (m)			0.00 - 0.00	0.00 - 0.00							0.00 - 0.00							0.00 - 0.00				
Container			ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	
Sample Type			GW	GW	GW	GW	GW	GW	GW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 11			X						X						X					
Anions by Kone (w)	All	NDPs: 0 Tests: 11			X						X						X					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 11					X						X						X			
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 11				X						X						X				
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 11		X						X						X						
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11		X						X						X						
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11		X						X						X						
GRO by GC-FID (W)	All	NDPs: 0 Tests: 11						X						X						X		
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 11			X						X						X					
Mercury Dissolved	All	NDPs: 0 Tests: 11				X						X						X				
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 11		X						X						X						
Redox Potential	All	NDPs: 0 Tests: 11		X						X						X						
Sulphide	All	NDPs: 0 Tests: 11	X						X						X							X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 11		X						X						X						
TPH CWG (W)	All	NDPs: 0 Tests: 11		X						X						X						

23367087	SW03		0.00 - 0.00	ZnAc (ALE246)	SW													X		
				Vial (ALE297)	SW								X							
				NaOH (ALE245)	SW			X												
				HNO3 Filtered (ALE204)	SW				X						X					
				500ml Plastic (ALE208)	SW	X	X							X						
				0.5l glass bottle (ALE227)	SW					X	X	X				X	X		X	X

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)	23367050	23367006						23367152							23367130							
Customer Sample Reference	RH101	RH102						SW01							SW02							
AGS Reference																						
Depth (m)	0.00 - 0.00	0.00 - 0.00						0.00 - 0.00							0.00 - 0.00							
Container	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)			
Sample Type	GW	GW	GW	GW	GW	GW	GW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW			
VOC MS (W)	All	NDPs: 0 Tests: 11																				
						X						X						X				

23367087	SW03		0.00 - 0.00	ZnAc (ALE246)	SW		
				Vial (ALE297)	SW		X
				NaOH (ALE245)	SW		
				HNO3 Filtered (ALE204)	SW		
				500ml Plastic (ALE208)	SW		
				0.5l glass bottle (ALE227)	SW		

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		687 #	391 #	1380 #	692 #	702 #	724 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090		18.7	3.73	270	8.89	11.5	12.6
Sulphide	<0.01 mg/l	TM101		0.49 #	0.015 #	0.786 #	0.0223 #	1.59 #	0.598 #
Redox potential	mV	TM110		144	131	107	181	137	143
Arsenic (diss.filt)	<0.5 µg/l	TM152		9.85 #	5.41 #	33.3 #	2.36 #	4.08 #	1.43 #
Boron (diss.filt)	<10 µg/l	TM152		2260 #	198 #	11100 #	854 #	768 #	742 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	11 #	<0.08 #	<0.08 #
Chromium (diss.filt)	<1 µg/l	TM152		5.11 #	<1 #	10.7 #	<1 #	7.75 #	6.98 #
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3 #	0.465 #	<0.3 #	140 #	<0.3 #	1.07 #
Lead (diss.filt)	<0.2 µg/l	TM152		0.266 #	0.614 #	5.53 #	3.73 #	0.274 #	2.71 #
Manganese (diss.filt)	<3 µg/l	TM152		230 #	360 #	73 #	485 #	277 #	257 #
Nickel (diss.filt)	<0.4 µg/l	TM152		1.16 #	1.07 #	11.7 #	36.5 #	0.771 #	2.75 #
Selenium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	1.84 #	1.09 #	<1 #	1.39 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		107 #	187 #	24.4 #	228 #	193 #	236 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		0.783 #	11 #	0.967 #	0.245 #	0.24 #	0.116 #
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #
Sulphate	<2 mg/l	TM184		118 #	177 #	<10 #	82.2 #	135 #	228 #
Cyanide, Total	<0.05 mg/l	TM227		0.13 #	<0.05 #	0.18 #	<0.05 #	<0.05 #	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Cyanide, Complex	<0.05 mg/l	TM227		0.13	<0.05	0.18	<0.05	<0.05	<0.05
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 #	0.12 #	<0.05 #	<0.05 #	<0.05 #
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03 #	<0.03 #	<0.03 #	<0.03 #	<0.03 #	<0.03 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	RH101	RH102	SW01	SW02	SW03
Customer Sample Ref.							
Depth (m)			0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Sample Type			Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
Date Sampled			02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
Sample Time			.	.	.	.	.
Date Received			04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
SDG Ref			201204-111	201204-111	201204-111	201204-111	201204-111
Lab Sample No.(s)			23367050	23367006	23367152	23367130	23367087
AGS Reference							
Alkalinity, Total as CaCO3	<2 mg/l	TM043	488 #	1650 #	37.5 #	33.1 #	32.1 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090	4.81	353	5.26	5.61	5.05
Sulphide	<0.01 mg/l	TM101	<0.01 #	0.967 #	0.0183	<0.01	0.0116
Redox potential	mV	TM110	130	132	121	126	122
Arsenic (diss.filt)	<0.5 µg/l	TM152	1.54 #	4.41 #	0.918 #	0.907 #	0.894 #
Boron (diss.filt)	<10 µg/l	TM152	295 #	11100 #	28.6 #	22.7 #	20.7 #
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Chromium (diss.filt)	<1 µg/l	TM152	<1 #	4.28 #	6.25 #	<1 #	<1 #
Copper (diss.filt)	<0.3 µg/l	TM152	1.63 #	0.43 #	3.38 #	3.27 #	3.52 #
Lead (diss.filt)	<0.2 µg/l	TM152	2.89 #	0.927 #	1.05 #	1.2 #	1.04 #
Manganese (diss.filt)	<3 µg/l	TM152	265 #	238 #	16.7 #	17 #	14.7 #
Nickel (diss.filt)	<0.4 µg/l	TM152	1.02 #	10.4 #	2.07 #	2.12 #	2.05 #
Selenium (diss.filt)	<1 µg/l	TM152	<1 #	<1 #	<1 #	<1 #	<1 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152	170 #	210 #	16.5 #	15.7 #	15.5 #
Iron (Dis.Filt)	<0.019 mg/l	TM152	0.0921 #	2.22 #	0.193 #	0.184 #	0.189 #
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #	<0.01 #	<0.01	<0.01	<0.01
Sulphate	<2 mg/l	TM184	207 #	23.6 #	17.9 #	17.4 #	16.7 #
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05
Thiocyanate	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05	<0.05	<0.05
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03 #	<0.03 #	<0.03	<0.03	<0.03

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0944 #	0.0314 #	2.25 #	0.0605 #	0.339 #	0.386 #
Acenaphthene (aq)	<0.005 µg/l	TM178		1.47 #	0.05 #	1.87 #	0.0956 #	2.95 #	1.68 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.0375 #	<0.005 #	0.169 #	0.161 #	0.0168 #	0.0131 #
Fluoranthene (aq)	<0.005 µg/l	TM178		1.49 #	0.18 #	2.37 #	2.37 #	1.87 #	2.09 #
Anthracene (aq)	<0.005 µg/l	TM178		0.179 #	0.015 #	0.382 #	0.195 #	0.146 #	0.243 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.623 #	0.0517 #	2.17 #	0.616 #	0.171 #	1.05 #
Fluorene (aq)	<0.005 µg/l	TM178		0.357 #	0.0163 #	1.04 #	0.0674 #	0.258 #	0.232 #
Chrysene (aq)	<0.005 µg/l	TM178		0.504 #	0.0297 #	0.764 #	1.26 #	0.409 #	0.95 #
Pyrene (aq)	<0.005 µg/l	TM178		1.51 #	0.129 #	2.35 #	2.9 #	1.3 #	1.81 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.375 #	0.0362 #	0.537 #	0.936 #	0.303 #	0.835 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.711 #	0.0107 #	1.38 #	2.46 #	0.446 #	1.71 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.217 #	0.00605 #	0.421 #	0.769 #	0.138 #	0.741 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.425 #	0.012 #	0.688 #	1.84 #	0.249 #	1.18 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.0606 #	<0.005 #	0.109 #	0.288 #	0.0376 #	0.135 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.348 #	0.0107 #	0.594 #	1.25 #	0.193 #	0.821 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.323 #	<0.005 #	0.602 #	1.57 #	0.194 #	0.637 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		8.72 #	0.579 #	17.7 #	16.9 #	9.01 #	14.5 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		0.11 #	0.235 #	0.0241 #	0.0682 #	0.0683 #
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.025 #	2.66 #	0.0179 #	0.0075 #	0.0101 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.025 #	0.0275 #	0.00716 #	0.00789 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.264 #	0.0733 #	0.485 #	0.0809 #	0.024 #
Anthracene (aq)	<0.005 µg/l	TM178		0.0473 #	0.0523 #	0.0288 #	0.00757 #	<0.005 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.319 #	0.107 #	0.13 #	0.0383 #	0.0158 #
Fluorene (aq)	<0.005 µg/l	TM178		0.0593 #	0.0832 #	0.0118 #	0.00871 #	0.00676 #
Chrysene (aq)	<0.005 µg/l	TM178		0.235 #	0.0176 #	0.229 #	0.054 #	0.0141 #
Pyrene (aq)	<0.005 µg/l	TM178		0.286 #	0.0506 #	0.473 #	0.0785 #	0.0236 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.11 #	0.0123 #	0.182 #	0.0458 #	0.0109 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.2 #	0.0229 #	0.319 #	0.0801 #	0.0144 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.077 #	0.0105 #	0.0976 #	0.0312 #	0.00764 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.127 #	0.0173 #	0.186 #	0.0464 #	0.0107 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.025 #	<0.005 #	0.0285 #	0.00759 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.13 #	<0.005 #	0.171 #	0.0424 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0963 #	<0.005 #	0.173 #	0.0254 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		2.06 #	3.37 #	2.56 #	0.63 #	0.206 #

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 #	<4 #	11.5 #	<8 #	<1 #	<1 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<4	<10	<8	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<4	<10	<8	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 #	<8 #	<20 #	<16 #	<2 #	<2 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Carbazole (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 #	<20 #	<50 #	<40 #	<5 #	<5 #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<4	<10	<8	<1	<1
Phenol (aq)	<1 µg/l	TM176		<1	<4	<10	<8	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Isophorone (aq)	<1 µg/l	TM176		<1 #	<4 #	<10 #	<8 #	<1 #	<1 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<4	<10	<8	<1	<1

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Methylphenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<20	<8	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
4-Methylphenol (aq)	<1 µg/l	TM176		<20 #	40.1 #	<1 #	<1 #	<1 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<20	<8	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<40 #	<16 #	<2 #	<2 #	<2 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Carbazole (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Dibenzofuran (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Diethyl phthalate (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
Dimethyl phthalate (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<100 #	<40 #	<5 #	<5 #	<5 #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Pentachlorophenol (aq)	<1 µg/l	TM176		<20	<8	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176		<20	16.3	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Hexachloroethane (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Nitrobenzene (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Isophorone (aq)	<1 µg/l	TM176		<20 #	<8 #	<1 #	<1 #	<1 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<20	<8	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		102	94	101	99	103	91
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	280 #	<50 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	<7 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	22	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	25	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	117	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<20	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	28	14	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	147	213	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	175	227	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	26	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	78	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		25	<10	101	<10	19	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		16	<10	112	24	14	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		34	<10	<20	149	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		75	<10	213	173	33	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		101	<10	669	400	33	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	175	227	<10	<10

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
GRO Surrogate % recovery**	%	TM245		94	89	103	102	110
GRO >C5-C12	<50 µg/l	TM245		<50 #	88 #	<50 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	14	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	16	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	23	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	15	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<50	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<50	<10	23	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<50	<10	23	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	88	23	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<50	<10	<10	<10	<10

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
Dibromofluoromethane**	%	TM208		110	111	105	112	108	112
Toluene-d8**	%	TM208		98.2	98.8	98	98.2	98.4	97.9
4-Bromofluorobenzene**	%	TM208		95.6	96.2	99.6	97.2	100	96
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	3.06 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	2.44 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23366904	23367032	23366986	23366948	23367170	23366928
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	1.95 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	3.39 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	2.66 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	1.83 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	1.41 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		1.17 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	4.3 #	<1 #	1.37 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
Dibromofluoromethane**	%	TM208		113	112	109	107	104
Toluene-d8**	%	TM208		97.9	98.1	98.4	98.5	98.5
4-Bromofluorobenzene**	%	TM208		97.1	95.5	99.6	98.4	98.3
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	1.82 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH101	RH102	SW01	SW02	SW03
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	02/12/2020	02/12/2020	02/12/2020	02/12/2020	02/12/2020
			Sample Time	.	.	.	.	.
			Date Received	04/12/2020	04/12/2020	04/12/2020	04/12/2020	04/12/2020
			SDG Ref	201204-111	201204-111	201204-111	201204-111	201204-111
			Lab Sample No.(s)	23367050	23367006	23367152	23367130	23367087
			AGS Reference					
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201204-111	**Client Reference:**	LD10162	**Report Number:**	601714
Location:	Ten Acres Lane	**Order Number:**	LD1728	**Superseded Report:**	600162

Test Completion Dates

Lab Sample No(s)	23366904	23367032	23366986	23366948	23367170	23366928	23367050	23367006	23367152	23367130
Customer Sample Ref.	CP107	CP108	CP109	CP110	CP103 (1)	CP103 (2)	RH101	RH102	SW01	SW02
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Surface Water	Surface Water
Alkalinity as CaCO3	09-Dec-2020	09-Dec-2020	10-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020
Anions by Kone (w)	09-Dec-2020	09-Dec-2020	11-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	11-Dec-2020	11-Dec-2020	09-Dec-2020
Cyanide Comp/Free/Total/Thiocyanate	08-Dec-2020	08-Dec-2020	08-Dec-2020	09-Dec-2020	08-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	08-Dec-2020	08-Dec-2020
Dissolved Metals by ICP-MS	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	11-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	11-Dec-2020	11-Dec-2020
Dissolved Organic/Inorganic Carbon	09-Dec-2020	08-Dec-2020	09-Dec-2020	08-Dec-2020	08-Dec-2020	09-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020
EPH CWG (Aliphatic) Aqueous GC (W)	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020
EPH CWG (Aromatic) Aqueous GC (W)	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020
GRO by GC-FID (W)	08-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	08-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020
Hexavalent Chromium (w)	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020
Mercury Dissolved	07-Dec-2020	08-Dec-2020	07-Dec-2020	08-Dec-2020	07-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	07-Dec-2020	07-Dec-2020
PAH Spec MS - Aqueous (W)	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	01-Jun-2021	11-Dec-2020	01-Jun-2021	10-Dec-2020	10-Dec-2020
Redox Potential	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020
Sulphide	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020	10-Dec-2020
SVOC MS (W) - Aqueous	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	11-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020	09-Dec-2020
TPH CWG (W)	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020	11-Dec-2020	11-Dec-2020	11-Dec-2020	10-Dec-2020
VOC MS (W)	08-Dec-2020	08-Dec-2020	09-Dec-2020	08-Dec-2020	09-Dec-2020	08-Dec-2020	08-Dec-2020	08-Dec-2020	09-Dec-2020	09-Dec-2020

Lab Sample No(s)	23367087
Customer Sample Ref.	SW03
AGS Ref.	
Depth	0.00 - 0.00
Type	Surface Water
Alkalinity as CaCO3	09-Dec-2020
Anions by Kone (w)	09-Dec-2020
Cyanide Comp/Free/Total/Thiocyanate	08-Dec-2020
Dissolved Metals by ICP-MS	11-Dec-2020
Dissolved Organic/Inorganic Carbon	08-Dec-2020
EPH CWG (Aliphatic) Aqueous GC (W)	10-Dec-2020
EPH CWG (Aromatic) Aqueous GC (W)	10-Dec-2020
GRO by GC-FID (W)	09-Dec-2020
Hexavalent Chromium (w)	08-Dec-2020
Mercury Dissolved	07-Dec-2020
PAH Spec MS - Aqueous (W)	10-Dec-2020
Redox Potential	09-Dec-2020
Sulphide	10-Dec-2020
SVOC MS (W) - Aqueous	09-Dec-2020
TPH CWG (W)	10-Dec-2020
VOC MS (W)	09-Dec-2020

ALS Environmental, Land	Issue No. 4
	Date: 03/03/2020
QF.7.5.1 Data Amendments Form	Issued and Authorised by Quality Manager

SDG	Sample Event	Sample ID	Date Amended	Amendment Reason	Analysis/Component	Authorised (Lab Manager)	Previous Value	New Value	Units	Supersedes Report
201204-111	23378270	CP103	01/06/2021	Analytical/Quality Issue	PAH EPAMS Acenaphthylene	Geraint Pumford	1.71	0.013177	µg/L	600162
201204-111	23376759	RH102	01/06/2021	Analytical/Quality Issue	PAH EPAMS Acenaphthylene	Geraint Pumford	2.71	0.02752	µg/L	600162

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	15 December 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201207-11
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	579951

This report has been revised and directly supersedes 579950 in its entirety.

We received 1 sample on Sunday December 06, 2020 and 1 of these samples were scheduled for analysis which was completed on Monday December 14, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23379646	RH108		0.00 - 0.00	04/12/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23379646					
Customer Sample Reference			RH108					
AGS Reference								
Depth (m)			0.00 - 0.00					
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 1		X			
Anions by Kone (w)	All	NDPs: 0 Tests: 1		X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 1			X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1		X			
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 1	X				
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 1	X				
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 1	X				
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1				X	
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 1		X			
Mercury Dissolved	All	NDPs: 0 Tests: 1		X			
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 1	X				
Redox Potential	All	NDPs: 0 Tests: 1	X				
Sulphide	All	NDPs: 0 Tests: 1					X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 1	X				
TPH CWG (W)	All	NDPs: 0 Tests: 1	X				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23379646				
Customer Sample Reference			RH108				
AGS Reference							
Depth (m)			0.00 - 0.00				
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW
VOC MS (W)	All	NDPs: 0 Tests: 1					
						X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	RH108
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	04/12/2020
Sample Time	.
Date Received	06/12/2020
SDG Ref	201207-11
Lab Sample No.(s)	23379646
AGS Reference	

Component	LOD/Units	Method	
Alkalinity, Total as CaCO3	<2 mg/l	TM043	1400 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090	6.93
Sulphide	<0.01 mg/l	TM101	<0.01 #
Redox potential	mV	TM110	150
Arsenic (diss.filt)	<0.5 µg/l	TM152	0.829 2 #
Boron (diss.filt)	<10 µg/l	TM152	456 2 #
Cadmium (diss.filt)	<0.08 µg/l	TM152	0.304 2 #
Chromium (diss.filt)	<1 µg/l	TM152	<1 2 #
Copper (diss.filt)	<0.3 µg/l	TM152	1.68 2 #
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2 2 #
Manganese (diss.filt)	<3 µg/l	TM152	1230 2 #
Nickel (diss.filt)	<0.4 µg/l	TM152	4.67 2 #
Selenium (diss.filt)	<1 µg/l	TM152	3.63 2 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152	81.3 2 #
Iron (Dis.Filt)	<0.019 mg/l	TM152	<0.019 2 #
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 2 #
Sulphate	<2 mg/l	TM184	348 #
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227	<0.05 #
Cyanide, Complex	<0.05 mg/l	TM227	<0.05
Thiocyanate	<0.05 mg/l	TM227	<0.05 #
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	RH108
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	04/12/2020
Sample Time	.
Date Received	06/12/2020
SDG Ref	201207-11
Lab Sample No.(s)	23379646
AGS Reference	

Component	LOD/Units	Method	
Naphthalene (aq)	<0.01 µg/l	TM178	1.43 #
Acenaphthene (aq)	<0.005 µg/l	TM178	1.17 #
Acenaphthylene (aq)	<0.005 µg/l	TM178	0.266 #
Fluoranthene (aq)	<0.005 µg/l	TM178	19.7 #
Anthracene (aq)	<0.005 µg/l	TM178	2.9 #
Phenanthrene (aq)	<0.005 µg/l	TM178	11.9 #
Fluorene (aq)	<0.005 µg/l	TM178	1.23 #
Chrysene (aq)	<0.005 µg/l	TM178	21.5 #
Pyrene (aq)	<0.005 µg/l	TM178	19.5 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	19.9 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	33.2 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	14.9 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	23 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	4.83 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	23.2 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	22.1 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	221 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	RH108
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	04/12/2020
Sample Time	.
Date Received	06/12/2020
SDG Ref	201207-11
Lab Sample No.(s)	23379646
AGS Reference	

Component	LOD/Units	Method	
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<100 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<100 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<100 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<100 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<100 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<100 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<100 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<100 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<100 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<100 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<100 #
2-Chlorophenol (aq)	<1 µg/l	TM176	<100 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<100 #
2-Methylphenol (aq)	<1 µg/l	TM176	<100 #
2-Nitroaniline (aq)	<1 µg/l	TM176	<100 #
2-Nitrophenol (aq)	<1 µg/l	TM176	<100 #
3-Nitroaniline (aq)	<1 µg/l	TM176	<100 #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<100 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<100 #
4-Chloroaniline (aq)	<1 µg/l	TM176	<100
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<100 #
4-Methylphenol (aq)	<1 µg/l	TM176	<100 #
4-Nitroaniline (aq)	<1 µg/l	TM176	<100 #
4-Nitrophenol (aq)	<1 µg/l	TM176	<100
Azobenzene (aq)	<1 µg/l	TM176	<100 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<100 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<100 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<200 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<100 #
Carbazole (aq)	<1 µg/l	TM176	<100 #
Dibenzofuran (aq)	<1 µg/l	TM176	<100 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<100 #
Diethyl phthalate (aq)	<1 µg/l	TM176	<100 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

		Customer Sample Ref.	RH108
		Depth (m)	0.00 - 0.00
		Sample Type	Ground Water (GW)
		Date Sampled	04/12/2020
		Sample Time	.
		Date Received	06/12/2020
		SDG Ref	201207-11
		Lab Sample No.(s)	23379646
		AGS Reference	
Component	**LOD/Units**	**Method**	
Dimethyl phthalate (aq)	<1 µg/l	TM176	<100 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<500 #
Hexachlorobenzene (aq)	<1 µg/l	TM176	<100 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<100 #
Pentachlorophenol (aq)	<1 µg/l	TM176	<100
Phenol (aq)	<1 µg/l	TM176	<100
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<100 #
Hexachloroethane (aq)	<1 µg/l	TM176	<100 #
Nitrobenzene (aq)	<1 µg/l	TM176	<100 #
Isophorone (aq)	<1 µg/l	TM176	<100 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<100

Validated

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. RH108				
			Depth (m) 0.00 - 0.00				
			Sample Type Ground Water (GW)				
			Date Sampled 04/12/2020				
			Sample Time .				
			Date Received 06/12/2020				
			SDG Ref 201207-11				
			Lab Sample No.(s) 23379646				
			AGS Reference				
GRO Surrogate % recovery**	%	TM245	115				
GRO >C5-C12	<50 µg/l	TM245	<50 #				
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3 #				
Benzene	<7 µg/l	TM245	<7 #				
Toluene	<4 µg/l	TM245	<4 #				
Ethylbenzene	<5 µg/l	TM245	<5 #				
m,p-Xylene	<8 µg/l	TM245	<8 #				
o-Xylene	<3 µg/l	TM245	<3 #				
Sum of detected Xylenes	<11 µg/l	TM245	<11				
Sum of detected BTEX	<28 µg/l	TM245	<28				
Aliphatics >C5-C6	<10 µg/l	TM245	<10				
Aliphatics >C6-C8	<10 µg/l	TM245	<10				
Aliphatics >C8-C10	<10 µg/l	TM245	<10				
Aliphatics >C10-C12	<10 µg/l	TM245	<10				
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	111				
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	174				
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	3550				
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	3840				
Aromatics >EC5-EC7	<10 µg/l	TM245	<10				
Aromatics >EC7-EC8	<10 µg/l	TM245	<10				
Aromatics >EC8-EC10	<10 µg/l	TM245	<10				
Aromatics >EC10-EC12	<10 µg/l	TM245	<10				
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	60				
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	123				
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	671				
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	854				
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	4700				
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174	3720				

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	RH108
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	04/12/2020
Sample Time	.
Date Received	06/12/2020
SDG Ref	201207-11
Lab Sample No.(s)	23379646
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM208	110
Toluene-d8**	%	TM208	93.6
4-Bromofluorobenzene**	%	TM208	74.7
Dichlorodifluoromethane	<1 µg/l	TM208	<1 #
Chloromethane	<1 µg/l	TM208	<1 #
Vinyl chloride	<1 µg/l	TM208	<1 #
Bromomethane	<1 µg/l	TM208	<1 #
Chloroethane	<1 µg/l	TM208	<1 #
Trichlorofluoromethane	<1 µg/l	TM208	<1 #
1,1-Dichloroethene	<1 µg/l	TM208	<1 #
Carbon disulphide	<1 µg/l	TM208	<1 #
Dichloromethane	<3 µg/l	TM208	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
1,1-Dichloroethane	<1 µg/l	TM208	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
2,2-Dichloropropane	<1 µg/l	TM208	<1
Bromochloromethane	<1 µg/l	TM208	<1 #
Chloroform	<1 µg/l	TM208	1.48 #
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 #
1,1-Dichloropropene	<1 µg/l	TM208	<1 #
Carbontetrachloride	<1 µg/l	TM208	<1 #
1,2-Dichloroethane	<1 µg/l	TM208	<1 #
Benzene	<1 µg/l	TM208	<1 #
Trichloroethene	<1 µg/l	TM208	<1 #
1,2-Dichloropropane	<1 µg/l	TM208	<1 #
Dibromomethane	<1 µg/l	TM208	<1 #
Bromodichloromethane	<1 µg/l	TM208	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
Toluene	<1 µg/l	TM208	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 #
1,3-Dichloropropane	<1 µg/l	TM208	<1 #

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	RH108
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	04/12/2020
Sample Time	.
Date Received	06/12/2020
SDG Ref	201207-11
Lab Sample No.(s)	23379646
AGS Reference	

Component	LOD/Units	Method	
Tetrachloroethene	<1 µg/l	TM208	<1 #
Dibromochloromethane	<1 µg/l	TM208	<1 #
1,2-Dibromoethane	<1 µg/l	TM208	<1 #
Chlorobenzene	<1 µg/l	TM208	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
Ethylbenzene	<1 µg/l	TM208	<1 #
m,p-Xylene	<1 µg/l	TM208	<1 #
o-Xylene	<1 µg/l	TM208	<1 #
Styrene	<1 µg/l	TM208	<1 #
Bromoform	<1 µg/l	TM208	<1 #
Isopropylbenzene	<1 µg/l	TM208	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #
Propylbenzene	<1 µg/l	TM208	<1 #
2-Chlorotoluene	<1 µg/l	TM208	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #
4-Chlorotoluene	<1 µg/l	TM208	<1 #
tert-Butylbenzene	<1 µg/l	TM208	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #
n-Butylbenzene	<1 µg/l	TM208	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #
Hexachlorobutadiene	<1 µg/l	TM208	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #
Naphthalene	<1 µg/l	TM208	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201207-11	**Client Reference:**	LD10162	**Report Number:**	579951
Location:	Ten Acres Lane	**Order Number:**	LD1732	**Superseded Report:**	579950

Test Completion Dates

Lab Sample No(s)	23379646
Customer Sample Ref.	RH108
AGS Ref.	
Depth	0.00 - 0.00
Type	Ground Water
Alkalinity as CaCO3	10-Dec-2020
Anions by Kone (w)	14-Dec-2020
Cyanide Comp/Free/Total/Thiocyanate	10-Dec-2020
Dissolved Metals by ICP-MS	11-Dec-2020
Dissolved Organic/Inorganic Carbon	09-Dec-2020
EPH CWG (Aliphatic) Aqueous GC (W)	14-Dec-2020
EPH CWG (Aromatic) Aqueous GC (W)	14-Dec-2020
GRO by GC-FID (W)	09-Dec-2020
Hexavalent Chromium (w)	11-Dec-2020
Mercury Dissolved	08-Dec-2020
PAH Spec MS - Aqueous (W)	14-Dec-2020
Redox Potential	09-Dec-2020
Sulphide	14-Dec-2020
SVOC MS (W) - Aqueous	14-Dec-2020
TPH CWG (W)	14-Dec-2020
VOC MS (W)	09-Dec-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
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LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	21 December 2020
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	201212-66
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	581010

We received 2 samples on Saturday December 12, 2020 and 2 of these samples were scheduled for analysis which was completed on Monday December 21, 2020. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

Version: 2.6 Version Issued: 21/12/2020

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23423227	CP101/RH109		0.00 - 0.00	10/12/2020
23423223	RH106		0.00 - 0.00	10/12/2020

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)								
										23423227	23423223
			Customer Sample Reference							CP101/RH109	RH106
			AGS Reference								
			Depth (m)							0.00 - 0.00	0.00 - 0.00
			Container	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)
			Sample Type	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 2			X						X
Anions by Kone (w)	All	NDPs: 0 Tests: 2			X						X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 2					X				X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 2				X					X
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 2		X						X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 2		X						X	
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 2		X						X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 2						X		X	
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 2			X						X
Mercury Dissolved	All	NDPs: 0 Tests: 2				X					X
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 2		X						X	
Redox Potential	All	NDPs: 0 Tests: 2		X						X	
Sulphide	All	NDPs: 0 Tests: 2							X		X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 2		X						X	
TPH CWG (W)	All	NDPs: 0 Tests: 2		X						X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)									23423227	23423223
Customer Sample Reference									CP101/RH109	RH106
AGS Reference										
Depth (m)									0.00 - 0.00	0.00 - 0.00
Container									0.5l glass bottle (ALE227)	500ml Plastic (ALE208)
									HNO3 Filtered (ALE204)	NaOH (ALE245)
									Vial (ALE297)	ZnAc (ALE246)
Sample Type									GW	GW
VOC MS (W)	All	NDPs: 0 Tests: 2								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		570 #	533 #				
Carbon, Organic (diss.filt)	<3 mg/l	TM090		6.62	7.22				
Sulphide	<0.01 mg/l	TM101		<0.01 #	<0.01 2 #				
Redox potential	mV	TM110		161	142				
Arsenic (diss.filt)	<0.5 µg/l	TM152		1.13 2 #	4.3 2 #				
Boron (diss.filt)	<10 µg/l	TM152		631 2 #	634 2 #				
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #				
Chromium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #				
Copper (diss.filt)	<0.3 µg/l	TM152		4.48 2 #	0.757 2 #				
Lead (diss.filt)	<0.2 µg/l	TM152		1.73 2 #	<0.2 2 #				
Manganese (diss.filt)	<3 µg/l	TM152		408 2 #	37.2 2 #				
Nickel (diss.filt)	<0.4 µg/l	TM152		3.99 2 #	3.94 2 #				
Selenium (diss.filt)	<1 µg/l	TM152		3.22 2 #	11.8 2 #				
Calcium (Dis.Filt)	<0.2 mg/l	TM152		194 2 #	64.7 2 #				
Iron (Dis.Filt)	<0.019 mg/l	TM152		0.183 2 #	<0.019 2 #				
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #				
Sulphate	<2 mg/l	TM184		364 #	187 #				
Cyanide, Total	<0.05 mg/l	TM227		<0.05 #	<0.05 2 #				
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 2 #				
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05 2				
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 2 #				
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03 #	<0.03 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0219 #	<0.01 #				
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0116 #	0.00719 #				
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #				
Fluoranthene (aq)	<0.005 µg/l	TM178		0.151 #	0.122 #				
Anthracene (aq)	<0.005 µg/l	TM178		0.018 #	0.011 #				
Phenanthrene (aq)	<0.005 µg/l	TM178		0.108 #	0.0528 #				
Fluorene (aq)	<0.005 µg/l	TM178		0.0159 #	0.00663 #				
Chrysene (aq)	<0.005 µg/l	TM178		0.0928 #	0.0581 #				
Pyrene (aq)	<0.005 µg/l	TM178		0.161 #	0.106 #				
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.0682 #	0.0407 #				
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.144 #	0.0959 #				
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.0567 #	0.0364 #				
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.0916 #	0.0564 #				
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.0188 #	<0.005 #				
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.0912 #	0.0335 #				
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0699 #	0.0328 #				
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		1.12 #	0.66 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<4 #				
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Chlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<4 #				
2-Nitrophenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
3-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Chloroaniline (aq)	<1 µg/l	TM176		<10	<4				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<4 #				
4-Nitrophenol (aq)	<1 µg/l	TM176		<10	<4				
Azobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<10 #	<4 #				
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<10 #	<4 #				
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<20 #	<8 #				
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #				
Carbazole (aq)	<1 µg/l	TM176		<10 #	<4 #				
Dibenzofuran (aq)	<1 µg/l	TM176		<10 #	<4 #				
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #				
Diethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
Dimethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #				
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<50 #	<20 #				
Hexachlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<10 #	<4 #				
Pentachlorophenol (aq)	<1 µg/l	TM176		<10	<4				
Phenol (aq)	<1 µg/l	TM176		<10	<4				
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<10 #	<4 #				
Hexachloroethane (aq)	<1 µg/l	TM176		<10 #	<4 #				
Nitrobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #				
Isophorone (aq)	<1 µg/l	TM176		<10 #	<4 #				
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<10	<4				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		92	95 2				
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 2 #				
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 2 #				
Benzene	<7 µg/l	TM245		<7 #	<7 2 #				
Toluene	<4 µg/l	TM245		<4 #	<4 2 #				
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 2 #				
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 2 #				
o-Xylene	<3 µg/l	TM245		<3 #	<3 2 #				
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11 2				
Sum of detected BTEX	<28 µg/l	TM245		<28	<28 2				
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10 2				
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10 2				
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10 2				
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10 2				
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10				
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10				
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		172	128				
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		172	128				
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10 2				
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10 2				
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10 2				
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10 2				
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10				
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10				
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10				
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10				
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		172	128				
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		172	128				

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
Dibromofluoromethane**	%	TM208		124	122 2				
Toluene-d8**	%	TM208		100	101 2				
4-Bromofluorobenzene**	%	TM208		93.5	98.9 2				
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 2 #				
Chloromethane	<1 µg/l	TM208		<1 #	<1 2 #				
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 2 #				
Bromomethane	<1 µg/l	TM208		<1 #	<1 2 #				
Chloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 2 #				
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 2 #				
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 2 #				
Dichloromethane	<3 µg/l	TM208		<3 #	<3 2 #				
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 2 #				
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 2 #				
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 2 #				
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1 2				
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 2 #				
Chloroform	<1 µg/l	TM208		<1 #	1.27 2 #				
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 2 #				
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 2 #				
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
Benzene	<1 µg/l	TM208		<1 #	<1 2 #				
Trichloroethene	<1 µg/l	TM208		<1 #	<1 2 #				
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 2 #				
Dibromomethane	<1 µg/l	TM208		<1 #	<1 2 #				
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 2 #				
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 2 #				
Toluene	<1 µg/l	TM208		<1 #	<1 2 #				
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 2 #				
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 2 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP101/RH109	RH106				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	10/12/2020	10/12/2020				
			Sample Time	.	.				
			Date Received	12/12/2020	12/12/2020				
			SDG Ref	201212-66	201212-66				
			Lab Sample No.(s)	23423227	23423223				
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 2 #				
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 2 #				
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 2 #				
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 2 #				
o-Xylene	<1 µg/l	TM208		<1 #	<1 2 #				
Styrene	<1 µg/l	TM208		<1 #	<1 2 #				
Bromoform	<1 µg/l	TM208		<1 #	<1 2 #				
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 2 #				
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 2 #				
Bromobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
Propylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 2 #				
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 2 #				
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 2 #				
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1 2				
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 2 #				
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 2 #				
Naphthalene	<1 µg/l	TM208		<1 #	<1 2 #				
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 2 #				
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1 2				

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	201212-66	**Client Reference:**	LD10162	**Report Number:**	581010
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23423227	23423223
Customer Sample Ref.	CP101/RH109	RH106
AGS Ref.		
Depth	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water
Alkalinity as CaCO3	19-Dec-2020	19-Dec-2020
Anions by Kone (w)	18-Dec-2020	18-Dec-2020
Cyanide Comp/Free/Total/Thiocyanate	16-Dec-2020	16-Dec-2020
Dissolved Metals by ICP-MS	21-Dec-2020	21-Dec-2020
Dissolved Organic/Inorganic Carbon	15-Dec-2020	18-Dec-2020
EPH CWG (Aliphatic) Aqueous GC (W)	18-Dec-2020	18-Dec-2020
EPH CWG (Aromatic) Aqueous GC (W)	18-Dec-2020	18-Dec-2020
GRO by GC-FID (W)	17-Dec-2020	17-Dec-2020
Hexavalent Chromium (w)	15-Dec-2020	15-Dec-2020
Mercury Dissolved	15-Dec-2020	15-Dec-2020
PAH Spec MS - Aqueous (W)	18-Dec-2020	18-Dec-2020
Redox Potential	16-Dec-2020	16-Dec-2020
Sulphide	21-Dec-2020	21-Dec-2020
SVOC MS (W) - Aqueous	21-Dec-2020	21-Dec-2020
TPH CWG (W)	18-Dec-2020	18-Dec-2020
VOC MS (W)	16-Dec-2020	16-Dec-2020

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	13 January 2021
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	210108-54
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	582920

We received 3 samples on Friday January 08, 2021 and 3 of these samples were scheduled for analysis which was completed on Wednesday January 13, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

Version: 2.6 Version Issued: 13/01/2021

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23513591	RH103		0.00 - 0.00	07/01/2021
23513554	RH106		0.00 - 0.00	07/01/2021
23513622	RH108		0.00 - 0.00	07/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)									23513591						23513554					23513622
Customer Sample Reference									RH103						RH106					RH108
AGS Reference																				
Depth (m)									0.00 - 0.00						0.00 - 0.00					0.00 - 0.00
Container									0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl.	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl.	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)
Sample Type									GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 3										X								X		
Anions by Kone (w)	All	NDPs: 0 Tests: 3										X								X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3						X							X							X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 3					X							X							X	
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 3	X							X							X					
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 3		X							X							X				
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 3		X							X							X				
GRO by GC-FID (W)	All	NDPs: 0 Tests: 3						X							X							
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 3			X							X								X		
Mercury Dissolved	All	NDPs: 0 Tests: 3				X								X							X	
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 3		X							X							X				
Redox Potential	All	NDPs: 0 Tests: 3	X							X							X					
Sulphide	All	NDPs: 0 Tests: 3							X							X						
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 3	X							X							X					
TPH CWG (W)	All	NDPs: 0 Tests: 3	X							X							X					

23513622	RH108		0.00 - 0.00	ZnAc (ALE246)	GW																										X				
				Vial (ALE297)	GW																X														

CERTIFICATE OF ANALYSIS

Validated

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

- X Test
- N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23513591							23513554							23513622				
Customer Sample Reference			RH103							RH106							RH108				
AGS Reference																					
Depth (m)			0.00 - 0.00							0.00 - 0.00							0.00 - 0.00				
Container			0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOC MS (W)	All	NDPs: 0 Tests: 3						X							X						

				ZnAc (ALE246)	GW	
				Vial (ALE297)	GW	
23513622	RH108		0.00 - 0.00	X		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		1020 #	395 #	555 #			
Carbon, Organic (diss.filt)	<3 mg/l	TM090		20.1	6.3	7.89			
Sulphide	<0.01 mg/l	TM101		<0.01 #	<0.01 #	<0.01 #			
Redox potential	mV	TM110		143	143	160			
Arsenic (diss.filt)	<0.5 µg/l	TM152		35.6 #	2.66 #	3.13 #			
Boron (diss.filt)	<10 µg/l	TM152		54800 #	583 #	313 #			
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #			
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #			
Copper (diss.filt)	<0.3 µg/l	TM152		0.955 #	2.18 #	<0.3 #			
Lead (diss.filt)	<0.2 µg/l	TM152		0.912 #	0.282 #	0.433 #			
Manganese (diss.filt)	<3 µg/l	TM152		544 #	471 #	3880 #			
Nickel (diss.filt)	<0.4 µg/l	TM152		3.09 #	2.61 #	7.88 #			
Selenium (diss.filt)	<1 µg/l	TM152		<1 #	2.86 #	<1 #			
Calcium (Dis.Filt)	<0.2 mg/l	TM152		135 #	97.7 #	255 #			
Iron (Dis.Filt)	<0.019 mg/l	TM152		1.79 #	0.0444 #	0.726 #			
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 #	<0.01 #	<0.01 #			
Sulphate	<2 mg/l	TM184		53.3 #	83.5 #	588 #			
Cyanide, Total	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05			
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03 #	<0.03 #	<0.03 #			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.026 #	0.0188 #	0.0492 #			
Acenaphthene (aq)	<0.005 µg/l	TM178		0.149 #	0.0357 #	0.0322 #			
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.151 #	0.0347 #	0.0257 #			
Fluoranthene (aq)	<0.005 µg/l	TM178		1.25 #	0.48 #	0.31 #			
Anthracene (aq)	<0.005 µg/l	TM178		0.135 #	0.0613 #	0.0379 #			
Phenanthrene (aq)	<0.005 µg/l	TM178		0.608 #	0.3 #	0.206 #			
Fluorene (aq)	<0.005 µg/l	TM178		0.0831 #	0.029 #	0.0267 #			
Chrysene (aq)	<0.005 µg/l	TM178		0.755 #	0.323 #	0.23 #			
Pyrene (aq)	<0.005 µg/l	TM178		1.19 #	0.454 #	0.322 #			
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.685 #	0.295 #	0.219 #			
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		1.27 #	0.637 #	0.418 #			
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.484 #	0.23 #	0.146 #			
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.9 #	0.399 #	0.278 #			
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.127 #	0.0596 #	0.0497 #			
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.719 #	0.296 #	0.225 #			
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.652 #	0.285 #	0.176 #			
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		9.19 #	3.94 #	2.75 #			

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Chlorophenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Methylphenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Nitroaniline (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
2-Nitrophenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
3-Nitroaniline (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Chloroaniline (aq)	<1 µg/l	TM176		<8	<4	<20			
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Methylphenol (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Nitroaniline (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
4-Nitrophenol (aq)	<1 µg/l	TM176		<8	<4	<20			
Azobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<16 #	<8 #	<40 #			
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Carbazole (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Dibenzofuran (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Diethyl phthalate (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
Dimethyl phthalate (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<40 #	<20 #	<100 #			
Hexachlorobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Pentachlorophenol (aq)	<1 µg/l	TM176		<8	<4	<20			
Phenol (aq)	<1 µg/l	TM176		<8	<4	<20			
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Hexachloroethane (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Nitrobenzene (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Isophorone (aq)	<1 µg/l	TM176		<8 #	<4 #	<20 #			
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<8	<4	<20			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		88	95	94			
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #			
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #			
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #			
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #			
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #			
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #			
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #			
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11			
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28			
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	<10			
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10			
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10			
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10			
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	<10			

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
Dibromofluoromethane**	%	TM208		109	114	112			
Toluene-d8**	%	TM208		98.8	97.5	96.8			
4-Bromofluorobenzene**	%	TM208		96.9	95.9	92			
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #			
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #			
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1			
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH103	RH106	RH108			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	07/01/2021	07/01/2021	07/01/2021			
			Sample Time	.	.	.			
			Date Received	08/01/2021	08/01/2021	08/01/2021			
			SDG Ref	210108-54	210108-54	210108-54			
			Lab Sample No.(s)	23513591	23513554	23513622			
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1			
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1			

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210108-54	**Client Reference:**	LD10162	**Report Number:**	582920
Location:	Ten Acres Lane	**Order Number:**	LD1734	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23513591	23513554	23513622
Customer Sample Ref.	RH103	RH106	RH108
AGS Ref.			
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	11-Jan-2021	11-Jan-2021	11-Jan-2021
Anions by Kone (w)	11-Jan-2021	11-Jan-2021	11-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	13-Jan-2021	12-Jan-2021	13-Jan-2021
Dissolved Metals by ICP-MS	12-Jan-2021	12-Jan-2021	12-Jan-2021
Dissolved Organic/Inorganic Carbon	09-Jan-2021	09-Jan-2021	09-Jan-2021
EPH CWG (Aliphatic) Aqueous GC (W)	11-Jan-2021	11-Jan-2021	11-Jan-2021
EPH CWG (Aromatic) Aqueous GC (W)	11-Jan-2021	11-Jan-2021	11-Jan-2021
GRO by GC-FID (W)	12-Jan-2021	12-Jan-2021	12-Jan-2021
Hexavalent Chromium (w)	11-Jan-2021	11-Jan-2021	11-Jan-2021
Mercury Dissolved	11-Jan-2021	12-Jan-2021	11-Jan-2021
PAH Spec MS - Aqueous (W)	12-Jan-2021	12-Jan-2021	12-Jan-2021
Redox Potential	11-Jan-2021	11-Jan-2021	11-Jan-2021
Sulphide	13-Jan-2021	13-Jan-2021	13-Jan-2021
SVOC MS (W) - Aqueous	12-Jan-2021	12-Jan-2021	12-Jan-2021
TPH CWG (W)	12-Jan-2021	12-Jan-2021	12-Jan-2021
VOC MS (W)	11-Jan-2021	11-Jan-2021	11-Jan-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Hawarden
Deeside
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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	02 June 2021
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	210126-33
Your Reference:	LD10162
Location:	Ten Acres Lane
Report No:	600239

This report has been revised and directly supersedes 600234 in its entirety.

We received 1 sample on Tuesday January 26, 2021 and 1 of these samples were scheduled for analysis which was completed on Wednesday June 02, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23607405	Seepage Sample 01		0.00 - 0.00	25/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23607405					
Customer Sample Reference			Seepage Sample 01					
AGS Reference								
Depth (m)			0.00 - 0.00					
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 1		X				
Anions by Kone (w)	All	NDPs: 0 Tests: 1		X				
Chlorine	All	NDPs: 0 Tests: 1		X				
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 1		X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 1				X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1			X			
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 1	X					
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 1		X				
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 1	X					
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 1	X					
Fluoride	All	NDPs: 0 Tests: 1		X				
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1					X	
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 1		X				
Mercury Dissolved	All	NDPs: 0 Tests: 1			X			
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 1	X					

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23607405						
Customer Sample Reference			Seepage Sample 01						
AGS Reference									
Depth (m)			0.00 - 0.00						
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW	GW
pH Value	All	NDPs: 0 Tests: 1		X				
Redox Potential	All	NDPs: 0 Tests: 1	X					
Sulphide	All	NDPs: 0 Tests: 1						X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 1	X					
Total Dissolved Solids	All	NDPs: 0 Tests: 1		X				
TPH CWG (W)	All	NDPs: 0 Tests: 1	X					
VOC MS (W)	All	NDPs: 0 Tests: 1					X	

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	Seepage Sample 01
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	25/01/2021
Sample Time	.
Date Received	26/01/2021
SDG Ref	210126-33
Lab Sample No.(s)	23607405
AGS Reference	

Component	LOD/Units	Method	
Chlorine, Free (Residual)	<0.01 mg/l	TM037	<0.01
Chlorine, Total (Residual)	<0.01 mg/l	TM037	<0.01
Alkalinity, Total as CaCO3	<2 mg/l	TM043	897 #
Oxygen, dissolved	<0.3 mg/l	TM046	3.44
Carbon, Organic (diss.filt)	<3 mg/l	TM090	17.4
Sulphide	<0.01 mg/l	TM101	0.613 #
Fluoride	<0.5 mg/l	TM104	0.679 #
Redox potential	mV	TM110	173
Conductivity @ 20 deg.C	<0.02 mS/cm	TM120	1.61 #
Dissolved solids, Total (meter)	<5 mg/l	TM123	1300 #
Arsenic (diss.filt)	<0.5 µg/l	TM152	1.5 #
Boron (diss.filt)	<10 µg/l	TM152	15700 #
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08 #
Chromium (diss.filt)	<1 µg/l	TM152	7.22 #
Copper (diss.filt)	<0.3 µg/l	TM152	<0.3 #
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2 #
Manganese (diss.filt)	<3 µg/l	TM152	533 #
Nickel (diss.filt)	<0.4 µg/l	TM152	3.49 #
Selenium (diss.filt)	<1 µg/l	TM152	<1 #
Zinc (diss.filt)	<1 µg/l	TM152	<1 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152	379 #
Iron (Dis.Filt)	<0.019 mg/l	TM152	1.89 #
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #
Sulphate	<2 mg/l	TM184	236 #
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227	<0.05 #
Cyanide, Complex	<0.05 mg/l	TM227	<0.05
Thiocyanate	<0.05 mg/l	TM227	<0.05 #
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03 #
pH	<1 pH Units	TM256	7.25 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	Seepage Sample 01
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	25/01/2021
Sample Time	.
Date Received	26/01/2021
SDG Ref	210126-33
Lab Sample No.(s)	23607405
AGS Reference	

Component	LOD/Units	Method	
Naphthalene (aq)	<0.01 µg/l	TM178	0.127 #
Acenaphthene (aq)	<0.005 µg/l	TM178	2.38 #
Acenaphthylene (aq)	<0.005 µg/l	TM178	0.0152 #
Fluoranthene (aq)	<0.005 µg/l	TM178	0.268 #
Anthracene (aq)	<0.005 µg/l	TM178	0.057 #
Phenanthrene (aq)	<0.005 µg/l	TM178	0.0479 #
Fluorene (aq)	<0.005 µg/l	TM178	0.167 #
Chrysene (aq)	<0.005 µg/l	TM178	0.0146 #
Pyrene (aq)	<0.005 µg/l	TM178	0.171 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	3.25 #

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	Seepage Sample 01		
Depth (m)	0.00 - 0.00		
Sample Type	Ground Water (GW)		
Date Sampled	25/01/2021		
Sample Time	.		
Date Received	26/01/2021		
SDG Ref	210126-33		
Lab Sample No.(s)	23607405		
AGS Reference			

Component	LOD/Units	Method					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1 #				
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #				
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #				
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	1.15 #				
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #				
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #				
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1 #				
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1 #				
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #				
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #				
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1 #				
2-Chlorophenol (aq)	<1 µg/l	TM176	<1 #				
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1 #				
2-Methylphenol (aq)	<1 µg/l	TM176	<1 #				
2-Nitroaniline (aq)	<1 µg/l	TM176	<1 #				
2-Nitrophenol (aq)	<1 µg/l	TM176	<1 #				
3-Nitroaniline (aq)	<1 µg/l	TM176	<1 #				
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1 #				
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1 #				
4-Chloroaniline (aq)	<1 µg/l	TM176	<1				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1 #				
4-Methylphenol (aq)	<1 µg/l	TM176	<1 #				
4-Nitroaniline (aq)	<1 µg/l	TM176	<1 #				
4-Nitrophenol (aq)	<1 µg/l	TM176	<1				
Azobenzene (aq)	<1 µg/l	TM176	<1 #				
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1 #				
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1 #				
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2 #				
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1 #				
Carbazole (aq)	<1 µg/l	TM176	<1 #				
Dibenzofuran (aq)	<1 µg/l	TM176	<1 #				
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1 #				
Diethyl phthalate (aq)	<1 µg/l	TM176	<1 #				

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Seepage Sample 01
			Depth (m)	0.00 - 0.00
			Sample Type	Ground Water (GW)
			Date Sampled	25/01/2021
			Sample Time	.
			Date Received	26/01/2021
			SDG Ref	210126-33
			Lab Sample No.(s)	23607405
			AGS Reference	
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1
Phenol (aq)	<1 µg/l	TM176		<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 #
Isophorone (aq)	<1 µg/l	TM176		<1 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Seepage Sample 01
			Depth (m)	0.00 - 0.00
			Sample Type	Ground Water (GW)
			Date Sampled	25/01/2021
			Sample Time	.
			Date Received	26/01/2021
			SDG Ref	210126-33
			Lab Sample No.(s)	23607405
			AGS Reference	
GRO Surrogate % recovery**	%	TM245		101
GRO >C5-C12	<50 µg/l	TM245		<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #
Benzene	<7 µg/l	TM245		<7 #
Toluene	<4 µg/l	TM245		<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #
o-Xylene	<3 µg/l	TM245		<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11
Sum of detected BTEX	<28 µg/l	TM245		<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	Seepage Sample 01
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	25/01/2021
Sample Time	.
Date Received	26/01/2021
SDG Ref	210126-33
Lab Sample No.(s)	23607405
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM208	111
Toluene-d8**	%	TM208	96.9
4-Bromofluorobenzene**	%	TM208	96.1
Dichlorodifluoromethane	<1 µg/l	TM208	<1 #
Chloromethane	<1 µg/l	TM208	<1 #
Vinyl chloride	<1 µg/l	TM208	<1 #
Bromomethane	<1 µg/l	TM208	<1 #
Chloroethane	<1 µg/l	TM208	<1 #
Trichlorofluoromethane	<1 µg/l	TM208	<1 #
1,1-Dichloroethene	<1 µg/l	TM208	<1 #
Carbon disulphide	<1 µg/l	TM208	<1 #
Dichloromethane	<3 µg/l	TM208	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
1,1-Dichloroethane	<1 µg/l	TM208	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
2,2-Dichloropropane	<1 µg/l	TM208	<1
Bromochloromethane	<1 µg/l	TM208	<1 #
Chloroform	<1 µg/l	TM208	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 #
1,1-Dichloropropene	<1 µg/l	TM208	<1 #
Carbontetrachloride	<1 µg/l	TM208	<1 #
1,2-Dichloroethane	<1 µg/l	TM208	<1 #
Benzene	<1 µg/l	TM208	<1 #
Trichloroethene	<1 µg/l	TM208	<1 #
1,2-Dichloropropane	<1 µg/l	TM208	<1 #
Dibromomethane	<1 µg/l	TM208	<1 #
Bromodichloromethane	<1 µg/l	TM208	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
Toluene	<1 µg/l	TM208	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 #
1,3-Dichloropropane	<1 µg/l	TM208	<1 #

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	Seepage Sample 01
Depth (m)	0.00 - 0.00
Sample Type	Ground Water (GW)
Date Sampled	25/01/2021
Sample Time	.
Date Received	26/01/2021
SDG Ref	210126-33
Lab Sample No.(s)	23607405
AGS Reference	

Component	LOD/Units	Method	
Tetrachloroethene	<1 µg/l	TM208	<1 #
Dibromochloromethane	<1 µg/l	TM208	<1 #
1,2-Dibromoethane	<1 µg/l	TM208	<1 #
Chlorobenzene	<1 µg/l	TM208	8.7 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
Ethylbenzene	<1 µg/l	TM208	<1 #
m,p-Xylene	<1 µg/l	TM208	<1 #
o-Xylene	<1 µg/l	TM208	<1 #
Styrene	<1 µg/l	TM208	<1 #
Bromoform	<1 µg/l	TM208	<1 #
Isopropylbenzene	<1 µg/l	TM208	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #
Propylbenzene	<1 µg/l	TM208	<1 #
2-Chlorotoluene	<1 µg/l	TM208	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #
4-Chlorotoluene	<1 µg/l	TM208	<1 #
tert-Butylbenzene	<1 µg/l	TM208	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	1.57 #
n-Butylbenzene	<1 µg/l	TM208	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208	1.15 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #
Hexachlorobutadiene	<1 µg/l	TM208	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #
Naphthalene	<1 µg/l	TM208	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1

Table of Results - Appendix

Method No	Reference	Description
TM037	MEWAM Chlorine demand HMSO 1988	Determination of Free, Combined and Total Chlorine in Waters and Wastewaters using Colourimetry
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM046	Method 4500G, AWWA/APHA, 20th Ed., 1999	Measurement of Dissolved Oxygen by Oxygen Meter
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM104	Method 4500F, AWWA/APHA, 20th Ed., 1999	Determination of Fluoride using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM123	BS 2690: Part 121:1981	The Determination of Total Dissolved Solids in Water
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210126-33	**Client Reference:**	LD10162	**Report Number:**	600239
Location:	Ten Acres Lane	**Order Number:**	LD1778	**Superseded Report:**	600234

Test Completion Dates

Lab Sample No(s)	23607405
Customer Sample Ref.	Seepage Sample 01
AGS Ref.	
Depth	0.00 - 0.00
Type	Ground Water
Alkalinity as CaCO3	27-Jan-2021
Anions by Kone (w)	27-Jan-2021
Chlorine	29-Jan-2021
Conductivity (at 20 deg.C)	26-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	27-Jan-2021
Dissolved Metals by ICP-MS	26-Jan-2021
Dissolved Organic/Inorganic Carbon	27-Jan-2021
Dissolved Oxygen by Probe	26-Jan-2021
EPH CWG (Aliphatic) Aqueous GC (W)	29-Jan-2021
EPH CWG (Aromatic) Aqueous GC (W)	29-Jan-2021
Fluoride	29-Jan-2021
GRO by GC-FID (W)	02-Feb-2021
Hexavalent Chromium (w)	27-Jan-2021
Mercury Dissolved	27-Jan-2021
PAH Spec MS - Aqueous (W)	02-Jun-2021
pH Value	27-Jan-2021
Redox Potential	27-Jan-2021
Sulphide	27-Jan-2021
SVOC MS (W) - Aqueous	29-Jan-2021
Total Dissolved Solids	27-Jan-2021
TPH CWG (W)	02-Feb-2021
VOC MS (W)	02-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	08 April 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220331-99
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	641470
Order Number:	LD2665

This report has been revised and directly supersedes 641022 in its entirety.

We received 8 samples on Thursday March 24, 2022 and 2 of these samples were scheduled for analysis which was completed on Friday April 08, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan
Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26057327	CP201		3.00 - 4.00	21/03/2022
26057302	CP201		4.00 - 6.00	21/03/2022
26057308	CP209		3.00 - 4.00	21/03/2022
26057334	CP201 ES1	ES1		
26057341	CP204 ES1	ES1		
26057316	TP218		0.20 - 0.70	22/03/2022
26057322	TP218		1.60 - 1.90	22/03/2022
26057337	TP218 ES2	ES2		

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)										26057302		26057322
Customer Sample Reference										CP201		TP218
AGS Reference												
Depth (m)										4.00 - 6.00		1.60 - 1.90
Container										1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type										S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 2									X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 2								X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 2									X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 2									X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 2									X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 2										X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 2									X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 2									X			X	
PAH by GCMS	All	NDPs: 0 Tests: 2									X			X	
PCBs by GCMS	All	NDPs: 0 Tests: 2									X			X	
pH	All	NDPs: 0 Tests: 2									X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 2									X			X	
Sample description	All	NDPs: 0 Tests: 2									X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 2									X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 2									X			X	

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26057302					26057322			
Customer Sample Reference			CP201					TP218			
AGS Reference											
Depth (m)			4.00 - 6.00					1.60 - 1.90			
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)			
Sample Type			S	S	S	S	S	S			
Total Sulphate	All	NDPs: 0 Tests: 2		X			X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 2		X			X				
VOC MS (S)	All	NDPs: 0 Tests: 2			X			X			

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26057302	CP201	4.00 - 6.00	Dark Brown	Loamy Sand	Stones	Brick
26057322	TP218	1.60 - 1.90	Light Brown	Sand	None	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP201	TP218				
			Depth (m)	4.00 - 6.00	1.60 - 1.90				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	21/03/2022	22/03/2022				
			Sample Time	12:00	14:30				
			Date Received	24/03/2022	24/03/2022				
			SDG Ref	220331-99	220331-99				
			Lab Sample No.(s)	26057302	26057322				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	9.3				
Phenol	<0.01 mg/kg	TM062 (S)		0.0114 M	<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)		0.0228 M	<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132		2.21 #	0.434 #				
pH	1 pH Units	TM133		11.4 M	8.84 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #				
Cyanide, Total	<1 mg/kg	TM153		<1 @ M	<1 M				
PCB congener 28	<3 µg/kg	TM168		47.1 M	<3 M				
PCB congener 52	<3 µg/kg	TM168		<15 M	<3 M				
PCB congener 101	<3 µg/kg	TM168		<15 M	<3 M				
PCB congener 118	<3 µg/kg	TM168		<15 M	<3 M				
PCB congener 138	<3 µg/kg	TM168		<15 M	<3 M				
PCB congener 153	<3 µg/kg	TM168		<15 M	<3 M				
PCB congener 180	<3 µg/kg	TM168		<15 M	<3 M				
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<105	<21				
Arsenic	<0.6 mg/kg	TM181		9.69 M	2.16 M				
Beryllium	<0.01 mg/kg	TM181		0.57 M	0.295 M				
Cadmium	<0.02 mg/kg	TM181		0.517 M	0.0828 M				
Chromium	<0.9 mg/kg	TM181		76.8 M	4.4 M				
Copper	<1.4 mg/kg	TM181		106 M	7.56 M				
Lead	<0.7 mg/kg	TM181		50 M	15.9 M				
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M				
Nickel	<0.2 mg/kg	TM181		153 M	7.15 M				
Selenium	<1 mg/kg	TM181		<1 #	<1 #				
Vanadium	<0.2 mg/kg	TM181		18.9 #	6.99 #				
Zinc	<1.9 mg/kg	TM181		88.8 M	20.6 M				
Sulphate, Total	<48 mg/kg	TM221		5930 M	<48 M				
Boron, water soluble	<1 mg/kg	TM222		1.42 M	<1 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0536 M	0.0135 M				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP201	TP218				
			Depth (m)	4.00 - 6.00	1.60 - 1.90				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	21/03/2022	22/03/2022				
			Sample Time	12:00	14:30				
			Date Received	24/03/2022	24/03/2022				
			SDG Ref	220331-99	220331-99				
			Lab Sample No.(s)	26057302	26057322				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		101	94.1				
Acenaphthene-d10 % recovery**	%	TM218		105	98.4				
Phenanthrene-d10 % recovery**	%	TM218		108	99.3				
Chrysene-d12 % recovery**	%	TM218		112	99.5				
Perylene-d12 % recovery**	%	TM218		119	101				
Naphthalene	<9 µg/kg	TM218		3760 M	35.4 M				
Acenaphthylene	<12 µg/kg	TM218		178 M	<12 M				
Acenaphthene	<8 µg/kg	TM218		3920 M	37.3 M				
Fluorene	<10 µg/kg	TM218		2960 M	35.8 M				
Phenanthrene	<15 µg/kg	TM218		16600 M	448 M				
Anthracene	<16 µg/kg	TM218		4500 M	139 M				
Fluoranthene	<17 µg/kg	TM218		15500 M	769 M				
Pyrene	<15 µg/kg	TM218		12600 M	681 M				
Benz(a)anthracene	<14 µg/kg	TM218		5610 M	452 M				
Chrysene	<10 µg/kg	TM218		5250 M	419 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		6430 M	578 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		1940 M	229 M				
Benzo(a)pyrene	<15 µg/kg	TM218		5120 M	509 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		3490 M	349 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		510 M	65.9 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2960 M	301 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		91300	5050				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4♦§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP201	TP218				
			Depth (m)	4.00 - 6.00	1.60 - 1.90				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	21/03/2022	22/03/2022				
			Sample Time	12:00	14:30				
			Date Received	24/03/2022	24/03/2022				
			SDG Ref	220331-99	220331-99				
			Lab Sample No.(s)	26057302	26057322				
			AGS Reference						
Phenol	<100 µg/kg	TM157		<200	<100				
Pentachlorophenol	<100 µg/kg	TM157		<200	<100				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<200	<100				
Nitrobenzene	<100 µg/kg	TM157		<200	<100				
Isophorone	<100 µg/kg	TM157		<200	<100				
Hexachloroethane	<100 µg/kg	TM157		<200	<100				
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<100				
Hexachlorobutadiene	<100 µg/kg	TM157		<200	<100				
Hexachlorobenzene	<100 µg/kg	TM157		<200	<100				
n-Dioctyl phthalate	<100 µg/kg	TM157		<200	<100				
Dimethyl phthalate	<100 µg/kg	TM157		<200	<100				
Diethyl phthalate	<100 µg/kg	TM157		<200	<100				
n-Dibutyl phthalate	<100 µg/kg	TM157		<200	<100				
Dibenzofuran	<100 µg/kg	TM157		1760	<100				
Carbazole	<100 µg/kg	TM157		889	<100				
Butylbenzyl phthalate	<100 µg/kg	TM157		<200	<100				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		228	<100				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<200	<100				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<200	<100				
Azobenzene	<100 µg/kg	TM157		<200	<100				
4-Nitrophenol	<100 µg/kg	TM157		<1000	<100				
4-Nitroaniline	<100 µg/kg	TM157		<1000	<100				
4-Methylphenol	<100 µg/kg	TM157		<200	<100				
4-Chlorophenylphenylether	<100 µg/kg	TM157		<200	<100				
4-Chloroaniline	<100 µg/kg	TM157		<200	<100				
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<200	<100				
4-Bromophenylphenylether	<100 µg/kg	TM157		<200	<100				
3-Nitroaniline	<100 µg/kg	TM157		<1000	<100				
2-Nitrophenol	<100 µg/kg	TM157		<200	<100				
2-Nitroaniline	<100 µg/kg	TM157		<200	<100				
2-Methylphenol	<100 µg/kg	TM157		<200	<100				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<200	<100				
2-Chlorophenol	<100 µg/kg	TM157		<200	<100				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 Report Number: 641470 Superseded Report: 641022
Client Ref.: LD10385 Location: Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend	Customer Sample Ref.	CP201	TP218				
# ISO17025 accredited.							
M mCERTS accredited.							
aq Aqueous / settled sample.							
diss.filt Dissolved / filtered sample.	Depth (m)	4.00 - 6.00	1.60 - 1.90				
tot.unfilt Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)				
* Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	21/03/2022	22/03/2022				
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:00	14:30				
(F) Trigger breach confirmed	Date Received	24/03/2022	24/03/2022				
1-4+§@ Sample deviation (see appendix)	SDG Ref	220331-99	220331-99				
	Lab Sample No.(s)	26057302	26057322				
	AGS Reference						

Component	LOD/Units	Method						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<200	<100				
2,4-Dinitrotoluene	<100 µg/kg	TM157	<200	<100				
2,4-Dimethylphenol	<100 µg/kg	TM157	<200	<100				
2,4-Dichlorophenol	<100 µg/kg	TM157	<200	<100				
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<200	<100				
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<200	<100				
1,4-Dichlorobenzene	<100 µg/kg	TM157	<200	<100				
1,3-Dichlorobenzene	<100 µg/kg	TM157	<200	<100				
1,2-Dichlorobenzene	<100 µg/kg	TM157	<200	<100				
2-Chloronaphthalene	<100 µg/kg	TM157	<200	<100				
2-Methylnaphthalene	<100 µg/kg	TM157	1600	<100				
Acenaphthylene	<100 µg/kg	TM157	<200	<100				
Acenaphthene	<100 µg/kg	TM157	3100	<100				
Anthracene	<100 µg/kg	TM157	3040	143				
Benzo(a)anthracene	<100 µg/kg	TM157	3820	488				
Benzo(b)fluoranthene	<100 µg/kg	TM157	3430	421				
Benzo(k)fluoranthene	<100 µg/kg	TM157	1350	386				
Benzo(a)pyrene	<100 µg/kg	TM157	2680	362				
Benzo(g,h,i)perylene	<100 µg/kg	TM157	1890	271				
Chrysene	<100 µg/kg	TM157	3510	461				
Fluoranthene	<100 µg/kg	TM157	11000	865				
Fluorene	<100 µg/kg	TM157	2220	<100				
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	2280	770				
Phenanthrene	<100 µg/kg	TM157	11600	507				
Pyrene	<100 µg/kg	TM157	9090	776				
Naphthalene	<100 µg/kg	TM157	2910	<100				
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	422	<100				
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<200	<100				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Customer Sample Ref.	CP201	TP218				
Depth (m)	4.00 - 6.00	1.60 - 1.90				
Sample Type	Soil/Solid (S)	Soil/Solid (S)				
Date Sampled	21/03/2022	22/03/2022				
Sample Time	12:00	14:30				
Date Received	24/03/2022	24/03/2022				
SDG Ref	220331-99	220331-99				
Lab Sample No.(s)	26057302	26057322				
AGS Reference						

Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	98.5 @	95				
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	25.1 @	<10				
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	37.6 @	<10				
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	303 @	<10				
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	1290 #	<1000 #				
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	15400 #	<1000 #				
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	33600 #	<1000 #				
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	138000 #	<1000 #				
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	76300	<1000				
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	265000	<5000				
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	515000	19200				
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10 @	<10				
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10 @	<10				
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	202 @	<10				
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	3420 #	<1000 #				
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	31600 #	<1000 #				
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	73200 #	4970 #				
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	130000 #	12700 #				
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	12300	1000				
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	6200	<1000				
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	251000	18800				
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	516000	18800				
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	366 @	<50				
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	202 @	<50				
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	568 @	<20				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
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- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
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- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP201	TP218				
			Depth (m)	4.00 - 6.00	1.60 - 1.90				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	21/03/2022	22/03/2022				
			Sample Time	12:00	14:30				
			Date Received	24/03/2022	24/03/2022				
			SDG Ref	220331-99	220331-99				
			Lab Sample No.(s)	26057302	26057322				
			AGS Reference						
Dibromofluoromethane**	%	TM116		95	117				
Toluene-d8**	%	TM116		93.3	96.2				
4-Bromofluorobenzene**	%	TM116		82.9	95.2				
Dichlorodifluoromethane	<6 µg/kg	TM116		<6 #	<6 #				
Chloromethane	<7 µg/kg	TM116		<7 #	<7 #				
Bromomethane	<10 µg/kg	TM116		<10 M	<10 M				
Chloroethane	<10 µg/kg	TM116		<10 M	<10 M				
Trichlorofluorormethane	<6 µg/kg	TM116		<6 M	<6 M				
1,1-Dichloroethene	<10 µg/kg	TM116		<10 #	<10 #				
Carbon Disulphide	<7 µg/kg	TM116		21.5 M	<7 M				
Dichloromethane	<10 µg/kg	TM116		24.2 #	13.4 #				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M				
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<10 M	<10 M				
1,1-Dichloroethane	<8 µg/kg	TM116		<8 M	<8 M				
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<6 M	<6 M				
2,2-Dichloropropane	<10 µg/kg	TM116		<10	<10				
Bromochloromethane	<10 µg/kg	TM116		<10 M	<10 M				
Chloroform	<8 µg/kg	TM116		<8 M	<8 M				
1,1,1-Trichloroethane	<7 µg/kg	TM116		<7 M	<7 M				
1,1-Dichloropropene	<10 µg/kg	TM116		<10 M	<10 M				
Carbontetrachloride	<10 µg/kg	TM116		<10 M	<10 M				
1,2-Dichloroethane	<5 µg/kg	TM116		<5 M	<5 M				
Benzene	<9 µg/kg	TM116		<9 M	<9 M				
Trichloroethene	<9 µg/kg	TM116		<9 #	<9 #				
1,2-Dichloropropane	<10 µg/kg	TM116		<10 M	<10 M				
Dibromomethane	<9 µg/kg	TM116		<9 M	<9 M				
Bromodichloromethane	<7 µg/kg	TM116		<7 M	<7 M				
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<10 M	<10 M				
Toluene	<7 µg/kg	TM116		<7 M	<7 M				
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<10	<10				
1,1,2-Trichloroethane	<10 µg/kg	TM116		<10 M	<10 M				
1,3-Dichloropropane	<7 µg/kg	TM116		<7 M	<7 M				
Tetrachloroethene	<5 µg/kg	TM116		<5 M	<5 M				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
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- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP201	TP218				
			Depth (m)	4.00 - 6.00	1.60 - 1.90				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	21/03/2022	22/03/2022				
			Sample Time	12:00	14:30				
			Date Received	24/03/2022	24/03/2022				
			SDG Ref	220331-99	220331-99				
			Lab Sample No.(s)	26057302	26057322				
			AGS Reference						
Dibromochloromethane	<10 µg/kg	TM116		<10 M	<10 M				
1,2-Dibromoethane	<10 µg/kg	TM116		<10 M	<10 M				
Chlorobenzene	<5 µg/kg	TM116		<5 M	<5 M				
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<10 M	<10 M				
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M				
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #				
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M				
Bromoform	<10 µg/kg	TM116		<10 M	<10 M				
Isopropylbenzene	<5 µg/kg	TM116		<5 #	<5 #				
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<10 #	<10 #				
1,2,3-Trichloropropane	<16 µg/kg	TM116		<16 M	<16 M				
Bromobenzene	<10 µg/kg	TM116		<10 M	<10 M				
Propylbenzene	<10 µg/kg	TM116		<10 M	<10 M				
2-Chlorotoluene	<9 µg/kg	TM116		<9 M	<9 M				
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<8 M	<8 M				
4-Chlorotoluene	<10 µg/kg	TM116		<10 M	<10 M				
tert-Butylbenzene	<14 µg/kg	TM116		<14 #	<14 #				
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		16.6 #	<9 #				
sec-Butylbenzene	<10 µg/kg	TM116		<10	<10				
4-Isopropyltoluene	<10 µg/kg	TM116		<10	<10				
1,3-Dichlorobenzene	<8 µg/kg	TM116		<8 M	<8 M				
1,4-Dichlorobenzene	<5 µg/kg	TM116		<5 M	<5 M				
n-Butylbenzene	<11 µg/kg	TM116		<11	<11				
1,2-Dichlorobenzene	<10 µg/kg	TM116		<10 M	<10 M				
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<14 M	<14 M				
Tert-amyl methyl ether	<10 µg/kg	TM116		<10 #	<10 #				
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<20	<20				
Hexachlorobutadiene	<20 µg/kg	TM116		<20	<20				
Naphthalene	<13 µg/kg	TM116		412 M	<13 M				
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<20 #	<20 #				
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<20	<20				
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02				
Sum of BTEX	<40 µg/kg	TM116		<40	<40				

CERTIFICATE OF ANALYSIS

SDG: 220331-99 **Report Number:** 641470 **Superseded Report:** 641022
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	CP201 4.00 - 6.00 SOLID 21/03/2022 00:00:00 24/03/2022 05:00:00 220331-99 26057302 TM048	04/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP218 1.60 - 1.90 SOLID 22/03/2022 00:00:00 24/03/2022 05:00:00 220331-99 26057322 TM048	04/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

Test Completion Dates

Lab Sample No(s)	26057302	26057322
Customer Sample Ref.	CP201	TP218
AGS Ref.		
Depth	4.00 - 6.00	1.60 - 1.90
Type	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	04-Apr-2022	04-Apr-2022
Asbestos ID in Solid Samples	04-Apr-2022	04-Apr-2022
Boron Water Soluble	04-Apr-2022	04-Apr-2022
Cyanide Comp/Free/Total/Thiocyanate	05-Apr-2022	05-Apr-2022
EPH CWG GC (S)	04-Apr-2022	04-Apr-2022
GRO by GC-FID (S)	05-Apr-2022	03-Apr-2022
Hexavalent Chromium (s)	04-Apr-2022	04-Apr-2022
Metals in solid samples by OES	05-Apr-2022	04-Apr-2022
PAH by GCMS	08-Apr-2022	08-Apr-2022
PCBs by GCMS	04-Apr-2022	04-Apr-2022
pH	05-Apr-2022	05-Apr-2022
Phenols by HPLC (S)	04-Apr-2022	04-Apr-2022
Sample description	31-Mar-2022	31-Mar-2022
Semi Volatile Organic Compounds	05-Apr-2022	01-Apr-2022
Total Organic Carbon	04-Apr-2022	04-Apr-2022
Total Sulphate	04-Apr-2022	04-Apr-2022
TPH CWG GC (S)	05-Apr-2022	04-Apr-2022
VOC MS (S)	01-Apr-2022	01-Apr-2022

ALS Environmental, Land	QF.7.5.1 Data Amendments Form (Issue No. 4)
	Date: 03/03/2020
	Issued and Authorised by Quality Manager

SDG	Sample Event	Sample ID	Date Amended	Amendment Reason	Previous Reference	New Reference	Supersedes Report
220331-99	All	All	08/04/2022	Other	missing TPH Components	Components authorised	641022

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
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Deeside
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Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 April 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220402-95
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	642653
Order Number:	LD2667

This report has been revised and directly supersedes 641921 in its entirety.

We received 6 samples on Friday April 01, 2022 and 6 of these samples were scheduled for analysis which was completed on Tuesday April 19, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26074682	CP207		10.00 - 11.00	25/03/2022
26074723	CP207		12.00 - 13.00	25/03/2022
26074691	CP210		5.50 - 6.00	23/03/2022
26074715	RH203		4.00 - 5.00	30/03/2022
26074709	TP236		1.50 - 1.70	30/03/2022
26074698	TP255		0.20 - 1.00	28/03/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	26074682			26074723			26074691			26074715			26074709			26074698		
			Customer Sample Reference	CP207			CP207			CP210			RH203			TP236			TP255		
			AGS Reference																		
			Depth (m)	10.00 - 11.00			12.00 - 13.00			5.50 - 6.00			4.00 - 5.00			1.50 - 1.70			0.20 - 1.00		
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 6			X			X			X			X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6		X			X			X			X			X			X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1											X									
Boron Water Soluble	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
Easily Liberated Sulphide	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 6				X			X			X			X			X				X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
PCBs by GCMS	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 6			X			X			X			X			X			X		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26074682	CP207		10.00 - 11.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26074723	CP207		12.00 - 13.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26074691	CP210		5.50 - 6.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26074715	RH203		4.00 - 5.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26074709	TP236		1.50 - 1.70	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26074698	TP255		0.20 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 6						
				X				
				X				
				X				
Total Organic Carbon	All	NDPs: 0 Tests: 6						
				X				
				X				
				X				
Total Sulphate	All	NDPs: 0 Tests: 6						
				X				
				X				
				X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 6						
				X				
				X				
				X				
VOC MS (S)	All	NDPs: 0 Tests: 6						
					X			
					X			
					X			

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26074682	CP207	10.00 - 11.00	Light Brown	Sandy Loam	Stones	None
26074723	CP207	12.00 - 13.00	Light Brown	Sandy Clay Loam	Stones	None
26074691	CP210	5.50 - 6.00	Light Brown	Sandy Clay Loam	Stones	None
26074715	RH203	4.00 - 5.00	Light Brown	Sandy Clay Loam	Stones	None
26074709	TP236	1.50 - 1.70	Light Brown	Sandy Clay	None	None
26074698	TP255	0.20 - 1.00	Dark Brown	Sandy Loam	Stones	Brick

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	8.4	13	13	12	11
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0114 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.057 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0684 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.52 #	2.24 #	3.33 #	4.67 #	0.491 #	2.45 #
pH	1 pH Units	TM133		8.99 M	8.69 M	8.09 M	7.78 M	7.16 M	8.49 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	6.43 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	3.12 M	<1 M	1.32 M
PCB congener 28	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 52	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 101	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 118	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 138	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 153	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
PCB congener 180	<3 µg/kg	TM168		<30 M	<3 M	<3 M	<3 M	<3 M	<15 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<210	<21	<21	<21	<21	<105
Sulphide, Easily liberated	<15 mg/kg	TM180		44.4 @ M	17.1 @ M	20.9 @ M	<15 ♦ M	<15 ♦ M	19.2 @ M
Arsenic	<0.6 mg/kg	TM181		14.1 M	17.2 M	18.7 M	16.3 M	7.93 M	15.2 M
Beryllium	<0.01 mg/kg	TM181		1.06 M	0.906 M	0.908 M	0.904 M	0.632 M	0.605 M
Cadmium	<0.02 mg/kg	TM181		0.416 M	0.355 M	0.491 M	0.814 M	0.0654 M	0.918 M
Chromium	<0.9 mg/kg	TM181		6.55 M	24.1 M	19.1 M	7.72 M	8.91 M	23.2 M
Copper	<1.4 mg/kg	TM181		32 M	737 M	253 M	58.2 M	17.8 M	138 M
Lead	<0.7 mg/kg	TM181		601 M	148 M	135 M	82.3 M	13.9 M	317 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		18.2 M	41.6 M	23.1 M	27.1 M	13.9 M	28.9 M
Selenium	<1 mg/kg	TM181		1.05 #	<1 #	<1 #	<1 #	<1 #	1.19 #
Vanadium	<0.2 mg/kg	TM181		21.3 #	22.9 #	23.8 #	22.8 #	25.2 #	20.3 #
Zinc	<1.9 mg/kg	TM181		86.7 M	210 M	361 M	331 M	30.4 M	351 M
Sulphate, Total	<48 mg/kg	TM221		1030 M	358 M	580 M	1140 M	161 M	904 M
Boron, water soluble	<1 mg/kg	TM222		40.8 M	4.05 M	2.24 M	2.16 M	<1 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0602 M	0.0823 M	0.173 M	0.192 M	0.0807 M	0.105 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					0		
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.3	105	103	103	90.1	111
Acenaphthene-d10 % recovery**	%	TM218		93.8	103	104	105	92.3	109
Phenanthrene-d10 % recovery**	%	TM218		94.4	102	104	106	94.7	112
Chrysene-d12 % recovery**	%	TM218		90.1	99.7	102	105	89.6	110
Perylene-d12 % recovery**	%	TM218		89.8	94.9	92.9	97.1	89.3	97.1
Naphthalene	<9 µg/kg	TM218		2350 M	20.9 M	76.2 M	95.8 M	<9 M	396 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	<12 M	40 M	<12 M	<12 M	<60 M
Acenaphthene	<8 µg/kg	TM218		2950 M	<8 M	120 M	310 M	<8 M	270 M
Fluorene	<10 µg/kg	TM218		3060 M	<10 M	121 M	383 M	<10 M	204 M
Phenanthrene	<15 µg/kg	TM218		15300 M	31.1 M	1040 M	1010 M	<15 M	2140 M
Anthracene	<16 µg/kg	TM218		4240 M	<16 M	260 M	367 M	<16 M	505 M
Fluoranthene	<17 µg/kg	TM218		14000 M	<17 M	1220 M	954 M	<17 M	3340 M
Pyrene	<15 µg/kg	TM218		11400 M	<15 M	1210 M	840 M	<15 M	3040 M
Benz(a)anthracene	<14 µg/kg	TM218		4740 M	<14 M	536 M	320 M	<14 M	1420 M
Chrysene	<10 µg/kg	TM218		4100 M	<10 M	570 M	335 M	<10 M	1440 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4030 M	<15 M	613 M	397 M	<15 M	2090 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1810 M	<14 M	193 M	138 M	<14 M	638 M
Benzo(a)pyrene	<15 µg/kg	TM218		3840 M	<15 M	470 M	275 M	<15 M	1400 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2430 M	<18 M	297 M	195 M	<18 M	1080 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		435 M	<23 M	54.1 M	31.3 M	<23 M	155 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2230 M	<24 M	268 M	171 M	<24 M	896 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		76900	<118	7090	5820	<118	19000

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Pentachlorophenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Nitrobenzene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Isophorone	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Hexachloroethane	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Diethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Dibenzofuran	<100 µg/kg	TM157		228	<100	<100	<100	<100	<500
Carbazole	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
Azobenzene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
4-Nitrophenol	<100 µg/kg	TM157		<500	<500	<500	<500	<500	<2500
4-Nitroaniline	<100 µg/kg	TM157		<500	<500	<500	<500	<500	<2500
4-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
4-Chloroaniline	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
3-Nitroaniline	<100 µg/kg	TM157		<500	<500	<500	<500	<500	<2500
2-Nitrophenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
2-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
2-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500
2-Chlorophenol	<100 µg/kg	TM157		<100	<100	<100	<100	<100	<500

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend		Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
tot.unfilt	Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
		Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
		SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
(F)	Trigger breach confirmed	Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2,4-Dimethylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2,4-Dichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2-Chloronaphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
2-Methylnaphthalene	<100 µg/kg	TM157	137	<100	<100	<100	<100	<500
Acenaphthylene	<100 µg/kg	TM157	<100	<100	116	<100	<100	<500
Acenaphthene	<100 µg/kg	TM157	285	<100	128	<100	<100	<500
Anthracene	<100 µg/kg	TM157	445	<100	267	<100	<100	<500
Benzo(a)anthracene	<100 µg/kg	TM157	616	<100	963	115	<100	1700
Benzo(b)fluoranthene	<100 µg/kg	TM157	490	<100	928	<100	<100	1910
Benzo(k)fluoranthene	<100 µg/kg	TM157	228	<100	464	<100	<100	870
Benzo(a)pyrene	<100 µg/kg	TM157	388	<100	696	<100	<100	1300
Benzo(g,h,i)perylene	<100 µg/kg	TM157	205	<100	383	<100	<100	825
Chrysene	<100 µg/kg	TM157	513	<100	800	115	<100	1810
Fluoranthene	<100 µg/kg	TM157	1790	<100	1860	219	<100	3410
Fluorene	<100 µg/kg	TM157	296	<100	116	<100	<100	<500
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	274	<100	452	<100	<100	994
Phenanthrene	<100 µg/kg	TM157	1630	<100	1210	219	<100	2580
Pyrene	<100 µg/kg	TM157	1470	<100	1810	219	<100	3320
Naphthalene	<100 µg/kg	TM157	308	<100	116	<100	<100	<500
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<500

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		85.5	76.2	89.3 @	84.7	110	83.8
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		20.5	25.1	<10 @	26.5	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		77.5	66.6	<10 @	58.7	<10	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		800	99.4	<10 @	191	<10	<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		1050 #	<1000 #	1900 #	<1000 #	<1000 #	1740 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		11400 #	<1000 #	23500 #	21000 #	<1000 #	17500 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		19900	<1000	6220	11700	<1000	1100
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		32700	<5000	32600	33600	<5000	21000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		214000	<10000	64400	90300	<10000	142000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		10.3	<10	<10 @	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10 @	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		534	66.6	<10 @	128	<10	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1580 #	<1000 #	<1000 #	1310 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		17300 #	<1000 #	<1000 #	7060 #	<1000 #	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		64900 #	<1000 #	5540 #	24200 #	<1000 #	16000 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		79900 #	<1000 #	22400 #	22600 #	<1000 #	73700 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		17900	<1000	3220	1540	<1000	30700
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		6770	<1000	<1000	<1000	<1000	13900
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		182000	<5000	31800	56700	<5000	121000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		216000	<10000	64400	90700	<10000	142000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		898	191	<50 @	276	<50	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		544	66.6	<50 @	128	<50	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		1440	258	<20 @	404	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

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M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Dibromofluoromethane**	%	TM116		101	101	99.9 @	102	122	103
Toluene-d8**	%	TM116		92.3	97.1	97.3 @	94.3	99.2	96.1
4-Bromofluorobenzene**	%	TM116		83.2	94.7	91.8 @	88.9	93.2	91.5
Dichlorodifluoromethane	<6 µg/kg	TM116		<6 #	<120 #	<60 @ #	<60 #	<6 #	<60 #
Chloromethane	<7 µg/kg	TM116		<7 #	<140 #	<70 @ #	<70 #	<7 #	<70 #
Vinyl Chloride	<6 µg/kg	TM116		<6 @ M	<120 @ M	<60 @ M	<60 ♦ M	<6 ♦ M	<60 @ M
Bromomethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Chloroethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Trichlorofluorormethane	<6 µg/kg	TM116		<6 M	<120 M	<60 @ M	<60 M	<6 M	<60 M
1,1-Dichloroethene	<10 µg/kg	TM116		<10 #	<200 #	<100 @ #	<100 #	<10 #	<100 #
Carbon Disulphide	<7 µg/kg	TM116		<7 M	<140 M	<70 @ M	<70 M	<7 M	<70 M
Dichloromethane	<10 µg/kg	TM116		<10 #	<200 #	<100 @ #	<100 #	<10 #	<100 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
1,1-Dichloroethane	<8 µg/kg	TM116		<8 M	<160 M	<80 @ M	<80 M	<8 M	<80 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<6 M	<120 M	<60 @ M	<60 M	<6 M	<60 M
2,2-Dichloropropane	<10 µg/kg	TM116		<10	<200	<100 @	<100	<10	<100
Bromochloromethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Chloroform	<8 µg/kg	TM116		<8 M	<160 M	<80 @ M	<80 M	<8 M	<80 M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<7 M	<140 M	<70 @ M	<70 M	<7 M	<70 M
1,1-Dichloropropene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Carbontetrachloride	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
1,2-Dichloroethane	<5 µg/kg	TM116		<5 M	<100 M	<50 @ M	<50 M	<5 M	<50 M
Benzene	<9 µg/kg	TM116		<9 M	<180 M	<90 @ M	<90 M	<9 M	<90 M
Trichloroethene	<9 µg/kg	TM116		<9 #	<180 #	<90 @ #	<90 #	<9 #	<90 #
1,2-Dichloropropane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Dibromomethane	<9 µg/kg	TM116		<9 M	<180 M	<90 @ M	<90 M	<9 M	<90 M
Bromodichloromethane	<7 µg/kg	TM116		<7 M	<140 M	<70 @ M	<70 M	<7 M	<70 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Toluene	<7 µg/kg	TM116		<7 M	<140 M	<70 @ M	<70 M	<7 M	<70 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<10	<200	<100 @	<100	<10	<100
1,1,2-Trichloroethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
1,3-Dichloropropane	<7 µg/kg	TM116		<7 M	<140 M	<70 @ M	<70 M	<7 M	<70 M

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<5 M	<100 M	<50 @ M	<50 M	<5 M	<50 M
Dibromochloromethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
1,2-Dibromoethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Chlorobenzene	<5 µg/kg	TM116		<5 M	<100 M	<50 @ M	<50 M	<5 M	<50 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<80 M	<40 @ M	<40 M	<4 M	<40 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<200 #	<100 @ #	<100 #	<10 #	<100 #
o-Xylene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Styrene	<10 µg/kg	TM116		<10 @ #	<200 @ #	<100 @ #	<100 ♦ #	<10 ♦ #	<100 @ #
Bromoform	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Isopropylbenzene	<5 µg/kg	TM116		<5 3 #	<100 3 #	<50 3 @ #	<50 3 #	<5 #	<50 3 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<10 #	<200 #	<100 @ #	<100 #	<10 #	<100 #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<16 M	<320 M	<160 @ M	<160 M	<16 M	<160 M
Bromobenzene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
Propylbenzene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
2-Chlorotoluene	<9 µg/kg	TM116		<9 M	<180 M	<90 @ M	<90 M	<9 M	<90 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<8 M	<160 M	<80 @ M	<80 M	<8 M	<80 M
4-Chlorotoluene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
tert-Butylbenzene	<14 µg/kg	TM116		<14 #	<280 #	<140 @ #	<140 #	<14 #	<140 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<9 #	<180 #	<90 @ #	<90 #	<9 #	<90 #
sec-Butylbenzene	<10 µg/kg	TM116		<10 3	<200 3	<100 3 @	<100 3	<10	<100 3
4-Isopropyltoluene	<10 µg/kg	TM116		29.7	<200	<100 @	<100	<10	<100
1,3-Dichlorobenzene	<8 µg/kg	TM116		<8 M	<160 M	<80 @ M	<80 M	<8 M	<80 M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<5 M	<100 M	<50 @ M	<50 M	<5 M	<50 M
n-Butylbenzene	<11 µg/kg	TM116		<11	<220	<110 @	<110	<11	<110
1,2-Dichlorobenzene	<10 µg/kg	TM116		<10 M	<200 M	<100 @ M	<100 M	<10 M	<100 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<14 M	<280 M	<140 @ M	<140 M	<14 M	<140 M
Tert-amyl methyl ether	<10 µg/kg	TM116		<10 #	<200 #	<100 @ #	<100 #	<10 #	<100 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<20	<400	<200 @	<200	<20	<200
Hexachlorobutadiene	<20 µg/kg	TM116		<20	<400	<200 @	<200	<20	<200
Naphthalene	<13 µg/kg	TM116		377 M	<260 M	<130 @ M	<130 M	<13 M	<130 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<20 #	<400 #	<200 @ #	<200 #	<20 #	<200 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<20	<400	<200	<200	<20	<200

Validated

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
			Depth (m)	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	25/03/2022	25/03/2022	23/03/2022	30/03/2022	30/03/2022	28/03/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022
			SDG Ref	220402-95	220402-95	220402-95	220402-95	220402-95	220402-95
			Lab Sample No.(s)	26074682	26074723	26074691	26074715	26074709	26074698
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.4	<0.2 @	<0.2	<0.02	<0.2
Sum of BTEX	<40 µg/kg	TM116		<40	<800	<400 @	<400	<40	<400

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP207 10.00 - 11.00 SOLID 25/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074682 TM048	08/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP207 12.00 - 13.00 SOLID 25/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074723 TM048	08/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP210 5.50 - 6.00 SOLID 23/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074691 TM048	08/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH203 4.00 - 5.00 SOLID 30/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074715 TM048	08/04/2022	Emily Anderton	Fibre bundle in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP236 1.50 - 1.70 SOLID 30/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074709 TM048	08/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP255 0.20 - 1.00 SOLID 28/03/2022 00:00:00 01/04/2022 05:00:00 220402-95 26074698 TM048	08/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	RH203	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	4.00 - 5.00					
Sample Type	SOLID					
Date Sampled	30/03/2022 00:00:00					
Date Received	01/04/2022 05:00:00					
SDG	220402-95					
Original Sample	26074715					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220402-95 **Report Number:** 642653 **Superseded Report:** 641921
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26074682	26074723	26074691	26074715	26074709	26074698
Customer Sample Ref.	CP207	CP207	CP210	RH203	TP236	TP255
AGS Ref.						
Depth	10.00 - 11.00	12.00 - 13.00	5.50 - 6.00	4.00 - 5.00	1.50 - 1.70	0.20 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
Asbestos ID in Solid Samples	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022
Asbestos Quantification - Full				19-Apr-2022		
Boron Water Soluble	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	07-Apr-2022
Cyanide Comp/Free/Total/Thiocyanate	07-Apr-2022	07-Apr-2022	06-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
Easily Liberated Sulphide	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022
EPH CWG GC (S)	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022
GRO by GC-FID (S)	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
Hexavalent Chromium (s)	08-Apr-2022	08-Apr-2022	08-Apr-2022	07-Apr-2022	08-Apr-2022	08-Apr-2022
Metals in solid samples by OES	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
PAH by GCMS	07-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	07-Apr-2022	06-Apr-2022
PCBs by GCMS	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
pH	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
Phenols by HPLC (S)	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	07-Apr-2022	06-Apr-2022
Sample description	04-Apr-2022	04-Apr-2022	04-Apr-2022	04-Apr-2022	04-Apr-2022	04-Apr-2022
Semi Volatile Organic Compounds	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022
Total Organic Carbon	06-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022
Total Sulphate	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022	06-Apr-2022
TPH CWG GC (S)	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022
VOC MS (S)	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022	07-Apr-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	22 April 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220407-145
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	643361
Order Number:	LD2685

This report has been revised and directly supersedes 642835 in its entirety.

We received 8 samples on Thursday April 07, 2022 and 7 of these samples were scheduled for analysis which was completed on Friday April 22, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26101289	RH205		11.00 - 12.00	31/03/2022
26101281	RH205		9.00 - 9.00	31/03/2022
26101325	TP215		1.00 - 1.00	01/04/2022
26101333	TP224		0.00 - 0.00	31/03/2022
26101302	TP224		1.40 - 1.40	31/03/2022
26101296	TP229		3.00 - 3.00	31/03/2022
26101314	TP244		0.70 - 1.00	01/04/2022
26101308	TP249		1.50 - 1.50	01/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26101289	RH205		11.00 - 12.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101281	RH205		9.00 - 9.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101325	TP215		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101302	TP224		1.40 - 1.40	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101296	TP229		3.00 - 3.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101314	TP244		0.70 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101308	TP249		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7	X					
			X					
			X					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 3						
				X				X
Boron Water Soluble	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7		X				
				X				
				X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 7		X				
				X				
				X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 7			X			
					X			
					X			
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 7		X				
				X				
				X				
PAH by GCMS	All	NDPs: 0 Tests: 7		X				
				X				
				X				
PCBs by GCMS	All	NDPs: 0 Tests: 7		X				
				X				
				X				
pH	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Phenols by HPLC (S)	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Sample description	All	NDPs: 0 Tests: 7		X				
				X				
				X				
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 7		X				
				X				
				X				

26101308	TP249		1.50 - 1.50	60g VOC (ALE215)	250g Amber Jar (ALE210)
				S	S
					X
					X
					X
					X
				X	
					X
					X
					X
					X
					X
					X
					X
					X

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26101289	RH205		11.00 - 12.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101281	RH205		9.00 - 9.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101325	TP215		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101302	TP224		1.40 - 1.40	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101296	TP229		3.00 - 3.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101314	TP244		0.70 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26101308	TP249		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
Total Organic Carbon	All	NDPs: 0 Tests: 7		X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
Total Sulphate	All	NDPs: 0 Tests: 7		X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
TPH CWG GC (S)	All	NDPs: 0 Tests: 7		X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
				X			250g Amber Jar (ALE210)	S
VOC MS (S)	All	NDPs: 0 Tests: 7			X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S
					X		60g VOC (ALE215)	S

26101308	TP249		1.50 - 1.50	60g VOC (ALE215)	250g Amber Jar (ALE210)
				S	S
					X
					X
					X
				X	

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26101281	RH205	9.00 - 9.00	Dark Brown	Loamy Sand	Stones	None
26101289	RH205	11.00 - 12.00	Dark Brown	Silty Clay Loam	Vegetation	None
26101325	TP215	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	Vegetation
26101302	TP224	1.40 - 1.40	Dark Brown	Sandy Loam	Crushed Brick	Plastic
26101296	TP229	3.00 - 3.00	Dark Brown	Sandy Loam	Stones	Vegetation
26101314	TP244	0.70 - 1.00	Dark Brown	Loamy Sand	Stones	Vegetation
26101308	TP249	1.50 - 1.50	Dark Brown	Sandy Silt Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	11	13	20	24	17
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0114 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0114 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	0.0228 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	0.0456 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.43 #	1.69 #	3.76 #	10.3 #	4.62 #	5.09 #
pH	1 pH Units	TM133		8.93 M	8.7 M	8.02 M	8.11 M	7.64 M	7.88 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	2.46 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.35 M	2.6 M	<1 M
PCB congener 28	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	388 M	<15 M
PCB congener 52	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	492 M	<15 M
PCB congener 101	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	523 M	<15 M
PCB congener 118	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	275 M	<15 M
PCB congener 138	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	298 M	<15 M
PCB congener 153	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	224 M	<15 M
PCB congener 180	<3 µg/kg	TM168		<3 M	<30 M	<3 M	<30 M	73.9 M	<15 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<210	<21	<210	2270	<105
Arsenic	<0.6 mg/kg	TM181		5.76 M	4.85 M	12 M	29.1 M	26.2 M	35.3 M
Beryllium	<0.01 mg/kg	TM181		0.734 M	0.58 M	1.02 M	0.949 M	0.369 M	1.41 M
Cadmium	<0.02 mg/kg	TM181		0.26 M	0.279 M	0.661 M	1.41 M	7.17 M	0.753 M
Chromium	<0.9 mg/kg	TM181		7.36 M	9.82 M	9.74 M	14.6 M	139 M	33.5 M
Copper	<1.4 mg/kg	TM181		15.6 M	22.4 M	66.6 M	164 M	3600 M	107 M
Lead	<0.7 mg/kg	TM181		10.4 M	119 M	611 M	340 M	2520 M	670 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	1.07 M	0.702 M
Nickel	<0.2 mg/kg	TM181		22.3 M	12.8 M	26.4 M	45.2 M	180 M	32.7 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.24 #	1.03 #	1.73 #	<1 #
Vanadium	<0.2 mg/kg	TM181		18.1 #	24.4 #	84.5 #	39.5 #	27.3 #	37 #
Zinc	<1.9 mg/kg	TM181		41.5 M	60.9 M	307 M	375 M	5610 M	392 M
Sulphate, Total	<48 mg/kg	TM221		250 M	3850 M	11000 M	809 M	16300 M	2890 M
Boron, water soluble	<1 mg/kg	TM222		2.3 M	7.75 M	1.09 M	1.4 M	7.46 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0142 M	0.172 M	1.47 M	0.0643 M	1.46 M	0.638 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					0.0049 #	0.0449 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #	0.004 #	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Additional Asbestos Components (Using TM048)		TM304					Chrysotile #	Amosite #	
Analysts Comments		TM304					Fibre bundles in soil	Loose fibres in soil	
Asbestos Quantification - Total - %	<0.001 %	TM304					0.0053 #	0.0489 #	

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP249
Depth (m)	1.50 - 1.50
Sample Type	Soil/Solid (S)
Date Sampled	01/04/2022
Sample Time	14:30
Date Received	07/04/2022
SDG Ref	220407-145
Lab Sample No.(s)	26101308
AGS Reference	

Component	LOD/Units	Method					
Moisture Content Ratio (% of as received sample)	%	PM024	25				
Phenol	<0.01 mg/kg	TM062 (S)	0.0134 M				
Cresols	<0.01 mg/kg	TM062 (S)	0.0134 M				
Xylenols	<0.015 mg/kg	TM062 (S)	0.0268 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	0.0536 M				
Soil Organic Matter (SOM)	<0.35 %	TM132	3.26 #				
pH	1 pH Units	TM133	8.02 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #				
Cyanide, Total	<1 mg/kg	TM153	<1 M				
PCB congener 28	<3 µg/kg	TM168	<30 M				
PCB congener 52	<3 µg/kg	TM168	<30 M				
PCB congener 101	<3 µg/kg	TM168	<30 M				
PCB congener 118	<3 µg/kg	TM168	<30 M				
PCB congener 138	<3 µg/kg	TM168	<30 M				
PCB congener 153	<3 µg/kg	TM168	<30 M				
PCB congener 180	<3 µg/kg	TM168	<30 M				
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<210				
Arsenic	<0.6 mg/kg	TM181	13.4 M				
Beryllium	<0.01 mg/kg	TM181	0.603 M				
Cadmium	<0.02 mg/kg	TM181	0.442 M				
Chromium	<0.9 mg/kg	TM181	9.41 M				
Copper	<1.4 mg/kg	TM181	31.8 M				
Lead	<0.7 mg/kg	TM181	178 M				
Mercury	<0.1 mg/kg	TM181	<0.1 M				
Nickel	<0.2 mg/kg	TM181	14.8 M				
Selenium	<1 mg/kg	TM181	<1 #				
Vanadium	<0.2 mg/kg	TM181	17.9 #				
Zinc	<1.9 mg/kg	TM181	197 M				
Sulphate, Total	<48 mg/kg	TM221	1030 M				
Boron, water soluble	<1 mg/kg	TM222	4.99 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.184 M				
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304	0.0018 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304	<0.001 #				

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. TP249	Depth (m) 1.50 - 1.50	Sample Type Soil/Solid (S)	Date Sampled 01/04/2022	Sample Time 14:30	Date Received 07/04/2022	SDG Ref 220407-145	Lab Sample No.(s) 26101308	AGS Reference
Additional Asbestos Components (Using TM048)		TM304	None #								
Analysts Comments		TM304	0								
Asbestos Quantification - Total - %	<0.001 %	TM304	0.0019 #								

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		104	107	101	107	101	99.2
Acenaphthene-d10 % recovery**	%	TM218		98.6	106	98.3	103	95.7	95.3
Phenanthrene-d10 % recovery**	%	TM218		99.2	111	103	108	101	101
Chrysene-d12 % recovery**	%	TM218		88.6	100	96.6	98.7	92.1	92.2
Perylene-d12 % recovery**	%	TM218		85.2	96.9	91.7	102	87.5	87.9
Naphthalene	<9 µg/kg	TM218		25.3 M	558 M	65.7 M	932 M	130 M	159 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<120 M	89.4 M	549 M	<60 M	90.1 M
Acenaphthene	<8 µg/kg	TM218		12.8 M	2210 M	128 M	2720 M	182 M	211 M
Fluorene	<10 µg/kg	TM218		16.7 M	1580 M	102 M	1890 M	137 M	214 M
Phenanthrene	<15 µg/kg	TM218		87.1 M	4920 M	1520 M	22600 M	1470 M	2520 M
Anthracene	<16 µg/kg	TM218		<16 M	1640 M	388 M	5980 M	334 M	919 M
Fluoranthene	<17 µg/kg	TM218		84.7 M	4460 M	3340 M	34800 M	2810 M	4630 M
Pyrene	<15 µg/kg	TM218		80.3 M	3590 M	3150 M	33600 M	2540 M	4300 M
Benz(a)anthracene	<14 µg/kg	TM218		33.2 M	1250 M	1440 M	12900 M	1040 M	1880 M
Chrysene	<10 µg/kg	TM218		36.8 M	1170 M	1430 M	13100 M	1150 M	1910 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		45 M	1330 M	1970 M	15200 M	1700 M	2420 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	448 M	588 M	4930 M	533 M	754 M
Benzo(a)pyrene	<15 µg/kg	TM218		28.4 M	985 M	1360 M	12600 M	1190 M	1670 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		22.7 M	675 M	983 M	8540 M	1080 M	1180 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<230 M	180 M	1460 M	257 M	245 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		28.5 M	554 M	876 M	7880 M	992 M	1090 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		502	25400	17600	180000	15500	24200

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP249
Depth (m)	1.50 - 1.50
Sample Type	Soil/Solid (S)
Date Sampled	01/04/2022
Sample Time	14:30
Date Received	07/04/2022
SDG Ref	220407-145
Lab Sample No.(s)	26101308
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	101
Acenaphthene-d10 % recovery**	%	TM218	97.2
Phenanthrene-d10 % recovery**	%	TM218	104
Chrysene-d12 % recovery**	%	TM218	93.7
Perylene-d12 % recovery**	%	TM218	93.9
Naphthalene	<9 µg/kg	TM218	142 M
Acenaphthylene	<12 µg/kg	TM218	<120 M
Acenaphthene	<8 µg/kg	TM218	623 M
Fluorene	<10 µg/kg	TM218	533 M
Phenanthrene	<15 µg/kg	TM218	3350 M
Anthracene	<16 µg/kg	TM218	1220 M
Fluoranthene	<17 µg/kg	TM218	4710 M
Pyrene	<15 µg/kg	TM218	4240 M
Benz(a)anthracene	<14 µg/kg	TM218	1620 M
Chrysene	<10 µg/kg	TM218	1690 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	1990 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	587 M
Benzo(a)pyrene	<15 µg/kg	TM218	1400 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	960 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<230 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	927 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	24000

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Pentachlorophenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Nitrobenzene	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Isophorone	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Hexachloroethane	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<1000	<200	<2000	<500	<400
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Hexachlorobenzene	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Dimethyl phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Diethyl phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Dibenzofuran	<100 µg/kg	TM157		<100	1200	<200	3720	<500	<200
Carbazole	<100 µg/kg	TM157		<100	<500	<200	3170	<500	<200
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
Azobenzene	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Nitrophenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Nitroaniline	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Methylphenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Chloroaniline	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
3-Nitroaniline	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
2-Nitrophenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
2-Nitroaniline	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
2-Methylphenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200
2-Chlorophenol	<100 µg/kg	TM157		<100	<500	<200	<1000	<500	<200

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend		Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
tot.unfilt	Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
		Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
		SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
(F)	Trigger breach confirmed	Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2,4-Dimethylphenol	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2,4-Dichlorophenol	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2-Chloronaphthalene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
2-Methylnaphthalene	<100 µg/kg	TM157	<100	<500	<200	2680	<500	<200
Acenaphthylene	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200
Acenaphthene	<100 µg/kg	TM157	<100	3790	422	8660	<500	<200
Anthracene	<100 µg/kg	TM157	184	2020	946	16800	1240	327
Benzo(a)anthracene	<100 µg/kg	TM157	291	1230	2860	37700	3130	1590
Benzo(b)fluoranthene	<100 µg/kg	TM157	191	703	1530	24900	2170	1390
Benzo(k)fluoranthene	<100 µg/kg	TM157	192	642	2440	25900	2480	1300
Benzo(a)pyrene	<100 µg/kg	TM157	205	614	2240	36800	2500	1440
Benzo(g,h,i)perylene	<100 µg/kg	TM157	127	<500	1560	23400	1880	947
Chrysene	<100 µg/kg	TM157	290	1320	2770	37200	3250	1520
Fluoranthene	<100 µg/kg	TM157	661	5850	6080	94100	7190	2630
Fluorene	<100 µg/kg	TM157	<100	1740	302	5230	<500	<200
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	223	631	2280	34000	3160	1730
Phenanthrene	<100 µg/kg	TM157	654	4340	3540	71600	5000	1220
Pyrene	<100 µg/kg	TM157	675	4690	5630	88600	6260	2570
Naphthalene	<100 µg/kg	TM157	<100	<500	<200	2440	<500	<200
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100	<500	<200	3110	<500	<200
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100	<500	<200	<1000	<500	<200

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.			TP249				
Depth (m)			1.50 - 1.50				
Sample Type			Soil/Solid (S)				
Date Sampled			01/04/2022				
Sample Time			14:30				
Date Received			07/04/2022				
SDG Ref			220407-145				
Lab Sample No.(s)			26101308				
AGS Reference							
Component	**LOD/Units**	**Method**					
Phenol	<100 µg/kg	TM157	<200				
Pentachlorophenol	<100 µg/kg	TM157	<200				
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157	<200				
Nitrobenzene	<100 µg/kg	TM157	<200				
Isophorone	<100 µg/kg	TM157	<200				
Hexachloroethane	<100 µg/kg	TM157	<200				
Hexachlorocyclopentadiene	<100 µg/kg	TM157	<200				
Hexachlorobutadiene	<100 µg/kg	TM157	<200				
Hexachlorobenzene	<100 µg/kg	TM157	<200				
n-Dioctyl phthalate	<100 µg/kg	TM157	<200				
Dimethyl phthalate	<100 µg/kg	TM157	<200				
Diethyl phthalate	<100 µg/kg	TM157	<200				
n-Dibutyl phthalate	<100 µg/kg	TM157	<200				
Dibenzofuran	<100 µg/kg	TM157	497				
Carbazole	<100 µg/kg	TM157	312				
Butylbenzyl phthalate	<100 µg/kg	TM157	<200				
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157	<200				
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157	<200				
bis(2-Chloroethyl)ether	<100 µg/kg	TM157	<200				
Azobenzene	<100 µg/kg	TM157	<200				
4-Nitrophenol	<100 µg/kg	TM157	<200				
4-Nitroaniline	<100 µg/kg	TM157	<200				
4-Methylphenol	<100 µg/kg	TM157	<200				
4-Chlorophenylphenylether	<100 µg/kg	TM157	<200				
4-Chloroaniline	<100 µg/kg	TM157	<200				
4-Chloro-3-methylphenol	<100 µg/kg	TM157	<200				
4-Bromophenylphenylether	<100 µg/kg	TM157	<200				
3-Nitroaniline	<100 µg/kg	TM157	<200				
2-Nitrophenol	<100 µg/kg	TM157	<200				
2-Nitroaniline	<100 µg/kg	TM157	<200				
2-Methylphenol	<100 µg/kg	TM157	<200				
1,2,4-Trichlorobenzene	<100 µg/kg	TM157	<200				
2-Chlorophenol	<100 µg/kg	TM157	<200				

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend		
#	ISO17025 accredited.	
M	mCERTS accredited.	
aq	Aqueous / settled sample.	
diss.filt	Dissolved / filtered sample.	
tot.unfilt	Total / unfiltered sample.	
*	Subcontracted - refer to subcontractor report for accreditation status.	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	
(F)	Trigger breach confirmed	
1-4+§@	Sample deviation (see appendix)	

			Customer Sample Ref.	TP249				
			Depth (m)	1.50 - 1.50				
			Sample Type	Soil/Solid (S)				
			Date Sampled	01/04/2022				
			Sample Time	14:30				
			Date Received	07/04/2022				
			SDG Ref	220407-145				
			Lab Sample No.(s)	26101308				
			AGS Reference					
Component	**LOD/Units**	**Method**						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<200					
2,4-Dinitrotoluene	<100 µg/kg	TM157	<200					
2,4-Dimethylphenol	<100 µg/kg	TM157	<200					
2,4-Dichlorophenol	<100 µg/kg	TM157	<200					
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<200					
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<200					
1,4-Dichlorobenzene	<100 µg/kg	TM157	<200					
1,3-Dichlorobenzene	<100 µg/kg	TM157	<200					
1,2-Dichlorobenzene	<100 µg/kg	TM157	<200					
2-Chloronaphthalene	<100 µg/kg	TM157	<200					
2-Methylnaphthalene	<100 µg/kg	TM157	<200					
Acenaphthylene	<100 µg/kg	TM157	<200					
Acenaphthene	<100 µg/kg	TM157	1230					
Anthracene	<100 µg/kg	TM157	1430					
Benzo(a)anthracene	<100 µg/kg	TM157	3080					
Benzo(b)fluoranthene	<100 µg/kg	TM157	1870					
Benzo(k)fluoranthene	<100 µg/kg	TM157	1910					
Benzo(a)pyrene	<100 µg/kg	TM157	2080					
Benzo(g,h,i)perylene	<100 µg/kg	TM157	1330					
Chrysene	<100 µg/kg	TM157	3030					
Fluoranthene	<100 µg/kg	TM157	7310					
Fluorene	<100 µg/kg	TM157	804					
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	2060					
Phenanthrene	<100 µg/kg	TM157	5520					
Pyrene	<100 µg/kg	TM157	6430					
Naphthalene	<100 µg/kg	TM157	<200					
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<200					
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<200					

Validated

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		93.4	71.9	103	84.2	73.3	89.9
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	53.8	<10	<10	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		32.2	315	<10	<10	<10	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		18.4	747	<10	<10	<10	<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	11900 #	<1000 #	<1000 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	30100 #	1050 #	1760 #	9160 #	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	16300 #	1220 #	8340 #	130000 #	1300 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	54100 #	11000 #	46000 #	187000 #	11100 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	15700	<1000	2740	25800	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	128000	14300	58800	353000	13500
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		<10000	439000	80900	536000	852000	207000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		11.5	498	<10	<10	<10	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	5920 #	<1000 #	<1000 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	59500 #	<1000 #	13700 #	3480 #	4270 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	45200 #	13300 #	114000 #	24200 #	66700 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	146000 #	46500 #	294000 #	365000 #	103000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	54200	6240	55300	106000	20000
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	17900	1710	13500	25500	5310
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	311000	66600	478000	499000	194000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		<10000	440000	80900	536000	852000	207000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		50.6	1120	<50	<50	<50	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	498	<50	<50	<50	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		50.6	1610	<20	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP249
Depth (m)	1.50 - 1.50
Sample Type	Soil/Solid (S)
Date Sampled	01/04/2022
Sample Time	14:30
Date Received	07/04/2022
SDG Ref	220407-145
Lab Sample No.(s)	26101308
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	99.3
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	20.1
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	32.2
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	56.3
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	1310 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	43500 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	19600
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	64400
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	116000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	37.5
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	9010 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	35600 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	6040
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1940
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	51300
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	116000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	109
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	109

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	124	109	111	113	109
Toluene-d8**	%	TM116		100	97.4	96.4	106	107	103
4-Bromofluorobenzene**	%	TM116		81.6	95	85.6	73.3	78.1	82.1
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 #	<120 #	<60 #	<120 #	<120 #	<120 #
Chloromethane	<7 µg/kg	TM116		<140 #	<140 #	<70 #	<140 #	<140 #	<140 #
Bromomethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Chloroethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M	<120 M	<60 M	<120 M	<120 M	<120 M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #	<200 #	<100 #	<200 #	<200 #	<200 #
Carbon Disulphide	<7 µg/kg	TM116		<140 M	<140 M	<70 M	<140 M	<140 M	<140 M
Dichloromethane	<10 µg/kg	TM116		<200 #	<200 #	<100 #	<200 #	<200 #	<200 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M	<160 M	<80 M	<160 M	<160 M	<160 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M	<120 M	<60 M	<120 M	<120 M	<120 M
2,2-Dichloropropane	<10 µg/kg	TM116		<200	<200	<100	<200	<200	<200
Bromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Chloroform	<8 µg/kg	TM116		<160 M	<160 M	<80 M	<160 M	<160 M	<160 M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M	<140 M	<70 M	<140 M	<140 M	<140 M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Carbontetrachloride	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M	<100 M	<50 M	<100 M	<100 M	<100 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<90 M	<180 M	<180 M	<180 M
Trichloroethene	<9 µg/kg	TM116		<180 #	<180 #	<90 #	<180 #	<180 #	<180 #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Dibromomethane	<9 µg/kg	TM116		<180 M	<180 M	<90 M	<180 M	<180 M	<180 M
Bromodichloromethane	<7 µg/kg	TM116		<140 M	<140 M	<70 M	<140 M	<140 M	<140 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<70 M	<140 M	<140 M	<140 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200	<200	<100	<200	<200	<200
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M	<140 M	<70 M	<140 M	<140 M	<140 M
Tetrachloroethene	<5 µg/kg	TM116		<100 M	<100 M	<50 M	<100 M	<100 M	<100 M

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244
			Depth (m)	11.00 - 12.00	9.00 - 9.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	31/03/2022	31/03/2022	01/04/2022	31/03/2022	31/03/2022	01/04/2022
			Sample Time	13:00	12:00	12:30	11:30	14:00	12:00
			Date Received	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022
			SDG Ref	220407-145	220407-145	220407-145	220407-145	220407-145	220407-145
			Lab Sample No.(s)	26101289	26101281	26101325	26101302	26101296	26101314
			AGS Reference						
Dibromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Chlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<50 M	<100 M	<100 M	<100 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<40 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<100 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Bromoform	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Isopropylbenzene	<5 µg/kg	TM116		<100 #	<100 #	<50 #	<100 #	<100 #	<100 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #	<200 #	<100 #	<200 #	<200 #	<200 #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M	<320 M	<160 M	<320 M	<320 M	<320 M
Bromobenzene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
Propylbenzene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
2-Chlorotoluene	<9 µg/kg	TM116		<180 M	<180 M	<90 M	<180 M	<180 M	<180 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M	<160 M	<80 M	<160 M	<160 M	<160 M
4-Chlorotoluene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
tert-Butylbenzene	<14 µg/kg	TM116		<280 #	<280 #	<140 #	<280 #	<280 #	<280 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #	<180 #	<90 #	<180 #	<180 #	<180 #
sec-Butylbenzene	<10 µg/kg	TM116		<200	<200	<100	<200	<200	<200
4-Isopropyltoluene	<10 µg/kg	TM116		<200	<200	<100	<200	<200	<200
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M	<160 M	<80 M	<160 M	<160 M	<160 M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<50 M	<100 M	<100 M	<100 M
n-Butylbenzene	<11 µg/kg	TM116		<220	<220	<110	<220	<220	<220
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M	<200 M	<100 M	<200 M	<200 M	<200 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 3 M	<280 M	<140 3 M	<280 3 M	<280 3 M	<280 3 M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #	<200 #	<100 #	<200 #	<200 #	<200 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<200	<400	<400	<400
Hexachlorobutadiene	<20 µg/kg	TM116		<400	<400	<200	<400	<400	<400
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<130 M	<260 M	<260 M	<260 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 3 #	<400 #	<200 3 #	<400 3 #	<400 3 #	<400 3 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<200	<400	<400	<400
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.2	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<400	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP249
Depth (m)	1.50 - 1.50
Sample Type	Soil/Solid (S)
Date Sampled	01/04/2022
Sample Time	14:30
Date Received	07/04/2022
SDG Ref	220407-145
Lab Sample No.(s)	26101308
AGS Reference	

Component	LOD/Units	Method					
Dibromofluoromethane**	%	TM116	108				
Toluene-d8**	%	TM116	101				
4-Bromofluorobenzene**	%	TM116	75.5				
Dichlorodifluoromethane	<6 µg/kg	TM116	<60 #				
Chloromethane	<7 µg/kg	TM116	<70 #				
Bromomethane	<10 µg/kg	TM116	<100 M				
Chloroethane	<10 µg/kg	TM116	<100 M				
Trichlorofluorormethane	<6 µg/kg	TM116	<60 M				
1,1-Dichloroethene	<10 µg/kg	TM116	<100 #				
Carbon Disulphide	<7 µg/kg	TM116	<70 M				
Dichloromethane	<10 µg/kg	TM116	<100 #				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<100 M				
trans-1,2-Dichloroethene	<10 µg/kg	TM116	<100 M				
1,1-Dichloroethane	<8 µg/kg	TM116	<80 M				
cis-1,2-Dichloroethene	<6 µg/kg	TM116	<60 M				
2,2-Dichloropropane	<10 µg/kg	TM116	<100				
Bromochloromethane	<10 µg/kg	TM116	<100 M				
Chloroform	<8 µg/kg	TM116	<80 M				
1,1,1-Trichloroethane	<7 µg/kg	TM116	<70 M				
1,1-Dichloropropene	<10 µg/kg	TM116	<100 M				
Carbontetrachloride	<10 µg/kg	TM116	<100 M				
1,2-Dichloroethane	<5 µg/kg	TM116	<50 M				
Benzene	<9 µg/kg	TM116	<90 M				
Trichloroethene	<9 µg/kg	TM116	<90 #				
1,2-Dichloropropane	<10 µg/kg	TM116	<100 M				
Dibromomethane	<9 µg/kg	TM116	<90 M				
Bromodichloromethane	<7 µg/kg	TM116	<70 M				
cis-1,3-Dichloropropene	<10 µg/kg	TM116	<100 M				
Toluene	<7 µg/kg	TM116	<70 M				
trans-1,3-Dichloropropene	<10 µg/kg	TM116	<100				
1,1,2-Trichloroethane	<10 µg/kg	TM116	<100 M				
1,3-Dichloropropane	<7 µg/kg	TM116	<70 M				
Tetrachloroethene	<5 µg/kg	TM116	<50 M				

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	TP249
Depth (m)	1.50 - 1.50
Sample Type	Soil/Solid (S)
Date Sampled	01/04/2022
Sample Time	14:30
Date Received	07/04/2022
SDG Ref	220407-145
Lab Sample No.(s)	26101308
AGS Reference	

Component	LOD/Units	Method	
Dibromochloromethane	<10 µg/kg	TM116	<100 M
1,2-Dibromoethane	<10 µg/kg	TM116	<100 M
Chlorobenzene	<5 µg/kg	TM116	<50 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116	<100 M
Ethylbenzene	<4 µg/kg	TM116	<40 M
p/m-Xylene	<10 µg/kg	TM116	<100 #
o-Xylene	<10 µg/kg	TM116	<100 M
Bromoform	<10 µg/kg	TM116	<100 M
Isopropylbenzene	<5 µg/kg	TM116	<50 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116	<100 #
1,2,3-Trichloropropane	<16 µg/kg	TM116	<160 M
Bromobenzene	<10 µg/kg	TM116	<100 M
Propylbenzene	<10 µg/kg	TM116	<100 M
2-Chlorotoluene	<9 µg/kg	TM116	<90 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116	<80 M
4-Chlorotoluene	<10 µg/kg	TM116	<100 M
tert-Butylbenzene	<14 µg/kg	TM116	<140 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116	<90 #
sec-Butylbenzene	<10 µg/kg	TM116	<100
4-Isopropyltoluene	<10 µg/kg	TM116	<100
1,3-Dichlorobenzene	<8 µg/kg	TM116	<80 M
1,4-Dichlorobenzene	<5 µg/kg	TM116	<50 M
n-Butylbenzene	<11 µg/kg	TM116	<110
1,2-Dichlorobenzene	<10 µg/kg	TM116	<100 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116	<140 3 M
Tert-amyl methyl ether	<10 µg/kg	TM116	<100 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116	<200
Hexachlorobutadiene	<20 µg/kg	TM116	<200
Naphthalene	<13 µg/kg	TM116	<130 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116	<200 3 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116	<200
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.2
Sum of BTEX	<40 µg/kg	TM116	<400

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH205 11.00 - 12.00 SOLID 31/03/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101289 TM048	12/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH205 9.00 - 9.00 SOLID 31/03/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101281 TM048	12/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP215 1.00 - 1.00 SOLID 01/04/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101325 TM048	12/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP224 1.40 - 1.40 SOLID 31/03/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101302 TM048	12/04/2022	Emily Anderton	Loose fibre in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP229 3.00 - 3.00 SOLID 31/03/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101296 TM048	12/04/2022	Emily Anderton	Fibre bundles in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP244 0.70 - 1.00 SOLID 01/04/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101314 TM048	13/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP249 1.50 - 1.50 SOLID 01/04/2022 00:00:00 07/04/2022 05:00:00 220407-145 26101308 TM048	12/04/2022	James Richards	Fibre bundles in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP224	Chrysotile (#)	Fibre bundles in soil	0.0049 (#)	<0.001 (#)	0.0053 (#)
Depth (m)	1.40 - 1.40					
Sample Type	SOLID					
Date Sampled	31/03/2022 00:00:00					
Date Received	07/04/2022 05:00:00					
SDG	220407-145					
Original Sample	26101302					
Method Number	TM304					
Cust. Sample Ref.	TP229	Amosite (#)	Loose fibres in soil	0.0449 (#)	0.0040 (#)	0.0489 (#)
Depth (m)	3.00 - 3.00					
Sample Type	SOLID					
Date Sampled	31/03/2022 00:00:00					
Date Received	07/04/2022 05:00:00					
SDG	220407-145					
Original Sample	26101296					
Method Number	TM304					
Cust. Sample Ref.	TP249	None (#)	-	0.0018 (#)	<0.001 (#)	0.0019 (#)
Depth (m)	1.50 - 1.50					
Sample Type	SOLID					
Date Sampled	01/04/2022 00:00:00					
Date Received	07/04/2022 05:00:00					
SDG	220407-145					
Original Sample	26101308					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220407-145 **Report Number:** 643361 **Superseded Report:** 642835
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26101281	26101289	26101325	26101302	26101296	26101314	26101308
Customer Sample Ref.	RH205	RH205	TP215	TP224	TP229	TP244	TP249
AGS Ref.							
Depth	9.00 - 9.00	11.00 - 12.00	1.00 - 1.00	1.40 - 1.40	3.00 - 3.00	0.70 - 1.00	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	12-Apr-2022	13-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	13-Apr-2022	13-Apr-2022
Asbestos ID in Solid Samples	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	13-Apr-2022	12-Apr-2022
Asbestos Quantification - Full				22-Apr-2022	22-Apr-2022		22-Apr-2022
Boron Water Soluble	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
Cyanide Comp/Free/Total/Thiocyanate	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022
EPH CWG GC (S)	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
GRO by GC-FID (S)	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	13-Apr-2022	12-Apr-2022	13-Apr-2022
Hexavalent Chromium (s)	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	19-Apr-2022
Metals in solid samples by OES	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
PAH by GCMS	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022
PCBs by GCMS	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
pH	11-Apr-2022	11-Apr-2022	11-Apr-2022	13-Apr-2022	11-Apr-2022	11-Apr-2022	11-Apr-2022
Phenols by HPLC (S)	11-Apr-2022	11-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	11-Apr-2022
Sample description	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022	08-Apr-2022
Semi Volatile Organic Compounds	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022
Total Organic Carbon	14-Apr-2022	14-Apr-2022	14-Apr-2022	12-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022
Total Sulphate	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
TPH CWG GC (S)	13-Apr-2022	13-Apr-2022	12-Apr-2022	12-Apr-2022	13-Apr-2022	12-Apr-2022	13-Apr-2022
VOC MS (S)	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	03 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220408-73
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	644581
Order Number:	LD2685, LD2725

This report has been revised and directly supersedes 643139 in its entirety.

We received 3 samples on Friday April 08, 2022 and 3 of these samples were scheduled for analysis which was completed on Tuesday May 03, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26104098	TP205		4.90 - 4.90	06/04/2022
26104093	TP235		1.40 - 1.40	04/04/2022
26108843	TP239		2.40 - 2.40	06/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)					
			26104098		26104093		26108843	
			Customer Sample Reference					
			TP205		TP235		TP239	
			AGS Reference					
			Depth (m)					
			4.90 - 4.90		1.40 - 1.40		2.40 - 2.40	
			Container					
			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
			Sample Type					
			S	S	S	S	S	S
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 2			X		X	
PFAS (Post Ox.) Solids	All	NDPs: 0 Tests: 1			X			
PFAS Solids	All	NDPs: 0 Tests: 3	X		X		X	
Sample description	All	NDPs: 0 Tests: 3		X		X		X

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26104098	TP205	4.90 - 4.90	Dark Brown	Loamy Sand	Stones	Vegetation
26104093	TP235	1.40 - 1.40	Dark Brown	Sand	Brick	Stones
26108843	TP239	2.40 - 2.40	Dark Brown	Sand	Brick	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP235	TP239			
			Depth (m)	4.90 - 4.90	1.40 - 1.40	2.40 - 2.40			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	06/04/2022	04/04/2022	06/04/2022			
			Sample Time	12:00	12:00	12:00:00			
			Date Received	08/04/2022	08/04/2022	08/04/2022			
			SDG Ref	220408-73	220408-73	220408-73			
			Lab Sample No.(s)	26104098	26104093	26108843			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	0	0.82			
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338		<3	<3	<3			
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338		<3	<3	<3			
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338		<2	<2	<2			
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338		<1	<1	<1			
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338		<1	<1	<1			
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338		<1	<1	<1			
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338		<1	<1	<1			
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338		<1	<1	<1			
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338		<1	<1	<1			
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338		<1	<1	<1			
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338		<1	1.48	<1			
Branched PFOS	<1 µg/kg	TM338		<1	<1	<1			
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338		<1	<1	<1			
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338		<1	<1	<1			
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338		<1	<1	<1			
6:2-FTS (27619-97-2)	<1 µg/kg	TM338		<1	<1	<1			
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338		<1	<1	<1			
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338		<1	<1	<1			
Total PFOS	<1 µg/kg	TM338		<1	1.48	<1			
PFBA (Post Ox.) Perfluoro-n-butanoic acid	<3 µg/kg	TM428			<3				
PFPA (Post Ox.) Perfluoro-n-pentanoic acid	<3 µg/kg	TM428			<3				
PFHxA (Post Ox.) Perfluoro-n-hexanoic acid	<2 µg/kg	TM428			<2				
PFBS (Post Ox.) Perfluoro-1-butanesulfonate	<1 µg/kg	TM428			<1				
PFHpA (Post Ox.) Perfluoro-n-heptanoic acid	<1 µg/kg	TM428			<1				
6:2 PTS (Post Ox.) Perfluoro-octane sulfonate 6:2	<1 µg/kg	TM428			<1				
PFOA (Post Ox.) Perfluoro-n-octanoic acid	<1 µg/kg	TM428			<1				
PFHxS (Post Ox.) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM428			<1				
PFNA (Post Ox.) Perfluoro-n-nonanoic acid	<1 µg/kg	TM428			<1				
PFHpS (Post Ox.) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM428			<1				
PFDA (Post Ox.) Perfluoro-n-decanoic acid	<1 µg/kg	TM428			<1				
Linear PFOS (Post Ox.) Perfluoro-1-octanesulfonate	<1 µg/kg	TM428			1.9				
Branched PFOS (Post Ox.)	<1 µg/kg	TM428			<1				

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP235	TP239			
			Depth (m)	4.90 - 4.90	1.40 - 1.40	2.40 - 2.40			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	06/04/2022	04/04/2022	06/04/2022			
			Sample Time	12:00	12:00	12:00:00			
			Date Received	08/04/2022	08/04/2022	08/04/2022			
			SDG Ref	220408-73	220408-73	220408-73			
			Lab Sample No.(s)	26104098	26104093	26108843			
			AGS Reference						
PFUnA (Post Ox.) Perfluoro-n-undecanoic acid	<1 µg/kg	TM428			<1				
PFDoA (Post Ox.) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM428			<1				
PFOSA (Post Ox.) Perfluoro-octanesulfonamide	<1 µg/kg	TM428			<1				
PFDS (Post Ox.) Perfluoro-1-decanesulfonate	<1 µg/kg	TM428			<1				
PFPeS (Post Ox.) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM428			<1				
Total PFOS (Post Ox.)	<2 µg/kg	TM428			<2				

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP235 1.40 - 1.40 SOLID 04/04/2022 00:00:00 08/04/2022 05:00:00 220408-73 26104093 TM048	21/04/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP239 2.40 - 2.40 SOLID 06/04/2022 00:00:00 08/04/2022 05:00:00 220408-73 26108843 TM048	21/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM428	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220408-73 **Report Number:** 644581 **Superseded Report:** 643139
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26104098	26104093	26108843
Customer Sample Ref.	TP205	TP235	TP239
AGS Ref.			
Depth	4.90 - 4.90	1.40 - 1.40	2.40 - 2.40
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Asbestos ID in Solid Samples		21-Apr-2022	21-Apr-2022
PFAS (Post Ox.) Solids		03-May-2022	
PFAS Solids	20-Apr-2022	20-Apr-2022	20-Apr-2022
Sample description	10-Apr-2022	10-Apr-2022	10-Apr-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Hawarden
Deeside
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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	26 April 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220408-74
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	643719
Order Number:	LD2685

This report has been revised and directly supersedes 643031 in its entirety.

We received 8 samples on Friday April 08, 2022 and 7 of these samples were scheduled for analysis which was completed on Tuesday April 26, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26104180	CP203		3.00 - 3.00	05/04/2022
26104187	CP203		5.00 - 5.00	05/04/2022
26104153	TP203		1.00 - 1.00	05/04/2022
26104159	TP203		2.90 - 2.90	05/04/2022
26104125	TP235		2.20 - 2.20	04/04/2022
26104166	TP239		1.40 - 1.40	06/04/2022
26104120	TP253	ES1	1.40 - 1.40	04/04/2022
26104142	TP253		3.80 - 3.80	04/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

- X Test
- N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26104180			26104187			26104153			26104159			26104125			26104166			26104142
Customer Sample Reference			CP203			CP203			TP203			TP203			TP235			TP239			TP253
AGS Reference																					
Depth (m)			3.00 - 3.00			5.00 - 5.00			1.00 - 1.00			2.90 - 2.90			2.20 - 2.20			1.40 - 1.40			3.80 - 3.80
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7	X			X			X			X			X			X			X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 3							X			X						X			
Boron Water Soluble	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Easily Liberated Sulphide	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 7			X			X			X			X			X			X	
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
PCBs by GCMS	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 7		X			X			X			X			X			X		

12:04:42 26/04/2022

26104142						
TP253						
3.80 - 3.80						
60g VOC (ALE215)						
S						
250g Amber Jar (ALE210)						
S						
X						
X						
X						
X						
X						
X						
	X					
X						
X						
X						
X						
X						
X						
X						

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Uns9ecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Pre9ared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26104180			26104187			26104153			26104159			26104125			26104166			26104142	
Customer Sample Reference			CP203			CP203			TP203			TP203			TP235			TP239			TP253	
AGS Reference																						
Depth (m)			3.00 - 3.00			5.00 - 5.00			1.00 - 1.00			2.90 - 2.90			2.20 - 2.20			1.40 - 1.40			3.80 - 3.80	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 6		X						X			X			X			X			
Total Organic Carbon	All	NDPs: 0 Tests: 7		X			X			X			X			X			X			
Total Sulphate	All	NDPs: 0 Tests: 7		X			X			X			X			X			X			
TPH CWG GC (S)	All	NDPs: 0 Tests: 7		X			X			X			X			X			X			
VOC MS (S)	All	NDPs: 0 Tests: 7			X			X			X			X			X			X		

26104142	TP253		3.80 - 3.80	60g VOC (ALE215)	250g Amber Jar (ALE210)	
				S	S	
					X	
					X	
					X	
					X	
				X		

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26104180	CP203	3.00 - 3.00	Dark Brown	Loamy Sand	Stones	Vegetation
26104187	CP203	5.00 - 5.00	Dark Brown	Sand	None	None
26104153	TP203	1.00 - 1.00	Dark Brown	Sand	Brick	Stones
26104159	TP203	2.90 - 2.90	Dark Brown	Loamy Sand	Brick	Stones
26104125	TP235	2.20 - 2.20	Dark Brown	Sand	Stones	Vegetation
26104166	TP239	1.40 - 1.40	Dark Brown	Sand	Brick	Stones
26104142	TP253	3.80 - 3.80	Dark Brown	Sandy Silt Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	12	9.3	14	7.7	8.8
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0116 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.022 M	0.0232 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		2.29 #	0.769 #	7.5 #	7.72 #	0.957 #	4.91 #
pH	1 pH Units	TM133		8.17 M	8.41 M	7.54 M	9.43 M	8.21 M	8.05 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.94 M	<1 M	<1 M	<1 M
PCB congener 28	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 52	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 101	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 118	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 138	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 153	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
PCB congener 180	<3 µg/kg	TM168		<3 M	<3 M	<6 M	<15 M	<3 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<21	<42	<105	<21	<21
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	99.2 @ M	163 @ M	<15 @ M	<15 M
Arsenic	<0.6 mg/kg	TM181		9.98 M	3.64 M	36.7 M	20 M	4.5 M	19.8 M
Beryllium	<0.01 mg/kg	TM181		0.977 M	0.221 M	0.804 M	0.964 M	0.439 M	0.918 M
Cadmium	<0.02 mg/kg	TM181		0.0232 M	0.0332 M	0.761 M	0.681 M	<0.02 M	1.12 M
Chromium	<0.9 mg/kg	TM181		11.1 M	0.914 M	15.4 M	13.2 M	7.75 M	20.9 M
Copper	<1.4 mg/kg	TM181		26.4 M	7.31 M	405 M	105 M	10.3 M	89.6 M
Lead	<0.7 mg/kg	TM181		160 M	13.5 M	695 M	191 M	11.7 M	231 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	0.138 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		29.1 M	7.31 M	23 M	22.5 M	16.4 M	40.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	1.21 #	<1 #	1.05 #
Vanadium	<0.2 mg/kg	TM181		24.9 #	5.52 #	19.6 #	30.6 #	12.1 #	26.9 #
Zinc	<1.9 mg/kg	TM181		66.9 M	18.6 M	258 M	257 M	27.4 M	399 M
Sulphate, Total	<48 mg/kg	TM221		298 M	55.2 M	4030 M	2750 M	137 M	849 M
Boron, water soluble	<1 mg/kg	TM222		3.22 M	1.41 M	2.23 M	4.31 M	<1 M	1.03 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.104 M	0.0771 M	1.09 M	0.292 M	0.138 M	0.107 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304				0.0603 #	<0.001 #		<0.001 #

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304				<0.001 #	<0.001 #		<0.001 #
Additional Asbestos Components (Using TM048)		TM304				None #	None #		None #
Analysts Comments		TM304				0	0		0
Asbestos Quantification - Total - %	<0.001 %	TM304				0.0607 #	<0.001 #		<0.001 #

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Customer Sample Ref.	TP253
Depth (m)	3.80 - 3.80
Sample Type	Soil/Solid (S)
Date Sampled	04/04/2022
Sample Time	13:00
Date Received	08/04/2022
SDG Ref	220408-74
Lab Sample No.(s)	26104142
AGS Reference	

Component	LOD/Units	Method		
Moisture Content Ratio (% of as received sample)	%	PM024	20	
Phenol	<0.01 mg/kg	TM062 (S)	<0.01	M
Cresols	<0.01 mg/kg	TM062 (S)	0.0248	M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015	M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035	M
Soil Organic Matter (SOM)	<0.35 %	TM132	5	#
pH	1 pH Units	TM133	7.57	M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	#
Cyanide, Total	<1 mg/kg	TM153	53.4	M
PCB congener 28	<3 µg/kg	TM168	29.6	M
PCB congener 52	<3 µg/kg	TM168	17.2	M
PCB congener 101	<3 µg/kg	TM168	<15	M
PCB congener 118	<3 µg/kg	TM168	<15	M
PCB congener 138	<3 µg/kg	TM168	<15	M
PCB congener 153	<3 µg/kg	TM168	<15	M
PCB congener 180	<3 µg/kg	TM168	<15	M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<105	
Sulphide, Easily liberated	<15 mg/kg	TM180	1340	@ M
Arsenic	<0.6 mg/kg	TM181	14.2	M
Beryllium	<0.01 mg/kg	TM181	0.677	M
Cadmium	<0.02 mg/kg	TM181	2.61	M
Chromium	<0.9 mg/kg	TM181	13.1	M
Copper	<1.4 mg/kg	TM181	144	M
Lead	<0.7 mg/kg	TM181	373	M
Mercury	<0.1 mg/kg	TM181	0.13	M
Nickel	<0.2 mg/kg	TM181	29.9	M
Selenium	<1 mg/kg	TM181	<1	#
Vanadium	<0.2 mg/kg	TM181	18.3	#
Zinc	<1.9 mg/kg	TM181	578	M
Sulphate, Total	<48 mg/kg	TM221	1680	M
Boron, water soluble	<1 mg/kg	TM222	1.78	M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.265	M

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		75.8	92.1	85.4	88.7	91	87.7
Acenaphthene-d10 % recovery**	%	TM218		75.4	91.5	91.7	91.7	90.5	89.4
Phenanthrene-d10 % recovery**	%	TM218		77	93.4	93.5	92.8	90.9	92
Chrysene-d12 % recovery**	%	TM218		73.1	87.8	81.2	86.5	85.4	83.2
Perylene-d12 % recovery**	%	TM218		75.6	89.4	83.1	89.7	88.7	83.8
Naphthalene	<9 µg/kg	TM218		13.7 M	<9 M	374 M	376 M	<9 M	30.4 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	71.9 M	73.8 M	<12 M	21.1 M
Acenaphthene	<8 µg/kg	TM218		12.8 M	<8 M	807 M	444 M	<8 M	94.3 M
Fluorene	<10 µg/kg	TM218		13 M	<10 M	747 M	473 M	<10 M	66 M
Phenanthrene	<15 µg/kg	TM218		74.5 M	18.5 M	3820 M	2230 M	<15 M	831 M
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	1390 M	1120 M	<16 M	225 M
Fluoranthene	<17 µg/kg	TM218		73.9 M	<17 M	5590 M	2060 M	21.8 M	1510 M
Pyrene	<15 µg/kg	TM218		71.7 M	19.8 M	5090 M	1820 M	20.5 M	1360 M
Benz(a)anthracene	<14 µg/kg	TM218		32.2 M	<14 M	2370 M	721 M	<14 M	651 M
Chrysene	<10 µg/kg	TM218		33.7 M	<10 M	2290 M	733 M	13.3 M	633 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		36.9 M	<15 M	3030 M	879 M	18.4 M	801 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	1000 M	294 M	<14 M	278 M
Benzo(a)pyrene	<15 µg/kg	TM218		25.8 M	<15 M	2230 M	636 M	<15 M	566 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	1420 M	433 M	<18 M	382 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	265 M	<115 M	<23 M	67.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	1380 M	420 M	<24 M	354 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		388	<118	31900	12700	<118	7870

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP253
Depth (m)	3.80 - 3.80
Sample Type	Soil/Solid (S)
Date Sampled	04/04/2022
Sample Time	13:00
Date Received	08/04/2022
SDG Ref	220408-74
Lab Sample No.(s)	26104142
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	88.8
Acenaphthene-d10 % recovery**	%	TM218	90.1
Phenanthrene-d10 % recovery**	%	TM218	89.7
Chrysene-d12 % recovery**	%	TM218	76.9
Perylene-d12 % recovery**	%	TM218	74.7
Naphthalene	<9 µg/kg	TM218	285 M
Acenaphthylene	<12 µg/kg	TM218	6610 M
Acenaphthene	<8 µg/kg	TM218	1700 M
Fluorene	<10 µg/kg	TM218	6290 M
Phenanthrene	<15 µg/kg	TM218	55000 M
Anthracene	<16 µg/kg	TM218	16900 M
Fluoranthene	<17 µg/kg	TM218	61200 M
Pyrene	<15 µg/kg	TM218	46400 M
Benz(a)anthracene	<14 µg/kg	TM218	21600 M
Chrysene	<10 µg/kg	TM218	19200 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	21900 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	7990 M
Benzo(a)pyrene	<15 µg/kg	TM218	17100 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	10500 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	1770 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	9060 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	303000

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031

Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	TP203	TP203	TP235	TP239	TP253
			Depth (m)	3.00 - 3.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022	04/04/2022
			Sample Time	12:00	12:00	13:00	12:00	12:00	13:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104153	26104159	26104125	26104166	26104142
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Pentachlorophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Nitrobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Isophorone	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Hexachloroethane	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<400	<1000	<200	<400	<400
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Hexachlorobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Dimethyl phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Diethyl phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Dibenzofuran	<100 µg/kg	TM157		<100	487	<500	<100	<200	<200
Carbazole	<100 µg/kg	TM157		<100	449	<500	<100	<200	<200
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Azobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Nitrophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Nitroaniline	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Methylphenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Chloroaniline	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
3-Nitroaniline	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Nitrophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Nitroaniline	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Methylphenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Chlorophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	TP203	TP203	TP235	TP239	TP253
			Depth (m)	3.00 - 3.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40	3.80 - 3.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022	04/04/2022
			Sample Time	12:00	12:00	13:00	12:00	12:00	13:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104153	26104159	26104125	26104166	26104142
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
2-Methylnaphthalene	<100 µg/kg	TM157		<100	352	686	<100	<200	<200
Acenaphthylene	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200
Acenaphthene	<100 µg/kg	TM157		<100	782	818	<100	<200	494
Anthracene	<100 µg/kg	TM157		<100	1320	1080	<100	<200	403
Benzo(a)anthracene	<100 µg/kg	TM157		<100	2360	1480	<100	712	1370
Benzo(b)fluoranthene	<100 µg/kg	TM157		<100	1890	900	<100	504	1040
Benzo(k)fluoranthene	<100 µg/kg	TM157		<100	1680	1110	<100	521	937
Benzo(a)pyrene	<100 µg/kg	TM157		<100	2050	1110	<100	620	1160
Benzo(g,h,i)perylene	<100 µg/kg	TM157		<100	1400	775	<100	459	689
Chrysene	<100 µg/kg	TM157		<100	2190	1490	<100	682	1220
Fluoranthene	<100 µg/kg	TM157		<100	5250	3690	<100	1330	3190
Fluorene	<100 µg/kg	TM157		<100	724	826	<100	<200	<200
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		<100	2610	1410	<100	869	1280
Phenanthrene	<100 µg/kg	TM157		<100	4130	4190	<100	741	1390
Pyrene	<100 µg/kg	TM157		<100	4740	3240	<100	1190	2900
Naphthalene	<100 µg/kg	TM157		<100	450	715	<100	<200	<200
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	229	<500	<100	<200	<200
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<200	<500	<100	<200	<200

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		96.4	109	93.1	97.4	111	95.7
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10	<10	25.5	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10	23.1	174	<10	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10	48.4	1040	<10	<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	5030 #	46300 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	33200 #	179000 #	<1000 #	2120 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	77900 #	209000 #	<1000 #	11400 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	270000 #	701000 #	<1000 #	101000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	<1000	49600	356000	<1000	11300
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	<5000	435000	1490000	<5000	126000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		<10000	<10000	670000	2430000	<10000	303000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	31.9	693	<10	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	4360 #	9880 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	15400 #	88000 #	<1000 #	4970 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1080 #	<1000 #	43700 #	110000 #	<1000 #	50200 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	168000 #	667000 #	<1000 #	111000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	3340	62100	<1000	11300
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	1550	44400	<1000	2540
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	<5000	235000	937000	<5000	178000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		<10000	<10000	670000	2430000	<10000	303000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50	<50	71.5	1240	<50	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	<50	<50	693	<50	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20	<20	71.5	1930	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP253
Depth (m)	3.80 - 3.80
Sample Type	Soil/Solid (S)
Date Sampled	04/04/2022
Sample Time	13:00
Date Received	08/04/2022
SDG Ref	220408-74
Lab Sample No.(s)	26104142
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	85.2
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	13.6
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	57
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	109
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	1540 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	3180 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	12800 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	111000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	25700
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	154000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	218000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	73.2
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	4310 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	16300 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	39700 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	3200
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1440
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	64000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	218000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	180
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	73.2
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	253

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	118	111	110	109	111
Toluene-d8**	%	TM116		98.2	90.6	101	103	95.5	104
4-Bromofluorobenzene**	%	TM116		94.8	72.8	74.3	76.7	79.2	76
Dichlorodifluoromethane	<6 µg/kg	TM116		<1200 #		<120 #	<60 #	<6 #	<60 #
Chloromethane	<7 µg/kg	TM116		<1400 #		<140 #	<70 #	<7 #	<70 #
Vinyl Chloride	<6 µg/kg	TM116		<1200 @ M		<120 @ M	<60 @ M	<6 M	<60 M
Bromomethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Chloroethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Trichlorofluorormethane	<6 µg/kg	TM116		<1200 M		<120 M	<60 M	<6 M	<60 M
1,1-Dichloroethene	<10 µg/kg	TM116		<2000 #		<200 #	<100 #	<10 #	<100 #
Carbon Disulphide	<7 µg/kg	TM116		<1400 M		<140 M	<70 M	<7 M	<70 M
Dichloromethane	<10 µg/kg	TM116		<2000 #		<200 #	<100 #	<10 #	<100 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<2000 M	<10 M	<200 M	<100 M	<10 M	<100 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
1,1-Dichloroethane	<8 µg/kg	TM116		<1600 M		<160 M	<80 M	<8 M	<80 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<1200 M		<120 M	<60 M	<6 M	<60 M
2,2-Dichloropropane	<10 µg/kg	TM116		<2000		<200	<100	<10	<100
Bromochloromethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Chloroform	<8 µg/kg	TM116		<1600 M		<160 M	<80 M	<8 M	<80 M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<1400 M		<140 M	<70 M	<7 M	<70 M
1,1-Dichloropropene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Carbontetrachloride	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
1,2-Dichloroethane	<5 µg/kg	TM116		<1000 M		<100 M	<50 M	<5 M	<50 M
Benzene	<9 µg/kg	TM116		<1800 M	41.5 M	<180 M	<90 M	<9 M	<90 M
Trichloroethene	<9 µg/kg	TM116		<1800 #		<180 #	<90 #	<9 #	<90 #
1,2-Dichloropropane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Dibromomethane	<9 µg/kg	TM116		<1800 M		<180 M	<90 M	<9 M	<90 M
Bromodichloromethane	<7 µg/kg	TM116		<1400 M		<140 M	<70 M	<7 M	<70 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Toluene	<7 µg/kg	TM116		<1400 M	50.7 M	<140 M	<70 M	<7 M	<70 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<2000		<200	<100	<10	<100
1,1,2-Trichloroethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
1,3-Dichloropropane	<7 µg/kg	TM116		<1400 M		<140 M	<70 M	<7 M	<70 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
			Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
			Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
			Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
			SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
			Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<1000 M		<100 M	<50 M	<5 M	<50 M
Dibromochloromethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
1,2-Dibromoethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Chlorobenzene	<5 µg/kg	TM116		<1000 M		<100 M	<50 M	<5 M	<50 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Ethylbenzene	<4 µg/kg	TM116		<800 M	<4 M	<80 M	<40 M	<4 M	<40 M
p/m-Xylene	<10 µg/kg	TM116		<2000 #	<10 #	<200 #	<100 #	<10 #	<100 #
o-Xylene	<10 µg/kg	TM116		<2000 M	<10 M	<200 M	<100 M	<10 M	<100 M
Styrene	<10 µg/kg	TM116		<2000 @ #		<200 @ #	<100 @ #	<10 #	<100 #
Bromoform	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Isopropylbenzene	<5 µg/kg	TM116		<1000 #		<100 #	<50 #	<5 #	<50 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<2000 #		<200 #	<100 #	<10 #	<100 #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<3200 M		<320 M	<160 M	<16 M	<160 M
Bromobenzene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
Propylbenzene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
2-Chlorotoluene	<9 µg/kg	TM116		<1800 M		<180 M	<90 M	<9 M	<90 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<1600 M		<160 M	<80 M	<8 M	<80 M
4-Chlorotoluene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
tert-Butylbenzene	<14 µg/kg	TM116		<2800 #		<280 #	<140 #	<14 #	<140 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<1800 #		<180 #	<90 #	<9 #	<90 #
sec-Butylbenzene	<10 µg/kg	TM116		<2000		<200	<100	<10	<100
4-Isopropyltoluene	<10 µg/kg	TM116		<2000		<200	<100	<10	<100
1,3-Dichlorobenzene	<8 µg/kg	TM116		<1600 M		<160 M	<80 M	<8 M	<80 M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<1000 M		<100 M	<50 M	<5 M	<50 M
n-Butylbenzene	<11 µg/kg	TM116		<2200		<220	<110	<11	<110
1,2-Dichlorobenzene	<10 µg/kg	TM116		<2000 M		<200 M	<100 M	<10 M	<100 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<2800 M		<280 3 M	<140 3 M	<14 M	<140 3 M
Tert-amyl methyl ether	<10 µg/kg	TM116		<2000 #		<200 #	<100 #	<10 #	<100 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<4000		<400	<200	<20	<200
Hexachlorobutadiene	<20 µg/kg	TM116		<4000		<400	<200	<20	<200
Naphthalene	<13 µg/kg	TM116		<2600 M		<260 M	533 M	<13 M	<130 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<4000 #		<400 3 #	<200 3 #	<20 #	<200 3 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<4000		<400	<200	<20	<200

Validated

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239
Depth (m)	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40
Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Date Sampled	05/04/2022	05/04/2022	05/04/2022	05/04/2022	04/04/2022	06/04/2022
Sample Time	12:00	13:00	12:00	13:00	12:00	12:00
Date Received	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022
SDG Ref	220408-74	220408-74	220408-74	220408-74	220408-74	220408-74
Lab Sample No.(s)	26104180	26104187	26104153	26104159	26104125	26104166
AGS Reference						

Component	LOD/Units	Method						
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<4	<0.02	<0.4	<0.2	<0.02	<0.2
Sum of BTEX	<40 µg/kg	TM116	<8000	92.1	<800	<400	<40	<400

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP253
Depth (m)	3.80 - 3.80
Sample Type	Soil/Solid (S)
Date Sampled	04/04/2022
Sample Time	13:00
Date Received	08/04/2022
SDG Ref	220408-74
Lab Sample No.(s)	26104142
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	114
Toluene-d8**	%	TM116	97.8
4-Bromofluorobenzene**	%	TM116	89.1
Dichlorodifluoromethane	<6 µg/kg	TM116	<60 #
Chloromethane	<7 µg/kg	TM116	<70 #
Vinyl Chloride	<6 µg/kg	TM116	<60 @ M
Bromomethane	<10 µg/kg	TM116	<100 M
Chloroethane	<10 µg/kg	TM116	<100 M
Trichlorofluorormethane	<6 µg/kg	TM116	<60 M
1,1-Dichloroethene	<10 µg/kg	TM116	<100 #
Carbon Disulphide	<7 µg/kg	TM116	<70 M
Dichloromethane	<10 µg/kg	TM116	<100 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<100 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116	<100 M
1,1-Dichloroethane	<8 µg/kg	TM116	<80 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116	<60 M
2,2-Dichloropropane	<10 µg/kg	TM116	<100
Bromochloromethane	<10 µg/kg	TM116	<100 M
Chloroform	<8 µg/kg	TM116	<80 M
1,1,1-Trichloroethane	<7 µg/kg	TM116	<70 M
1,1-Dichloropropene	<10 µg/kg	TM116	<100 M
Carbontetrachloride	<10 µg/kg	TM116	<100 M
1,2-Dichloroethane	<5 µg/kg	TM116	<50 M
Benzene	<9 µg/kg	TM116	<90 M
Trichloroethene	<9 µg/kg	TM116	<90 #
1,2-Dichloropropane	<10 µg/kg	TM116	<100 M
Dibromomethane	<9 µg/kg	TM116	<90 M
Bromodichloromethane	<7 µg/kg	TM116	<70 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116	<100 M
Toluene	<7 µg/kg	TM116	<70 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116	<100
1,1,2-Trichloroethane	<10 µg/kg	TM116	<100 M
1,3-Dichloropropane	<7 µg/kg	TM116	<70 M

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	TP253
Depth (m)	3.80 - 3.80
Sample Type	Soil/Solid (S)
Date Sampled	04/04/2022
Sample Time	13:00
Date Received	08/04/2022
SDG Ref	220408-74
Lab Sample No.(s)	26104142
AGS Reference	

Component	LOD/Units	Method	
Tetrachloroethene	<5 µg/kg	TM116	<50 M
Dibromochloromethane	<10 µg/kg	TM116	<100 M
1,2-Dibromoethane	<10 µg/kg	TM116	<100 M
Chlorobenzene	<5 µg/kg	TM116	<50 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116	<100 M
Ethylbenzene	<4 µg/kg	TM116	<40 M
p/m-Xylene	<10 µg/kg	TM116	<100 #
o-Xylene	<10 µg/kg	TM116	<100 M
Styrene	<10 µg/kg	TM116	<100 @#
Bromoform	<10 µg/kg	TM116	<100 M
Isopropylbenzene	<5 µg/kg	TM116	<50 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116	<100 #
1,2,3-Trichloropropane	<16 µg/kg	TM116	<160 M
Bromobenzene	<10 µg/kg	TM116	<100 M
Propylbenzene	<10 µg/kg	TM116	<100 M
2-Chlorotoluene	<9 µg/kg	TM116	<90 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116	<80 M
4-Chlorotoluene	<10 µg/kg	TM116	<100 M
tert-Butylbenzene	<14 µg/kg	TM116	<140 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116	<90 #
sec-Butylbenzene	<10 µg/kg	TM116	<100
4-Isopropyltoluene	<10 µg/kg	TM116	<100
1,3-Dichlorobenzene	<8 µg/kg	TM116	<80 M
1,4-Dichlorobenzene	<5 µg/kg	TM116	<50 M
n-Butylbenzene	<11 µg/kg	TM116	<110
1,2-Dichlorobenzene	<10 µg/kg	TM116	<100 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116	<140 M
Tert-amyl methyl ether	<10 µg/kg	TM116	<100 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116	<200
Hexachlorobutadiene	<20 µg/kg	TM116	<200
Naphthalene	<13 µg/kg	TM116	<130 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116	<200 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116	<200

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

		Customer Sample Ref.	TP253
		Depth (m)	3.80 - 3.80
		Sample Type	Soil/Solid (S)
		Date Sampled	04/04/2022
		Sample Time	13:00
		Date Received	08/04/2022
		SDG Ref	220408-74
		Lab Sample No.(s)	26104142
		AGS Reference	
Component	**LOD/Units**	**Method**	
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.2
Sum of BTEX	<40 µg/kg	TM116	<400

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP203 3.00 - 3.00 SOLID 05/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104180 TM048	14/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP203 5.00 - 5.00 SOLID 05/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104187 TM048	14/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP203 1.00 - 1.00 SOLID 05/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104153 TM048	14/04/2022	Emily Anderton	Fibre bundle in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP203 2.90 - 2.90 SOLID 05/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104159 TM048	14/04/2022	Emily Anderton	ACM debris in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP235 2.20 - 2.20 SOLID 04/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104125 TM048	14/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP239 1.40 - 1.40 SOLID 06/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104166 TM048	14/04/2022	Emily Anderton	Fibre bundle in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP253 3.80 - 3.80 SOLID 04/04/2022 00:00:00 08/04/2022 05:00:00 220408-74 26104142 TM048	14/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP203	None (#)	-	0.0603 (#)	<0.001 (#)	0.0607 (#)
Depth (m)	1.00 - 1.00					
Sample Type	SOLID					
Date Sampled	05/04/2022 00:00:00					
Date Received	08/04/2022 05:00:00					
SDG	220408-74					
Original Sample	26104153					
Method Number	TM304					
Cust. Sample Ref.	TP203	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.90 - 2.90					
Sample Type	SOLID					
Date Sampled	05/04/2022 00:00:00					
Date Received	08/04/2022 05:00:00					
SDG	220408-74					
Original Sample	26104159					
Method Number	TM304					
Cust. Sample Ref.	TP239	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.40 - 1.40					
Sample Type	SOLID					
Date Sampled	06/04/2022 00:00:00					
Date Received	08/04/2022 05:00:00					
SDG	220408-74					
Original Sample	26104166					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220408-74 **Report Number:** 643719 **Superseded Report:** 643031
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26104180	26104187	26104153	26104159	26104125	26104166	26104142
Customer Sample Ref.	CP203	CP203	TP203	TP203	TP235	TP239	TP253
AGS Ref.							
Depth	3.00 - 3.00	5.00 - 5.00	1.00 - 1.00	2.90 - 2.90	2.20 - 2.20	1.40 - 1.40	3.80 - 3.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	19-Apr-2022
Asbestos ID in Solid Samples	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022
Asbestos Quantification - Full			26-Apr-2022	25-Apr-2022		25-Apr-2022	
Boron Water Soluble	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022
Cyanide Comp/Free/Total/Thiocyanate	14-Apr-2022	20-Apr-2022	14-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
Easily Liberated Sulphide	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022	12-Apr-2022
EPH CWG GC (S)	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022
GRO by GC-FID (S)	19-Apr-2022	19-Apr-2022	12-Apr-2022	12-Apr-2022	19-Apr-2022	12-Apr-2022	12-Apr-2022
Hexavalent Chromium (s)	20-Apr-2022	19-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
Metals in solid samples by OES	19-Apr-2022	20-Apr-2022	20-Apr-2022	19-Apr-2022	20-Apr-2022	19-Apr-2022	13-Apr-2022
PAH by GCMS	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022
PCBs by GCMS	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	19-Apr-2022	13-Apr-2022	13-Apr-2022
pH	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
Phenols by HPLC (S)	14-Apr-2022	14-Apr-2022	14-Apr-2022	14-Apr-2022	13-Apr-2022	19-Apr-2022	13-Apr-2022
Sample description	10-Apr-2022	10-Apr-2022	10-Apr-2022	10-Apr-2022	10-Apr-2022	10-Apr-2022	09-Apr-2022
Semi Volatile Organic Compounds	13-Apr-2022		13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022	13-Apr-2022
Total Organic Carbon	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
Total Sulphate	19-Apr-2022	19-Apr-2022	13-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	13-Apr-2022
TPH CWG GC (S)	19-Apr-2022	19-Apr-2022	13-Apr-2022	13-Apr-2022	19-Apr-2022	13-Apr-2022	13-Apr-2022
VOC MS (S)	13-Apr-2022	19-Apr-2022	13-Apr-2022	13-Apr-2022	19-Apr-2022	13-Apr-2022	14-Apr-2022

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	03 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220414-86
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	644453
Order Number:	LD2707

This report has been revised and directly supersedes 643868 in its entirety.

We received 5 samples on Wednesday April 13, 2022 and 5 of these samples were scheduled for analysis which was completed on Tuesday May 03, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26139138	CP202		6.70 - 6.70	11/04/2022
26139152	WS305		1.50 - 1.50	11/04/2022
26139146	WS316		2.00 - 2.00	11/04/2022
26139129	WS316		4.00 - 4.00	11/04/2022
26139123	WS317		2.50 - 2.50	11/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	26139138	26139152	26139146	26139129	26139123
			Customer Sample Reference	CP202	WS305	WS316	WS316	WS317
			AGS Reference					
			Depth (m)	6.70 - 6.70	1.50 - 1.50	2.00 - 2.00	4.00 - 4.00	2.50 - 2.50
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 1			X									
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 1	X											
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1	X											
Boron Water Soluble	All	NDPs: 0 Tests: 1		X										
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 1		X										
Easily Liberated Sulphide	All	NDPs: 0 Tests: 1		X										
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X		X				X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X		X				X		X	
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 1		X										
Metals in solid samples by OES	All	NDPs: 0 Tests: 1		X										
PAH by GCMS	All	NDPs: 0 Tests: 1		X										
PCBs by GCMS	All	NDPs: 0 Tests: 1		X										
PFAS Solids	All	NDPs: 0 Tests: 1							X					
pH	All	NDPs: 0 Tests: 1		X										
Phenols by HPLC (S)	All	NDPs: 0 Tests: 1		X										

Validated

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26139138	26139152	26139146	26139129	26139123					
Customer Sample Reference			CP202	WS305	WS316	WS316	WS317					
AGS Reference												
Depth (m)			6.70 - 6.70	1.50 - 1.50	2.00 - 2.00	4.00 - 4.00	2.50 - 2.50					
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S
Sample description	All	NDPs: 0 Tests: 5		X		X			X	X		X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 4		X		X				X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 1		X									
Total Sulphate	All	NDPs: 0 Tests: 1		X									
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X		X				X		X	
VOC MS (S)	All	NDPs: 0 Tests: 4			X		X				X		X

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26139138	CP202	6.70 - 6.70	Dark Brown	Sandy Silt Loam	Stones	Brick
26139152	WS305	1.50 - 1.50	Dark Brown	Silty Sand	Stones	None
26139129	WS316	4.00 - 4.00	Dark Brown	Sand	Stones	None
26139146	WS316	2.00 - 2.00	Dark Brown	Loamy Sand	Stones	Vegetation
26139123	WS317	2.50 - 2.50	Dark Brown	Silty Sand	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS316	WS317
			Depth (m)	6.70 - 6.70	1.50 - 1.50	2.00 - 2.00	4.00 - 4.00	2.50 - 2.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022	11/04/2022
			Sample Time	11:00	12:00	11:30	10:30	10:00
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022	13/04/2022
			SDG Ref	220414-86	220414-86	220414-86	220414-86	220414-86
			Lab Sample No.(s)	26139138	26139152	26139146	26139129	26139123
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		10	30	15	25	30
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132		1.61 #				
pH	1 pH Units	TM133		10.6 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #				
Cyanide, Total	<1 mg/kg	TM153		<1 M				
PCB congener 28	<3 µg/kg	TM168		<15 M				
PCB congener 52	<3 µg/kg	TM168		<15 M				
PCB congener 101	<3 µg/kg	TM168		<15 M				
PCB congener 118	<3 µg/kg	TM168		<15 M				
PCB congener 138	<3 µg/kg	TM168		<15 M				
PCB congener 153	<3 µg/kg	TM168		<15 M				
PCB congener 180	<3 µg/kg	TM168		<15 M				
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<105				
Sulphide, Easily liberated	<15 mg/kg	TM180		107 @ M				
Arsenic	<0.6 mg/kg	TM181		6.61 M				
Beryllium	<0.01 mg/kg	TM181		0.574 M				
Cadmium	<0.02 mg/kg	TM181		0.126 M				
Chromium	<0.9 mg/kg	TM181		12.1 M				
Copper	<1.4 mg/kg	TM181		18.5 M				
Lead	<0.7 mg/kg	TM181		102 M				
Mercury	<0.1 mg/kg	TM181		<0.1 M				
Nickel	<0.2 mg/kg	TM181		16.4 M				
Selenium	<1 mg/kg	TM181		<1 #				
Vanadium	<0.2 mg/kg	TM181		27.1 #				
Zinc	<1.9 mg/kg	TM181		254 M				
Sulphate, Total	<48 mg/kg	TM221		2400 M				
Boron, water soluble	<1 mg/kg	TM222		2.4 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0473 M				
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #				

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS316	WS317	
			Depth (m)	6.70 - 6.70	1.50 - 1.50	2.00 - 2.00	4.00 - 4.00	2.50 - 2.50	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022	11/04/2022	
			Sample Time	11:00	12:00	11:30	10:30	10:00	
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022	13/04/2022	
			SDG Ref	220414-86	220414-86	220414-86	220414-86	220414-86	
			Lab Sample No.(s)	26139138	26139152	26139146	26139129	26139123	
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		0					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338				<3			
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338				<3			
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338				<2			
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338				<1			
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338				<1			
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338				<1			
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338				<1			
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338				<1			
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338				<1			
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338				<1			
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338				<1			
Branched PFOS	<1 µg/kg	TM338				<1			
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338				<1			
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338				<1			
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338				<1			
6:2-FTS (27619-97-2)	<1 µg/kg	TM338				<1			
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338				<1			
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338				<1			
Total PFOS	<1 µg/kg	TM338				<1			

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. CP202				
			Depth (m) 6.70 - 6.70				
			Sample Type Soil/Solid (S)				
			Date Sampled 11/04/2022				
			Sample Time 11:00				
			Date Received 13/04/2022				
			SDG Ref 220414-86				
			Lab Sample No.(s) 26139138				
			AGS Reference				
Naphthalene-d8 % recovery**	%	TM218	95.1				
Acenaphthene-d10 % recovery**	%	TM218	98.9				
Phenanthrene-d10 % recovery**	%	TM218	107				
Chrysene-d12 % recovery**	%	TM218	93				
Perylene-d12 % recovery**	%	TM218	88.1				
Naphthalene	<9 µg/kg	TM218	1080 M				
Acenaphthylene	<12 µg/kg	TM218	83.4 M				
Acenaphthene	<8 µg/kg	TM218	5370 M				
Fluorene	<10 µg/kg	TM218	4170 M				
Phenanthrene	<15 µg/kg	TM218	25400 M				
Anthracene	<16 µg/kg	TM218	7850 M				
Fluoranthene	<17 µg/kg	TM218	23300 M				
Pyrene	<15 µg/kg	TM218	21000 M				
Benz(a)anthracene	<14 µg/kg	TM218	9590 M				
Chrysene	<10 µg/kg	TM218	9290 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218	8420 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218	3240 M				
Benzo(a)pyrene	<15 µg/kg	TM218	7550 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	4330 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	848 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218	4060 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	136000				

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
Phenol	<100 µg/kg	TM157		<500	<200	<100	<100		
Pentachlorophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<500	<200	<100	<100		
Nitrobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
Isophorone	<100 µg/kg	TM157		<500	<200	<100	<100		
Hexachloroethane	<100 µg/kg	TM157		<500	<200	<100	<100		
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<500	<200	<100	<100		
Hexachlorobutadiene	<100 µg/kg	TM157		<500	<200	<100	<100		
Hexachlorobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
n-Dioctyl phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
Dimethyl phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
Diethyl phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
n-Dibutyl phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
Dibenzofuran	<100 µg/kg	TM157		560	<200	<100	185		
Carbazole	<100 µg/kg	TM157		<500	<200	<100	383		
Butylbenzyl phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<500	<200	<100	<100		
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<500	<200	<100	<100		
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<500	<200	<100	<100		
Azobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Nitrophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Nitroaniline	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Methylphenol	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Chlorophenylphenylether	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Chloroaniline	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<500	<200	<100	<100		
4-Bromophenylphenylether	<100 µg/kg	TM157		<500	<200	<100	<100		
3-Nitroaniline	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Nitrophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Nitroaniline	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Methylphenol	<100 µg/kg	TM157		<500	<200	<100	<100		
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Chlorophenol	<100 µg/kg	TM157		<500	<200	<100	<100		

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<500	<200	<100	<100		
2,4-Dinitrotoluene	<100 µg/kg	TM157		<500	<200	<100	<100		
2,4-Dimethylphenol	<100 µg/kg	TM157		<500	<200	<100	<100		
2,4-Dichlorophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<500	<200	<100	<100		
1,4-Dichlorobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
1,3-Dichlorobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
1,2-Dichlorobenzene	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Chloronaphthalene	<100 µg/kg	TM157		<500	<200	<100	<100		
2-Methylnaphthalene	<100 µg/kg	TM157		<500	<200	<100	156		
Acenaphthylene	<100 µg/kg	TM157		<500	<200	<100	<100		
Acenaphthene	<100 µg/kg	TM157		1160	<200	<100	355		
Anthracene	<100 µg/kg	TM157		1240	<200	<100	909		
Benzo(a)anthracene	<100 µg/kg	TM157		2480	1400	239	2940		
Benzo(b)fluoranthene	<100 µg/kg	TM157		1190	901	186	2240		
Benzo(k)fluoranthene	<100 µg/kg	TM157		1620	1240	226	2170		
Benzo(a)pyrene	<100 µg/kg	TM157		1960	1230	226	2290		
Benzo(g,h,i)perylene	<100 µg/kg	TM157		941	758	160	1430		
Chrysene	<100 µg/kg	TM157		2320	1600	239	3050		
Fluoranthene	<100 µg/kg	TM157		5540	1670	412	7060		
Fluorene	<100 µg/kg	TM157		840	<200	<100	355		
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		1430	1170	253	2170		
Phenanthrene	<100 µg/kg	TM157		4790	529	200	4440		
Pyrene	<100 µg/kg	TM157		5060	1720	412	6300		
Naphthalene	<100 µg/kg	TM157		683	<200	<100	<100		
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<500	<200	<100	227		
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<500	<200	<100	<100		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		95.7	77	86.9	70.4		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		14.6	<10	<10	35.5		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		52.6	<10	<10	132		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		4970	<10	<10	216		
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		2890 #	<1000 #	<1000 #	<1000 #		
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		21400 #	7900 #	38600 #	5140 #		
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		9700	<1000	7760	<1000		
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		34600	8240	47100	5970		
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		111000	33000	72300	12200		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		97.4	<10	<10	<10		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		14.6	<10	<10	<10		
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		3310	<10	<10	143		
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		4730 #	<1000 #	<1000 #	<1000 #		
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		22800 #	1750 #	1680 #	1750 #		
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		44300 #	21600 #	22500 #	3520 #		
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		4720	1420	<1000	<1000		
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		76700	24700	25300	6270		
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		120000	33000	72300	12800		
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		5040	<50	<50	383		
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		3420	<50	<50	143		
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		8460	<20	<20	527		

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
Dibromofluoromethane**	%	TM116		139	111 @	109 @	109 @		
Toluene-d8**	%	TM116		85.4	100 @	98.5 @	99.7 @		
4-Bromofluorobenzene**	%	TM116		80.4	95 @	95.2 @	98.8 @		
Dichlorodifluoromethane	<6 µg/kg	TM116		<6 #	<120 @ #	<120 @ #	<120 @ #		
Chloromethane	<7 µg/kg	TM116		<7 #	<140 @ #	<140 @ #	<140 @ #		
Vinyl Chloride	<6 µg/kg	TM116		<6 @ M	<120 @ M	<120 @ M	<120 @ M		
Bromomethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Chloroethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Trichlorofluorormethane	<6 µg/kg	TM116		<6 M	<120 @ M	<120 @ M	<120 @ M		
1,1-Dichloroethene	<10 µg/kg	TM116		<10 #	<200 @ #	<200 @ #	<200 @ #		
Carbon Disulphide	<7 µg/kg	TM116		9.58 M	<140 @ M	<140 @ M	<140 @ M		
Dichloromethane	<10 µg/kg	TM116		<10 #	<200 @ #	<200 @ #	<200 @ #		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
1,1-Dichloroethane	<8 µg/kg	TM116		<8 M	<160 @ M	<160 @ M	<160 @ M		
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<6 M	<120 @ M	<120 @ M	<120 @ M		
2,2-Dichloropropane	<10 µg/kg	TM116		<10	<200 @	<200 @	<200 @		
Bromochloromethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Chloroform	<8 µg/kg	TM116		<8 M	<160 @ M	<160 @ M	<160 @ M		
1,1,1-Trichloroethane	<7 µg/kg	TM116		<7 M	<140 @ M	<140 @ M	<140 @ M		
1,1-Dichloropropene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Carbontetrachloride	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dichloroethane	<5 µg/kg	TM116		<5 M	<100 @ M	<100 @ M	<100 @ M		
Benzene	<9 µg/kg	TM116		15.4 M	<180 @ M	<180 @ M	<180 @ M		
Trichloroethene	<9 µg/kg	TM116		<9 #	<180 @ #	<180 @ #	<180 @ #		
1,2-Dichloropropane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Dibromomethane	<9 µg/kg	TM116		<9 M	<180 @ M	<180 @ M	<180 @ M		
Bromodichloromethane	<7 µg/kg	TM116		<7 M	<140 @ M	<140 @ M	<140 @ M		
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Toluene	<7 µg/kg	TM116		<7 M	<140 @ M	<140 @ M	<140 @ M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<10	<200 @	<200 @	<200 @		
1,1,2-Trichloroethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
1,3-Dichloropropane	<7 µg/kg	TM116		<7 M	<140 @ M	<140 @ M	<140 @ M		

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<5 M	<100 @ M	<100 @ M	<100 @ M		
Dibromochloromethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dibromoethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Chlorobenzene	<5 µg/kg	TM116		<5 M	<100 @ M	<100 @ M	<100 @ M		
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Ethylbenzene	<4 µg/kg	TM116		<4 M	<80 @ M	<80 @ M	<80 @ M		
p/m-Xylene	<10 µg/kg	TM116		<10 #	<200 @ #	<200 @ #	<200 @ #		
o-Xylene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Styrene	<10 µg/kg	TM116		<10 @ #	<200 @ #	<200 @ #	<200 @ #		
Bromoform	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Isopropylbenzene	<5 µg/kg	TM116		9.18 #	<100 @ #	<100 @ #	<100 @ #		
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<10 #	<200 @ #	<200 @ #	<200 @ #		
1,2,3-Trichloropropane	<16 µg/kg	TM116		<16 M	<320 @ M	<320 @ M	<320 @ M		
Bromobenzene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
Propylbenzene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
2-Chlorotoluene	<9 µg/kg	TM116		<9 M	<180 @ M	<180 @ M	<180 @ M		
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<8 M	<160 @ M	<160 @ M	<160 @ M		
4-Chlorotoluene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
tert-Butylbenzene	<14 µg/kg	TM116		<14 #	<280 @ #	<280 @ #	<280 @ #		
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<9 #	<180 @ #	<180 @ #	<180 @ #		
sec-Butylbenzene	<10 µg/kg	TM116		<10	<200 @	<200 @	<200 @		
4-Isopropyltoluene	<10 µg/kg	TM116		91	<200 @	<200 @	<200 @		
1,3-Dichlorobenzene	<8 µg/kg	TM116		<8 M	<160 @ M	<160 @ M	<160 @ M		
1,4-Dichlorobenzene	<5 µg/kg	TM116		<5 M	<100 @ M	<100 @ M	<100 @ M		
n-Butylbenzene	<11 µg/kg	TM116		<11	<220 @	<220 @	<220 @		
1,2-Dichlorobenzene	<10 µg/kg	TM116		<10 M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<14 M	<280 @ M	<280 @ M	<280 @ M		
Tert-amyl methyl ether	<10 µg/kg	TM116		<10 #	<200 @ #	<200 @ #	<200 @ #		
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<20	<400 @	<400 @	<400 @		
Hexachlorobutadiene	<20 µg/kg	TM116		<20	<400 @	<400 @	<400 @		
Naphthalene	<13 µg/kg	TM116		96.9 M	<260 @ M	<260 @ M	<260 @ M		
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<20 #	<400 @ #	<400 @ #	<400 @ #		
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<20	<400	<400	<400		

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	WS305	WS316	WS317		
			Depth (m)	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.50 - 2.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	11/04/2022	11/04/2022	11/04/2022	11/04/2022		
			Sample Time	11:00	12:00	10:30	10:00		
			Date Received	13/04/2022	13/04/2022	13/04/2022	13/04/2022		
			SDG Ref	220414-86	220414-86	220414-86	220414-86		
			Lab Sample No.(s)	26139138	26139152	26139129	26139123		
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.4 @	<0.4 @	<0.4 @		
Sum of BTEX	<40 µg/kg	TM116		<40	<800 @	<800 @	<800 @		

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref.	CP202	22/04/2022	Emily Anderton	Fibre bundle in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Depth (m)	6.70 - 6.70										
Sample Type	SOLID										
Date Sampled	11/04/2022 00:00:00										
Date Receieved	13/04/2022 05:00:00										
SDG	220414-86										
Original Sample	26139138										
Method Number	TM048										

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	CP202	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	6.70 - 6.70					
Sample Type	SOLID					
Date Sampled	11/04/2022 00:00:00					
Date Received	13/04/2022 05:00:00					
SDG	220414-86					
Original Sample	26139138					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220414-86 **Report Number:** 644453 **Superseded Report:** 643868
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26139138	26139152	26139129	26139146	26139123
Customer Sample Ref.	CP202	WS305	WS316	WS316	WS317
AGS Ref.					
Depth	6.70 - 6.70	1.50 - 1.50	4.00 - 4.00	2.00 - 2.00	2.50 - 2.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	22-Apr-2022				
Asbestos ID in Solid Samples	22-Apr-2022				
Asbestos Quantification - Full	03-May-2022				
Boron Water Soluble	27-Apr-2022				
Cyanide Comp/Free/Total/Thiocyanate	25-Apr-2022				
Easily Liberated Sulphide	26-Apr-2022				
EPH CWG GC (S)	21-Apr-2022	21-Apr-2022	21-Apr-2022		21-Apr-2022
GRO by GC-FID (S)	25-Apr-2022	25-Apr-2022	25-Apr-2022		25-Apr-2022
Hexavalent Chromium (s)	25-Apr-2022				
Metals in solid samples by OES	22-Apr-2022				
PAH by GCMS	21-Apr-2022				
PCBs by GCMS	22-Apr-2022				
PFAS Solids				22-Apr-2022	
pH	22-Apr-2022				
Phenols by HPLC (S)	22-Apr-2022				
Sample description	15-Apr-2022	15-Apr-2022	15-Apr-2022	15-Apr-2022	15-Apr-2022
Semi Volatile Organic Compounds	22-Apr-2022	20-Apr-2022	20-Apr-2022		20-Apr-2022
Total Organic Carbon	22-Apr-2022				
Total Sulphate	25-Apr-2022				
TPH CWG GC (S)	25-Apr-2022	25-Apr-2022	25-Apr-2022		25-Apr-2022
VOC MS (S)	22-Apr-2022	26-Apr-2022	26-Apr-2022		26-Apr-2022

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Hawarden
Deeside
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Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	27 April 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220415-70
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	644004
Order Number:	LD2711

This report has been revised and directly supersedes 643798 in its entirety.

We received 6 samples on Friday April 15, 2022 and 6 of these samples were scheduled for analysis which was completed on Wednesday April 27, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26144316	WS306		1.30 - 1.30	12/04/2022
26144306	WS307		2.60 - 2.60	12/04/2022
26144292	WS309		3.20 - 3.20	12/04/2022
26144325	WS310		2.80 - 2.80	12/04/2022
26144332	WS311		1.40 - 1.40	12/04/2022
26144299	WS318		3.50 - 3.50	12/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

- X Test
- N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26144316			26144306			26144292		26144325			26144332			26144299	
Customer Sample Reference			WS306			WS307			WS309		WS310			WS311			WS318	
AGS Reference																		
Depth (m)			1.30 - 1.30			2.60 - 2.60			3.20 - 3.20		2.80 - 2.80			1.40 - 1.40			3.50 - 3.50	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3				X					X			X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2									X			X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 5		X			X		X						X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5			X			X		X						X		X
PFAS Solids	All	NDPs: 0 Tests: 2	X								X							
Sample description	All	NDPs: 0 Tests: 5		X			X		X						X		X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 6		X			X		X			X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 5		X			X		X						X		X	
VOC MS (S)	All	NDPs: 0 Tests: 6			X			X		X			X			X		X

14:46:46 27/04/2022

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26144316	WS306	1.30 - 1.30	Dark Brown	Sandy Clay Loam	Stones	Plastic
26144306	WS307	2.60 - 2.60	Dark Brown	Sandy Clay Loam	Stones	Brick
26144292	WS309	3.20 - 3.20	Dark Brown	Clay Loam	Stones	None
26144325	WS310	2.80 - 2.80	Dark Brown	Loamy Sand	Vegetation	Brick
26144332	WS311	1.40 - 1.40	Dark Brown	Clay Loam	Stones	Brick
26144299	WS318	3.50 - 3.50	Dark Brown	Sandy Clay Loam	Stones	Oil/Petroleum

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		24	21	56	22	25	24
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #	0.0184 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #	0.0015 #	
Additional Asbestos Components (Using TM048)		TM304					None #	Chrysotile #	
Analysts Comments		TM304					0	Loose fibres in soil	
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #	0.0199 #	
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338		<3			<3		
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338		<3			<3		
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338		<2			<2		
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338		<1			<1		
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338		<1			<1		
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338		<1			<1		
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338		<1			<1		
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338		<1			<1		
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338		<1			<1		
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338		<1			<1		
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338		<1			<1		
Branched PFOS	<1 µg/kg	TM338		<1			<1		
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338		<1			<1		
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338		<1			<1		
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338		<1			<1		
6:2-FTS (27619-97-2)	<1 µg/kg	TM338		<1			<1		
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338		<1			<1		
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338		<1			<1		
Total PFOS	<1 µg/kg	TM338		<1			<1		

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
			AGS Reference						
Phenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Pentachlorophenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Nitrobenzene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Isophorone	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Hexachloroethane	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Hexachlorobutadiene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Hexachlorobenzene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
n-Dioctyl phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Dimethyl phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Diethyl phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
n-Dibutyl phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Dibenzofuran	<100 µg/kg	TM157		3180	<100	<5000	<1000	335	<100
Carbazole	<100 µg/kg	TM157		<2000	<100	64800	<1000	<200	<100
Butylbenzyl phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<2000	<100	<5000	<1000	1070	<100
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
Azobenzene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Nitrophenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Nitroaniline	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Methylphenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Chlorophenylphenylether	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Chloroaniline	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
4-Bromophenylphenylether	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
3-Nitroaniline	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
2-Nitrophenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
2-Nitroaniline	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
2-Methylphenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100
2-Chlorophenol	<100 µg/kg	TM157		<2000	<100	<5000	<1000	<200	<100

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.		Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
tot.unfilt	Total / unfiltered sample.		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.		Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
(F)	Trigger breach confirmed		Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
1-4+§@	Sample deviation (see appendix)		AGS Reference						
Component		**LOD/Units**	**Method**						
2,6-Dinitrotoluene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2,4-Dinitrotoluene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2,4-Dimethylphenol		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2,4-Dichlorophenol		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2,4,6-Trichlorophenol		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2,4,5-Trichlorophenol		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
1,4-Dichlorobenzene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
1,3-Dichlorobenzene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
1,2-Dichlorobenzene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2-Chloronaphthalene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
2-Methylnaphthalene		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100
Acenaphthylene		<100 µg/kg	TM157	<2000	<100	51500	<1000	<200	<100
Acenaphthene		<100 µg/kg	TM157	3500	<100	<5000	2070	657	145
Anthracene		<100 µg/kg	TM157	8280	<100	192000	2020	643	238
Benzo(a)anthracene		<100 µg/kg	TM157	16600	191	311000	3300	2010	792
Benzo(b)fluoranthene		<100 µg/kg	TM157	9700	<100	117000	2180	1030	436
Benzo(k)fluoranthene		<100 µg/kg	TM157	10100	127	149000	2230	1250	554
Benzo(a)pyrene		<100 µg/kg	TM157	12100	140	194000	2100	1410	528
Benzo(g,h,i)perylene		<100 µg/kg	TM157	6300	<100	68400	<1000	710	277
Chrysene		<100 µg/kg	TM157	16900	178	237000	3470	1540	766
Fluoranthene		<100 µg/kg	TM157	36700	343	572000	8860	4570	1700
Fluorene		<100 µg/kg	TM157	5610	<100	38100	<1000	549	<100
Indeno(1,2,3-cd)pyrene		<100 µg/kg	TM157	10600	<100	114000	1550	938	449
Phenanthrene		<100 µg/kg	TM157	38500	203	518000	8930	3640	726
Pyrene		<100 µg/kg	TM157	36800	318	497000	6980	4070	1520
Naphthalene		<100 µg/kg	TM157	5060	<100	12000	<1000	<200	<100
Dibenzo(a,h)anthracene		<100 µg/kg	TM157	<2000	<100	14400	<1000	<200	<100
Bis(2-chloroisopropyl) ether		<100 µg/kg	TM157	<2000	<100	<5000	<1000	<200	<100

Validated

CERTIFICATE OF ANALYSIS

SDG: 220415-70 **Report Number:** 644004 **Superseded Report:** 643798

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144332	26144299
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		103	100	45.5 4	87.4	94.7
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		172	<10	92 4	22.8	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		372	31.8	311 4	67	31.7
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		593	25.4	1370 4	201	73.9
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		3590 #	<1000 #	<10000	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		19900 #	<1000 #	<10000	63900 #	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		37300 #	<1000 #	126000	208000 #	<1000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		208000 #	<1000 #	557000	693000 #	8570 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		156000	<1000	96900	245000	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		425000	<5000	788000	1210000	8570
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		2470000	<10000	32300000	1390000	28700
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		40.9	<10	432 4	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		37	<10	702 4	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		396	16.5	911 4	134	48.8
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		16800 #	<1000 #	81100	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		108000 #	<1000 #	994000	25100 #	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		550000 #	1830 #	10900000	48100 #	8770 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1140000 #	2500 #	17800000	104000 #	9780 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		227000	<1000	1680000	5560	<1000
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		57500	<1000	249000	<1000	<1000
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		2040000	5330	31500000	183000	20100
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		2470000	<10000	32300000	1390000	28900
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		1140	57.2	1770 4	291	106
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		474	<50	2040 4	134	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		1610	57.2	3810 4	425	106

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VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
			AGS Reference						
Dibromofluoromethane**	%	TM116		110 @	112 @	113 @	111 @	115 @	111 @
Toluene-d8**	%	TM116		96.8 @	99.4 @	101 @	98.4 @	98.6 @	99.5 @
4-Bromofluorobenzene**	%	TM116		90.3 @	97.2 @	98 @	91.2 @	92.7 @	97 @
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<120 @ #	<1200 @ #	<120 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116		<140 @ #	<140 @ #	<1400 @ #	<140 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116		<120 @ M	<120 @ M	<1200 @ M	<120 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ M	<120 @ M	<1200 @ M	<120 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116		<140 @ M	<140 @ M	<1400 @ M	<140 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ M	<160 @ M	<1600 @ M	<160 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ M	<120 @ M	<1200 @ M	<120 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<200 @	<2000 @	<200 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116		<160 @ M	<160 @ M	<1600 @ M	<160 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<1400 @ M	<140 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ M	<100 @ M	<1000 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<1800 @ M	<180 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<1800 @ #	<180 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116		<180 @ M	<180 @ M	<1800 @ M	<180 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<1400 @ M	<140 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		<140 @ M	<140 @ M	<1400 @ M	<140 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<200 @	<2000 @	<200 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<1400 @ M	<140 @ M	<140 @ M	<140 @ M

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Results Legend
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- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<1000 @ M	<100 @ M	<100 @ M	<100 @ M
Dibromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Chlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<1000 @ M	<100 @ M	<100 @ M	<100 @ M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	<80 @ M	<800 @ M	<80 @ M	<80 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Styrene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
Bromoform	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<100 @ #	<1000 @ #	<100 @ #	<100 @ #	<100 @ #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ M	<320 @ M	<3200 @ M	<320 @ M	<320 @ M	<320 @ M
Bromobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
Propylbenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<1800 @ M	<180 @ M	<180 @ M	<180 @ M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<1600 @ M	<160 @ M	<160 @ M	<160 @ M
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<280 @ #	<2800 @ #	<280 @ #	<280 @ #	<280 @ #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<1800 @ #	<180 @ #	<180 @ #	<180 @ #
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<200 @	<2000 @	<200 @	<200 @	<200 @
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<200 @	<2000 @	<200 @	<200 @	<200 @
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<1600 @ M	<160 @ M	<160 @ M	<160 @ M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<1000 @ M	<100 @ M	<100 @ M	<100 @ M
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<220 @	<2200 @	<220 @	<220 @	<220 @
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<2000 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ M	<280 @ M	<2800 @ M	<280 @ M	<280 @ M	<280 @ M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<200 @ #	<2000 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<400 @	<4000 @	<400 @	<400 @	<400 @
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<400 @	<4000 @	<400 @	<400 @	<400 @
Naphthalene	<13 µg/kg	TM116		1230 @ M	<260 @ M	12300 @ M	<260 @ M	<260 @ M	<260 @ M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<400 @ #	<4000 @ #	<400 @ #	<400 @ #	<400 @ #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<4000	<400	<400	<400

Validated

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(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
			Depth (m)	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
			Sample Time	12:00	11:00	09:00	12:30	13:00	10:00
			Date Received	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022	15/04/2022
			SDG Ref	220415-70	220415-70	220415-70	220415-70	220415-70	220415-70
			Lab Sample No.(s)	26144316	26144306	26144292	26144325	26144332	26144299
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.4 @	<4 @		<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<800 @	<800 @	<8000 @		<800 @	<800 @

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Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS307 2.60 - 2.60 SOLID 12/04/2022 00:00:00 15/04/2022 05:00:00 220415-70 26144306 TM048	26/04/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS310 2.80 - 2.80 SOLID 12/04/2022 00:00:00 15/04/2022 05:00:00 220415-70 26144325 TM048	26/04/2022	James Richards	Fibre bundle in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS311 1.40 - 1.40 SOLID 12/04/2022 00:00:00 15/04/2022 05:00:00 220415-70 26144332 TM048	26/04/2022	James Richards	fibre bundles in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	WS310	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.80 - 2.80					
Sample Type	SOLID					
Date Sampled	12/04/2022 00:00:00					
Date Received	15/04/2022 05:00:00					
SDG	220415-70					
Original Sample	26144325					
Method Number	TM304					
Cust. Sample Ref.	WS311	Chrysotile (#)	Loose fibres in soil	0.0184 (#)	0.0015 (#)	0.0199 (#)
Depth (m)	1.40 - 1.40					
Sample Type	SOLID					
Date Sampled	12/04/2022 00:00:00					
Date Received	15/04/2022 05:00:00					
SDG	220415-70					
Original Sample	26144332					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

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Test Completion Dates

Lab Sample No(s)	26144316	26144306	26144292	26144325	26144332	26144299
Customer Sample Ref.	WS306	WS307	WS309	WS310	WS311	WS318
AGS Ref.						
Depth	1.30 - 1.30	2.60 - 2.60	3.20 - 3.20	2.80 - 2.80	1.40 - 1.40	3.50 - 3.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Asbestos ID in Solid Samples		26-Apr-2022		26-Apr-2022	26-Apr-2022	
Asbestos Quantification - Full				26-Apr-2022	27-Apr-2022	
EPH CWG GC (S)	21-Apr-2022	20-Apr-2022	21-Apr-2022		20-Apr-2022	21-Apr-2022
GRO by GC-FID (S)	25-Apr-2022	25-Apr-2022	26-Apr-2022		26-Apr-2022	26-Apr-2022
PFAS Solids	22-Apr-2022			22-Apr-2022		
Sample description	15-Apr-2022	15-Apr-2022	15-Apr-2022	15-Apr-2022	15-Apr-2022	15-Apr-2022
Semi Volatile Organic Compounds	20-Apr-2022	22-Apr-2022	22-Apr-2022	20-Apr-2022	22-Apr-2022	20-Apr-2022
TPH CWG GC (S)	25-Apr-2022	25-Apr-2022	26-Apr-2022		26-Apr-2022	26-Apr-2022
VOC MS (S)	26-Apr-2022	26-Apr-2022	26-Apr-2022	26-Apr-2022	26-Apr-2022	26-Apr-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	03 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220421-119
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	644481
Order Number:	LD2726

This report has been revised and directly supersedes 644465 in its entirety.

We received 7 samples on Thursday April 21, 2022 and 7 of these samples were scheduled for analysis which was completed on Tuesday May 03, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Receiveh Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampleh Date
26162140	CP202		13.00 - 14.00	14/04/2022
26162151	CP202		8.00 - 9.00	14/04/2022
26162117	TP230		1.50 - 1.50	14/04/2022
26162126	TP233		1.70 - 1.70	14/04/2022
26162107	WS302		0.50 - 0.50	14/04/2022
26162088	WS303		4.50 - 4.50	14/04/2022
26162100	WS312		4.00 - 4.00	14/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220421-119
Client Ref.: LD10385
Report Number: 644481
Location: Ten Acres Lane
Superseded Report: 644465

Results Legend

- X — Test
- N — No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26162140			26162151		26162117			26162126		26162107	26162088			26162100		
Customer Sample Reference			CP202			CP202		TP230			TP233		WS302	WS303			WS312		
AGS Reference																			
Depth (m)			13.00 - 14.00			8.00 - 9.00		1.50 - 1.50			1.70 - 1.70		0.50 - 0.50	4.50 - 4.50			4.00 - 4.00		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X		X			X									X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6	X			X		X					X	X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 4		X		X			X									X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 4		X		X			X									X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4		X		X			X									X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 5		X		X			X						X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5			X		X			X						X			X
Hexavalent Chromium (s)	All	NDPs: 1 Tests: 3		X		X			N									X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X		X			X									X	
PAH by GCMS	All	NDPs: 0 Tests: 4		X		X			X									X	
PCBs by GCMS	All	NDPs: 0 Tests: 4		X		X			X									X	
PFAS Solids	All	NDPs: 0 Tests: 2									X		X						
pH	All	NDPs: 0 Tests: 4		X		X			X									X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X		X			X									X	
Sample description	All	NDPs: 0 Tests: 5		X		X			X			X	X						

11:21:03 03/05/2022

Validated

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26162140	26162151	26162117				26162126	26162107	26162088				26162100				
Customer Sample Reference			CP202	CP202	TP230				TP233	WS302	WS303				WS312				
AGS Reference																			
Depth (m)			13.00 - 14.00	8.00 - 9.00	1.50 - 1.50				1.70 - 1.70	0.50 - 0.50	4.50 - 4.50				4.00 - 4.00				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 4				X			X					X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 4		X		X			X								X		
Total Sulphate	All	NDPs: 0 Tests: 4		X		X			X								X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 5		X		X			X					X			X		
VOC MS (S)	All	NDPs: 0 Tests: 5			X		X			X					X			X	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26162140	CP202	13.00 - 14.00	Dark Brown	Silty Clay Loam	None	Stones
26162151	CP202	8.00 - 9.00	Dark Brown	Sand	Stones	Brick
26162117	TP230	1.50 - 1.50	Dark Brown	Sandy Loam	Crushed Brick	Stones
26162126	TP233	1.70 - 1.70	Dark Brown	Sandy Clay	Vegetation	Stones
26162107	WS302	0.50 - 0.50	Dark Brown	Sandy Clay Loam	Crushed Brick	Stones
26162088	WS303	4.50 - 4.50	Dark Brown	Sandy Loam	Crushed Brick	Oil/Petroleum
26162100	WS312	4.00 - 4.00	Dark Brown	Sandy Clay Loam	Crushed Brick	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	TP233	WS302	WS303
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	1.70 - 1.70	0.50 - 0.50	4.50 - 4.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022
			Sample Time	13:00	12:00:00	11:00	11:30	13:00	12:00
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119	220421-119
			Lab Sample No.(s)	26162140	26162151	26162117	26162126	26162107	26162088
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	15	27	25	17	19
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0118 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		1.19 #	1.04 #	27.6 #			
pH	1 pH Units	TM133		8.75 M	8.03 M	8.08 M			
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #				
Cyanide, Total	<1 mg/kg	TM153		<1 M	11.5 M	38 M			
PCB congener 28	<3 µg/kg	TM168		<3 M	143 M	<3 M			
PCB congener 52	<3 µg/kg	TM168		<3 M	44.3 M	<3 M			
PCB congener 101	<3 µg/kg	TM168		<3 M	32.8 M	<3 M			
PCB congener 118	<3 µg/kg	TM168		<3 M	21.9 M	<3 M			
PCB congener 138	<3 µg/kg	TM168		<3 M	17 M	<3 M			
PCB congener 153	<3 µg/kg	TM168		<3 M	15.3 M	<3 M			
PCB congener 180	<3 µg/kg	TM168		<3 M	7.96 M	<3 M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	282	<21			
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	331 @ M	<15 @ M			
Arsenic	<0.6 mg/kg	TM181		6.91 M	7.01 M	37.5 M			
Beryllium	<0.01 mg/kg	TM181		0.936 M	0.309 M	2.88 M			
Cadmium	<0.02 mg/kg	TM181		<0.02 M	4.59 M	0.344 M			
Chromium	<0.9 mg/kg	TM181		9.13 M	23 M	15 M			
Copper	<1.4 mg/kg	TM181		17.8 M	61 M	154 M			
Lead	<0.7 mg/kg	TM181		10.8 M	576 M	193 M			
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M			
Nickel	<0.2 mg/kg	TM181		26 M	26.7 M	56 M			
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.63 #			
Vanadium	<0.2 mg/kg	TM181		20.5 #	10.9 #	57.6 #			
Zinc	<1.9 mg/kg	TM181		47.4 M	438 M	219 M			
Sulphate, Total	<48 mg/kg	TM221		<480 M	2590 M	578 M			
Boron, water soluble	<1 mg/kg	TM222		1.8 M	7.17 M	1.88 M			
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0409 M	0.497 M	0.0653 M			
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338					<3	<3	

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	TP233	WS302	WS303
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	1.70 - 1.70	0.50 - 0.50	4.50 - 4.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022
			Sample Time	13:00	12:00:00	11:00	11:30	13:00	12:00
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119	220421-119
			Lab Sample No.(s)	26162140	26162151	26162117	26162126	26162107	26162088
			AGS Reference						
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338					<3	<3	
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338					<2	<2	
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338					<1	<1	
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338					<1	<1	
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338					<1	<1	
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338					<1	<1	
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338					<1	<1	
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338					<1	<1	
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338					<1	<1	
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338					<1	<1	
Branched PFOS	<1 µg/kg	TM338					<1	<1	
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338					<1	<1	
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338					<1	<1	
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338					<1	<1	
6:2-FTS (27619-97-2)	<1 µg/kg	TM338					<1	<1	
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338					<1	<1	
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338					<1	<1	
Total PFOS	<1 µg/kg	TM338					<1	<1	

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	WS312						
Depth (m)	4.00 - 4.00						
Sample Type	Soil/Solid (S)						
Date Sampled	14/04/2022						
Sample Time	12:30						
Date Received	21/04/2022						
SDG Ref	220421-119						
Lab Sample No.(s)	26162100						
AGS Reference							
Component	**LOD/Units**	**Method**					
Moisture Content Ratio (% of as received sample)	%	PM024	15				
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132	4.6 #				
pH	1 pH Units	TM133	8.41 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #				
Cyanide, Total	<1 mg/kg	TM153	<1 M				
PCB congener 28	<3 µg/kg	TM168	<3 M				
PCB congener 52	<3 µg/kg	TM168	<3 M				
PCB congener 101	<3 µg/kg	TM168	<3 M				
PCB congener 118	<3 µg/kg	TM168	<3 M				
PCB congener 138	<3 µg/kg	TM168	<3 M				
PCB congener 153	<3 µg/kg	TM168	<3 M				
PCB congener 180	<3 µg/kg	TM168	<3 M				
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<21				
Sulphide, Easily liberated	<15 mg/kg	TM180	<15 @ M				
Arsenic	<0.6 mg/kg	TM181	13.2 M				
Beryllium	<0.01 mg/kg	TM181	1.03 M				
Cadmium	<0.02 mg/kg	TM181	0.0676 M				
Chromium	<0.9 mg/kg	TM181	8.58 M				
Copper	<1.4 mg/kg	TM181	36.7 M				
Lead	<0.7 mg/kg	TM181	33.5 M				
Mercury	<0.1 mg/kg	TM181	<0.1 M				
Nickel	<0.2 mg/kg	TM181	24.1 M				
Selenium	<1 mg/kg	TM181	<1 #				
Vanadium	<0.2 mg/kg	TM181	24 #				
Zinc	<1.9 mg/kg	TM181	70.5 M				
Sulphate, Total	<48 mg/kg	TM221	158 M				
Boron, water soluble	<1 mg/kg	TM222	2.18 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0583 M				

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	WS312		
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	4.00 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022		
			Sample Time	13:00	12:00:00	11:00	12:30		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220421-119	220421-119	220421-119	220421-119		
			Lab Sample No.(s)	26162140	26162151	26162117	26162100		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.3	85	92.4	96.4		
Acenaphthene-d10 % recovery**	%	TM218		94.6	82.4	89.8	92.3		
Phenanthrene-d10 % recovery**	%	TM218		91.4	78.7	83.8	87.9		
Chrysene-d12 % recovery**	%	TM218		89.1	80.6	77.9	82.7		
Perylene-d12 % recovery**	%	TM218		94.7	88.4	75	85		
Naphthalene	<9 µg/kg	TM218		<9 M	140 M	71.9 M	<9 M		
Acenaphthylene	<12 µg/kg	TM218		<12 M	<60 M	<12 M	<12 M		
Acenaphthene	<8 µg/kg	TM218		<8 M	413 M	28.2 M	<8 M		
Fluorene	<10 µg/kg	TM218		<10 M	210 M	18.5 M	<10 M		
Phenanthrene	<15 µg/kg	TM218		22.3 M	1090 M	282 M	81.3 M		
Anthracene	<16 µg/kg	TM218		<16 M	391 M	64.6 M	20.2 M		
Fluoranthene	<17 µg/kg	TM218		<17 M	2760 M	461 M	150 M		
Pyrene	<15 µg/kg	TM218		<15 M	2350 M	456 M	140 M		
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	871 M	255 M	69.9 M		
Chrysene	<10 µg/kg	TM218		<10 M	874 M	275 M	76.6 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	1020 M	429 M	98.4 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	382 M	153 M	31 M		
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	735 M	351 M	63.8 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	454 M	299 M	46.4 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<115 M	44.7 M	<23 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	448 M	298 M	45.4 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	12100	3490	823		

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	TP230	WS303	WS312		
			Depth (m)	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022		
			Sample Time	12:00:00	11:00	12:00	12:30		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220421-119	220421-119	220421-119	220421-119		
			Lab Sample No.(s)	26162151	26162117	26162088	26162100		
			AGS Reference						
Phenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
Pentachlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<200	<100	<1000	<100		
Nitrobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
Isophorone	<100 µg/kg	TM157		<200	<100	<1000	<100		
Hexachloroethane	<100 µg/kg	TM157		<200	<100	<1000	<100		
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<400	<100	<2000	<200		
Hexachlorobutadiene	<100 µg/kg	TM157		<200	<100	<1000	<100		
Hexachlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
n-Dioctyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100		
Dimethyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100		
Diethyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100		
n-Dibutyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100		
Dibenzofuran	<100 µg/kg	TM157		976	<100	<1000	<100		
Carbazole	<100 µg/kg	TM157		1000	<100	<1000	<100		
Butylbenzyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100		
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		1560	<100	<1000	<100		
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<200	<100	<1000	<100		
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<200	<100	<1000	<100		
Azobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Nitrophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Chlorophenylphenylether	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Chloroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
4-Bromophenylphenylether	<100 µg/kg	TM157		<200	<100	<1000	<100		
3-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Nitrophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Chlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	TP230	WS303	WS312		
			Depth (m)	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022		
			Sample Time	12:00:00	11:00	12:00	12:30		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220421-119	220421-119	220421-119	220421-119		
			Lab Sample No.(s)	26162151	26162117	26162088	26162100		
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<1000	<100		
2,4-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<1000	<100		
2,4-Dimethylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
2,4-Dichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100		
1,4-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
1,3-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
1,2-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Chloronaphthalene	<100 µg/kg	TM157		<200	<100	<1000	<100		
2-Methylnaphthalene	<100 µg/kg	TM157		512	<100	<1000	<100		
Acenaphthylene	<100 µg/kg	TM157		<200	<100	<1000	<100		
Acenaphthene	<100 µg/kg	TM157		1550	<100	1450	<100		
Anthracene	<100 µg/kg	TM157		4620	<100	1330	<100		
Benzo(a)anthracene	<100 µg/kg	TM157		5660	225	2310	<100		
Benzo(b)fluoranthene	<100 µg/kg	TM157		2260	144	<1000	<100		
Benzo(k)fluoranthene	<100 µg/kg	TM157		3640	269	1710	<100		
Benzo(a)pyrene	<100 µg/kg	TM157		3260	318	1310	<100		
Benzo(g,h,i)perylene	<100 µg/kg	TM157		1890	222	<1000	<100		
Chrysene	<100 µg/kg	TM157		5740	306	2660	<100		
Fluoranthene	<100 µg/kg	TM157		16500	330	6890	<100		
Fluorene	<100 µg/kg	TM157		1340	<100	1310	<100		
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		4270	336	1740	<100		
Phenanthrene	<100 µg/kg	TM157		11200	264	7240	<100		
Pyrene	<100 µg/kg	TM157		14200	408	5880	<100		
Naphthalene	<100 µg/kg	TM157		716	<100	<1000	<100		
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		283	<100	<1000	<100		
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<200	<100	<1000	<100		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	WS303	WS312
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022
			Sample Time	13:00	12:00:00	11:00	12:00	12:30
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119
			Lab Sample No.(s)	26162140	26162151	26162117	26162088	26162100
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		78.3	93.7	92.3	82.1	79.9
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	16.5	<10	54.6	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		17.6	69.6	<10	122	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		15.2	278	<10	268	<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	13700 #	<1000 #	4060 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	25200 #	<1000 #	62900 #	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	70100 #	<1000 #	70000 #	<1000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	483000 #	<1000 #	108000 #	<1000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	79000	<1000	17600	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	671000	<5000	263000	<5000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		<10000	898000	<10000	1250000	<10000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	10.6	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		10.5	185	<10	179	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	4560 #	<1000 #	1350 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	27100 #	<1000 #	32800 #	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	69300 #	<1000 #	82700 #	<1000 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	118000 #	2320 #	641000 #	<1000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	8650	<1000	231000	<1000
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	3630	<1000	59100	<1000
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	228000	<5000	989000	<5000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		<10000	899000	<10000	1250000	<10000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50	365	<50	444	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	196	<50	179	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20	561	<20	622	<20

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
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- aq Aqueous / settled sample.
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Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	WS303	WS312
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022
			Sample Time	13:00	12:00:00	11:00	12:00	12:30
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119
			Lab Sample No.(s)	26162140	26162151	26162117	26162088	26162100
			AGS Reference					
Dibromofluoromethane**	%	TM116		125 @	123	128 @	120 @	123 @
Toluene-d8**	%	TM116		99.4 @	91	100 @	100 @	99.7 @
4-Bromofluorobenzene**	%	TM116		93.4 @	72.6	90.6 @	94.1 @	93.3 @
Dichlorodifluoromethane	<6 µg/kg	TM116			<6 #	<120 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116			<7 #	<140 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116			<6 @ M	<120 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116			<6 M	<120 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116			<10 #	<200 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116			11.9 M	<140 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116			<10 #	<200 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116			<8 M	<160 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116			<6 M	<120 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116			<10	<200 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116			<8 M	<160 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116			<7 M	<140 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116			<5 M	<100 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<180 @ M	<9 M	<180 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116			<9 #	<180 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116			<9 M	<180 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116			<7 M	<140 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		<140 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116			<10	<200 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116			<7 M	<140 @ M	<140 @ M	<140 @ M

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	WS303	WS312	
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022	
			Sample Time	13:00	12:00:00	11:00	12:00	12:30	
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022	
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119	
			Lab Sample No.(s)	26162140	26162151	26162117	26162088	26162100	
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116			<5 M	<100 @ M	<100 @ M	<100 @ M	
Dibromochloromethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
1,2-Dibromoethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
Chlorobenzene	<5 µg/kg	TM116			<5 M	<100 @ M	<100 @ M	<100 @ M	
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	5.7 M	<80 @ M	<80 @ M	<80 @ M	
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #	
o-Xylene	<10 µg/kg	TM116		<200 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M	
Styrene	<10 µg/kg	TM116			<10 @ #	<200 @ #	<200 @ #	<200 @ #	
Bromoform	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
Isopropylbenzene	<5 µg/kg	TM116			<5 #	<100 @ #	<100 @ #	<100 @ #	
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116			<10 #	<200 @ #	<200 @ #	<200 @ #	
1,2,3-Trichloropropane	<16 µg/kg	TM116			<16 M	<320 @ M	<320 @ M	<320 @ M	
Bromobenzene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
Propylbenzene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
2-Chlorotoluene	<9 µg/kg	TM116			<9 M	<180 @ M	<180 @ M	<180 @ M	
1,3,5-Trimethylbenzene	<8 µg/kg	TM116			<8 M	<160 @ M	<160 @ M	<160 @ M	
4-Chlorotoluene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
tert-Butylbenzene	<14 µg/kg	TM116			<14 #	<280 @ #	<280 @ #	<280 @ #	
1,2,4-Trimethylbenzene	<9 µg/kg	TM116			<9 #	<180 @ #	<180 @ #	<180 @ #	
sec-Butylbenzene	<10 µg/kg	TM116			<10	<200 @	<200 @	<200 @	
4-Isopropyltoluene	<10 µg/kg	TM116			<10	<200 @	<200 @	<200 @	
1,3-Dichlorobenzene	<8 µg/kg	TM116			<8 M	<160 @ M	<160 @ M	<160 @ M	
1,4-Dichlorobenzene	<5 µg/kg	TM116			<5 M	<100 @ M	<100 @ M	<100 @ M	
n-Butylbenzene	<11 µg/kg	TM116			<11	<220 @	<220 @	<220 @	
1,2-Dichlorobenzene	<10 µg/kg	TM116			<10 M	<200 @ M	<200 @ M	<200 @ M	
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116			<14 M	<280 @ M	<280 @ M	<280 @ M	
Tert-amyl methyl ether	<10 µg/kg	TM116			<10 #	<200 @ #	<200 @ #	<200 @ #	
1,2,4-Trichlorobenzene	<20 µg/kg	TM116			<20	<400 @	<400 @	<400 @	
Hexachlorobutadiene	<20 µg/kg	TM116			<20	<400 @	<400 @	<400 @	
Naphthalene	<13 µg/kg	TM116			<13 M	<260 @ M	<260 @ M	<260 @ M	
1,2,3-Trichlorobenzene	<20 µg/kg	TM116			<20 #	<400 @ #	<400 @ #	<400 @ #	
1,3,5-Trichlorobenzene	<20 µg/kg	TM116			<20	<400	<400	<400	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP202	TP230	WS303	WS312
			Depth (m)	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	4.50 - 4.50	4.00 - 4.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/04/2022	14/04/2022	14/04/2022	14/04/2022	14/04/2022
			Sample Time	13:00	12:00:00	11:00	12:00	12:30
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220421-119	220421-119	220421-119	220421-119	220421-119
			Lab Sample No.(s)	26162140	26162151	26162117	26162088	26162100
			AGS Reference					
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.02	<0.4 @	<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<800 @	<40	<800 @	<800 @	<800 @

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP202 13.00 - 14.00 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162140 TM048	28/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP202 8.00 - 9.00 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162151 TM048	27/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP230 1.50 - 1.50 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162117 TM048	28/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS302 0.50 - 0.50 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162107 TM048	03/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS303 4.50 - 4.50 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162088 TM048	03/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS312 4.00 - 4.00 SOLID 14/04/2022 00:00:00 21/04/2022 05:00:00 220421-119 26162100 TM048	28/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Notification of NDPs (No determination possible)

Date Received : 21/04/2022 11:44:22

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
26162117	TP230	1.50 - 1.50	Hexavalent Chromium (s)	Sample too coloured

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220421-119 **Report Number:** 644481 **Superseded Report:** 644465
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26162140	26162151	26162117	26162126	26162107	26162088	26162100
Customer Sample Ref.	CP202	CP202	TP230	TP233	WS302	WS303	WS312
AGS Ref.							
Depth	13.00 - 14.00	8.00 - 9.00	1.50 - 1.50	1.70 - 1.70	0.50 - 0.50	4.50 - 4.50	4.00 - 4.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	26-Apr-2022	26-Apr-2022	26-Apr-2022				26-Apr-2022
Asbestos ID in Solid Samples	28-Apr-2022	27-Apr-2022	28-Apr-2022		03-May-2022	03-May-2022	28-Apr-2022
Boron Water Soluble	28-Apr-2022	28-Apr-2022	28-Apr-2022				28-Apr-2022
Cyanide Comp/Free/Total/Thiocyanate	26-Apr-2022	26-Apr-2022	28-Apr-2022				26-Apr-2022
Easily Liberated Sulphide	27-Apr-2022	26-Apr-2022	26-Apr-2022				27-Apr-2022
EPH CWG GC (S)	26-Apr-2022	26-Apr-2022	28-Apr-2022			26-Apr-2022	26-Apr-2022
GRO by GC-FID (S)	28-Apr-2022	28-Apr-2022	28-Apr-2022			28-Apr-2022	28-Apr-2022
Hexavalent Chromium (s)	27-Apr-2022	28-Apr-2022					27-Apr-2022
Metals in solid samples by OES	26-Apr-2022	26-Apr-2022	26-Apr-2022				26-Apr-2022
PAH by GCMS	27-Apr-2022	27-Apr-2022	27-Apr-2022				27-Apr-2022
PCBs by GCMS	28-Apr-2022	27-Apr-2022	28-Apr-2022				28-Apr-2022
PFAS Solids				27-Apr-2022	27-Apr-2022		
pH	26-Apr-2022	26-Apr-2022	26-Apr-2022				26-Apr-2022
Phenols by HPLC (S)	26-Apr-2022	26-Apr-2022	26-Apr-2022				27-Apr-2022
Sample description	22-Apr-2022	22-Apr-2022	22-Apr-2022	22-Apr-2022	22-Apr-2022	22-Apr-2022	22-Apr-2022
Semi Volatile Organic Compounds		26-Apr-2022	28-Apr-2022			26-Apr-2022	26-Apr-2022
Total Organic Carbon	28-Apr-2022	28-Apr-2022	28-Apr-2022				28-Apr-2022
Total Sulphate	26-Apr-2022	26-Apr-2022	26-Apr-2022				26-Apr-2022
TPH CWG GC (S)	28-Apr-2022	28-Apr-2022	28-Apr-2022			28-Apr-2022	28-Apr-2022
VOC MS (S)	28-Apr-2022	28-Apr-2022	28-Apr-2022			28-Apr-2022	28-Apr-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	05 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220425-5
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	644903
Order Number:	LD2729

This report has been revised and directly supersedes 644698 in its entirety.

We received 6 samples on Thursday April 21, 2022 and 6 of these samples were scheduled for analysis which was completed on Thursday May 05, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26178980	TP230		1.60 - 1.60	1&/04/2022
26178&75	TP231		0.60 - 0.60	1&/04/2022
26178&6&	TP232		1.00 - 1.00	1&/04/2022
2617&001	TP234		3.50 - 3.50	1&/04/2022
26178&85	TP247		1.60 - 1.60	1&/04/2022
26178&&6	TP247		2.00 - 2.00	1&/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26178980	TP230		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26178975	TP231		0.60 - 0.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26178969	TP232		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
			26179001	TP234		3.50 - 3.50	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26178985	TP247		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26178996	TP247		2.00 - 2.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Easily Liberated Sulphide	All	NDPs: 0 Tests: 4		X				
				X				
				X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X				
				X				
				X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X			
					X			
					X			
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X				
				X				
				X				
PAH by GCMS	All	NDPs: 0 Tests: 4		X				
				X				
				X				
PCBs by GCMS	All	NDPs: 0 Tests: 4		X				
				X				
				X				
PFAS Solids	All	NDPs: 0 Tests: 2					X	
								X
pH	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X				
				X				
				X				
Sample description	All	NDPs: 0 Tests: 5		X				
							X	
				X				
								X

Validated

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26178980			26178975			26178969			26179001			26178985			26178996
Customer Sample Reference			TP230			TP231			TP232			TP234			TP247			TP247
AGS Reference																		
Depth (m)			1.60 - 1.60			0.60 - 0.60			1.00 - 1.00			3.50 - 3.50			1.60 - 1.60			2.00 - 2.00
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 4		X			X					X			X			
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X					X			X			
Total Sulphate	All	NDPs: 0 Tests: 4		X			X					X			X			
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X					X			X			
VOC MS (S)	All	NDPs: 0 Tests: 4			X			X					X			X		

13:18:02 05/05/2022

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
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Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26178980	TP230	1.60 - 1.60	Dark Brown	Stone/Soil	Stones	N/A
26178975	TP231	0.60 - 0.60	Dark Brown	Loamy Sand	N/A	N/A
26178969	TP232	1.00 - 1.00	Dark Brown	Sand	Stones	None
26179001	TP234	3.50 - 3.50	Dark Brown	Loamy Sand	Stones	Brick
26178985	TP247	1.60 - 1.60	Dark Brown	Sand	Stones	N/A
26178996	TP247	2.00 - 2.00	Dark Brown	Sandy Clay Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP232	TP234	TP247	TP247
			Depth (m)	1.60 - 1.60	0.60 - 0.60	1.00 - 1.00	3.50 - 3.50	1.60 - 1.60	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022	19/04/2022	19/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220425-5	220425-5	220425-5	220425-5	220425-5	220425-5
			Lab Sample No.(s)	26178980	26178975	26178969	26179001	26178985	26178996
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		27	42	27	24	22	25
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M		<0.01 M	<0.01 M	
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M		<0.01 M	<0.01 M	
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015 M		<0.015 M	<0.015 M	
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035 M		<0.035 M	<0.035 M	
Soil Organic Matter (SOM)	<0.35 %	TM132		20.9 #	7.62 #		12.8 #	32.8 #	
pH	1 pH Units	TM133		7.83 #	7.17 M		10.6 M	8.28 M	
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #		<0.6 #	<0.6 #	
Cyanide, Total	<1 mg/kg	TM153		5.33 #	20.1 M		4.2 M	18.9 M	
PCB congener 28	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 52	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 101	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 118	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 138	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 153	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
PCB congener 180	<3 µg/kg	TM168		<3 #	<3 M		<3 M	<3 M	
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<21		<21	<21	
Sulphide, Easily liberated	<15 mg/kg	TM180		101 @ #	153 @ M		<15 @ M	<15 @ M	
Arsenic	<0.6 mg/kg	TM181		64.5 #	95.9 M		40 M	<6 M	
Beryllium	<0.01 mg/kg	TM181		1.64 #	2.05 M		1.72 M	3 M	
Cadmium	<0.02 mg/kg	TM181		0.283 #	37.4 M		0.162 M	0.862 M	
Chromium	<0.9 mg/kg	TM181		29.7 #	168 M		21.2 M	27.5 M	
Copper	<1.4 mg/kg	TM181		169 #	850 M		84.7 M	4440 M	
Lead	<0.7 mg/kg	TM181		223 #	342 M		108 M	923 M	
Mercury	<0.1 mg/kg	TM181		<0.1 #	<1 M		<0.1 M	<0.1 M	
Nickel	<0.2 mg/kg	TM181		54.7 #	183 M		30.7 M	<2 M	
Selenium	<1 mg/kg	TM181		2.29 #	<1 #		1.48 #	<10 #	
Vanadium	<0.2 mg/kg	TM181		66.6 #	332 #		45.2 #	2.04 #	
Zinc	<1.9 mg/kg	TM181		242 #	2090 M		85.6 M	889 M	
Sulphate, Total	<48 mg/kg	TM221		1480 #	2000 M		1050 M	1140 M	
Boron, water soluble	<1 mg/kg	TM222		2.62 #	1.61 M		1.21 M	1.2 M	
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.186 #	0.238 M		0.0799 M	0.0885 M	
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338				<3			<3

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP232	TP234	TP247	TP247
			Depth (m)	1.60 - 1.60	0.60 - 0.60	1.00 - 1.00	3.50 - 3.50	1.60 - 1.60	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022	19/04/2022	19/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022	21/04/2022
			SDG Ref	220425-5	220425-5	220425-5	220425-5	220425-5	220425-5
			Lab Sample No.(s)	26178980	26178975	26178969	26179001	26178985	26178996
			AGS Reference						
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338				<3			<3
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338				<2			<2
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338				<1			<1
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338				<1			<1
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338				<1			<1
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338				<1			<1
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338				<1			<1
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338				<1			<1
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338				<1			<1
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338				<1			<1
Branched PFOS	<1 µg/kg	TM338				<1			<1
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338				<1			<1
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338				<1			<1
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338				<1			<1
6:2-FTS (27619-97-2)	<1 µg/kg	TM338				<1			<1
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338				<1			<1
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338				<1			<1
Total PFOS	<1 µg/kg	TM338				<1			<1

Validated

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698

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PAH by GCMS

Results Legend

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(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.1	94	93.9	86.3		
Acenaphthene-d10 % recovery**	%	TM218		91.9	92.2	91.4	88.9		
Phenanthrene-d10 % recovery**	%	TM218		87.6	87.3	88	89.9		
Chrysene-d12 % recovery**	%	TM218		89.5	91.5	93.1	82.2		
Perylene-d12 % recovery**	%	TM218		90.8	94.1	89.5	73.6		
Naphthalene	<9 µg/kg	TM218		25.7 #	45.8 M	26 M	69.8 M		
Acenaphthylene	<12 µg/kg	TM218		29.2 #	148 M	26.5 M	132 M		
Acenaphthene	<8 µg/kg	TM218		20.4 #	33.1 M	39 M	47.2 M		
Fluorene	<10 µg/kg	TM218		22.3 #	51.2 M	30.4 M	49.6 M		
Phenanthrene	<15 µg/kg	TM218		194 #	301 M	312 M	623 M		
Anthracene	<16 µg/kg	TM218		45.9 #	117 M	78 M	169 M		
Fluoranthene	<17 µg/kg	TM218		472 #	776 M	556 M	1140 M		
Pyrene	<15 µg/kg	TM218		449 #	892 M	534 M	1200 M		
Benz(a)anthracene	<14 µg/kg	TM218		229 #	616 M	278 M	807 M		
Chrysene	<10 µg/kg	TM218		235 #	561 M	276 M	808 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		277 #	716 M	330 M	928 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		122 #	333 M	118 M	407 M		
Benzo(a)pyrene	<15 µg/kg	TM218		219 #	744 M	278 M	908 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		194 #	484 M	231 M	738 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		37.7 #	98 M	44.7 M	146 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		180 #	403 M	214 M	641 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2750	6320	3370	8820		

CERTIFICATE OF ANALYSIS

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Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

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- # ISO17025 accredited.
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- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
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Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100	<100	<200		
Pentachlorophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100	<100	<200		
Nitrobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
Isophorone	<100 µg/kg	TM157		<100	<100	<100	<200		
Hexachloroethane	<100 µg/kg	TM157		<100	<100	<100	<200		
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100	<100	<200		
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100	<100	<200		
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
Diethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
Dibenzofuran	<100 µg/kg	TM157		<100	<100	<100	<200		
Carbazole	<100 µg/kg	TM157		<100	<100	<100	<200		
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100	<100	<200		
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100	<100	<200		
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100	<100	<200		
Azobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Nitrophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Chloroaniline	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100	<100	<200		
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<200		
3-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Nitrophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<200		
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Chlorophenol	<100 µg/kg	TM157		<100	<100	<100	<200		

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Semi Volatile Organic Compounds

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Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<100	<100	<200		
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<100	<100	<200		
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<100	<100	<200		
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<100	<100	<200		
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<100	<100	<200		
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<100	<100	<200		
Acenaphthylene	<100 µg/kg	TM157		<100	<100	<100	<200		
Acenaphthene	<100 µg/kg	TM157		<100	<100	<100	<200		
Anthracene	<100 µg/kg	TM157		<100	<100	<100	334		
Benzo(a)anthracene	<100 µg/kg	TM157		383	<100	158	1160		
Benzo(b)fluoranthene	<100 µg/kg	TM157		273	<100	<100	800		
Benzo(k)fluoranthene	<100 µg/kg	TM157		308	<100	160	1070		
Benzo(a)pyrene	<100 µg/kg	TM157		280	<100	152	1150		
Benzo(g,h,i)perylene	<100 µg/kg	TM157		229	<100	<100	801		
Chrysene	<100 µg/kg	TM157		460	<100	236	1280		
Fluoranthene	<100 µg/kg	TM157		1050	<100	496	1770		
Fluorene	<100 µg/kg	TM157		<100	<100	<100	<200		
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		217	<100	<100	968		
Phenanthrene	<100 µg/kg	TM157		257	<100	497	1520		
Pyrene	<100 µg/kg	TM157		913	<100	513	1730		
Naphthalene	<100 µg/kg	TM157		<100	<100	<100	<200		
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<100	<100	<200		
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<100	<100	<200		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99.2 @	79.1 @	107 @	77.6 @		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		15.1 @	<10 @	<10 @	<10 @		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		71.2 @	<10 @	<10 @	31.8 @		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		121 @	<10 @	<10 @	25.4 @		
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	5350 #		
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	8760 #		
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	26800 #		
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	<5000	<5000	41300		
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		16700	<10000	<10000	163000		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @		
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		80.8 @	<10 @	<10 @	16.5 @		
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	1260 #		
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		4830 #	<1000 #	<1000 #	15900 #		
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		9930 #	<1000 #	<1000 #	92200 #		
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	12300		
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	1450		
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		15800	<5000	<5000	122000		
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		15800	<10000	<10000	163000		
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		207 @	<50 @	<50 @	57.2 @		
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		80.8 @	<50 @	<50 @	<50 @		
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		288 @	<20 @	<20 @	57.2 @		

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
Dibromofluoromethane**	%	TM116		114 @	96.1	108	114 @		
Toluene-d8**	%	TM116		99.6 @	97.2	101	98.9 @		
4-Bromofluorobenzene**	%	TM116		98.1 @	71.6	77	95.2 @		
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<6 #	<6 #	<120 @ #		
Chloromethane	<7 µg/kg	TM116		<140 @ #	<7 #	<7 #	<140 @ #		
Vinyl Chloride	<6 µg/kg	TM116		<120 @ #	<6 @ M	<6 @ M	<120 @ M		
Bromomethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Chloroethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ #	<6 M	<6 M	<120 @ M		
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<10 #	<10 #	<200 @ #		
Carbon Disulphide	<7 µg/kg	TM116		<140 @ #	31.3 M	<7 M	<140 @ M		
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<10 #	<10 #	<200 @ #		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ #	<8 M	<8 M	<160 @ M		
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ #	<6 M	<6 M	<120 @ M		
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<10	<10	<200 @		
Bromochloromethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Chloroform	<8 µg/kg	TM116		<160 @ #	<8 M	<8 M	<160 @ M		
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ #	<7 M	<7 M	<140 @ M		
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Carbontetrachloride	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ #	<5 M	<5 M	<100 @ M		
Benzene	<9 µg/kg	TM116		<180 @ #	<9 M	<9 M	<180 @ M		
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<9 #	<9 #	<180 @ #		
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Dibromomethane	<9 µg/kg	TM116		<180 @ #	<9 M	<9 M	<180 @ M		
Bromodichloromethane	<7 µg/kg	TM116		<140 @ #	<7 M	<7 M	<140 @ M		
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Toluene	<7 µg/kg	TM116		<140 @ #	<7 M	<7 M	<140 @ M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<10	<10	<200 @		
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ #	<7 M	<7 M	<140 @ M		

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ #	<5 M	<5 M	<100 @ M		
Dibromochloromethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Chlorobenzene	<5 µg/kg	TM116		<100 @ #	<5 M	<5 M	<100 @ M		
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Ethylbenzene	<4 µg/kg	TM116		<80 @ #	<4 M	<4 M	<80 @ M		
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<10 #	<10 #	<200 @ #		
o-Xylene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Styrene	<10 µg/kg	TM116		<200 @ #	<10 @ #	<10 @ #	<200 @ #		
Bromoform	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<5 #	<5 #	<100 @ #		
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<10 #	<10 #	<200 @ #		
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ #	<16 M	<16 M	<320 @ M		
Bromobenzene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
Propylbenzene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ #	<9 M	<9 M	<180 @ M		
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ #	<8 M	<8 M	<160 @ M		
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<14 #	<14 #	<280 @ #		
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	<9 #	<9 #	<180 @ #		
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<10	<10	<200 @		
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<10	<10	<200 @		
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ #	<8 M	<8 M	<160 @ M		
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ #	<5 M	<5 M	<100 @ M		
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<11	<11	<220 @		
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ #	<10 M	<10 M	<200 @ M		
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ #	<14 M	<14 M	<280 @ M		
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<10 #	<10 #	<200 @ #		
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<20	<20	<400 @		
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<20	<20	<400 @		
Naphthalene	<13 µg/kg	TM116		<260 @ #	<13 M	<13 M	<260 @ M		
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<20 #	<20 #	<400 @ #		
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<20	<20	<400		

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP231	TP234	TP247		
			Depth (m)	1.60 - 1.60	0.60 - 0.60	3.50 - 3.50	1.60 - 1.60		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	19/04/2022	19/04/2022	19/04/2022	19/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	21/04/2022	21/04/2022	21/04/2022	21/04/2022		
			SDG Ref	220425-5	220425-5	220425-5	220425-5		
			Lab Sample No.(s)	26178980	26178975	26179001	26178985		
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.02	<0.02	<0.4 @		
Sum of BTEX	<40 µg/kg	TM116		<800 @	<40	<40	<800 @		

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP230 1.60 - 1.60 SOLID 19/04/2022 00:00:00 21/04/2022 05:00:00 220425-5 26178980 TM048	29/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP231 0.60 - 0.60 SOLID 19/04/2022 00:00:00 21/04/2022 05:00:00 220425-5 26178975 TM048	03/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP234 3.50 - 3.50 SOLID 19/04/2022 00:00:00 21/04/2022 05:00:00 220425-5 26179001 TM048	29/04/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP247 1.60 - 1.60 SOLID 19/04/2022 00:00:00 21/04/2022 05:00:00 220425-5 26178985 TM048	29/04/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220425-5 **Report Number:** 644903 **Superseded Report:** 644698
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26178980	26178975	26178969	26179001	26178985	26178996
Customer Sample Ref.	TP230	TP231	TP232	TP234	TP247	TP247
AGS Ref.						
Depth	1.60 - 1.60	0.60 - 0.60	1.00 - 1.00	3.50 - 3.50	1.60 - 1.60	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	29-Apr-2022	29-Apr-2022		29-Apr-2022	29-Apr-2022	
Asbestos ID in Solid Samples	29-Apr-2022	03-May-2022		29-Apr-2022	29-Apr-2022	
Boron Water Soluble	28-Apr-2022	28-Apr-2022		28-Apr-2022	28-Apr-2022	
Cyanide Comp/Free/Total/Thiocyanate	28-Apr-2022	28-Apr-2022		28-Apr-2022	28-Apr-2022	
Easily Liberated Sulphide	29-Apr-2022	29-Apr-2022		29-Apr-2022	29-Apr-2022	
EPH CWG GC (S)	28-Apr-2022	28-Apr-2022		28-Apr-2022	28-Apr-2022	
GRO by GC-FID (S)	03-May-2022	03-May-2022		03-May-2022	03-May-2022	
Hexavalent Chromium (s)	26-Apr-2022	29-Apr-2022		26-Apr-2022	26-Apr-2022	
Metals in solid samples by OES	29-Apr-2022	03-May-2022		29-Apr-2022	29-Apr-2022	
PAH by GCMS	29-Apr-2022	29-Apr-2022		29-Apr-2022	29-Apr-2022	
PCBs by GCMS	28-Apr-2022	28-Apr-2022		28-Apr-2022	28-Apr-2022	
PFAS Solids			27-Apr-2022			27-Apr-2022
pH	28-Apr-2022	03-May-2022		03-May-2022	28-Apr-2022	
Phenols by HPLC (S)	28-Apr-2022	27-Apr-2022		28-Apr-2022	28-Apr-2022	
Sample description	25-Apr-2022	25-Apr-2022	25-Apr-2022	25-Apr-2022	25-Apr-2022	25-Apr-2022
Semi Volatile Organic Compounds	27-Apr-2022	27-Apr-2022		28-Apr-2022	27-Apr-2022	
Total Organic Carbon	05-May-2022	04-May-2022		04-May-2022	04-May-2022	
Total Sulphate	28-Apr-2022	28-Apr-2022		28-Apr-2022	28-Apr-2022	
TPH CWG GC (S)	03-May-2022	03-May-2022		03-May-2022	03-May-2022	
VOC MS (S)	03-May-2022	29-Apr-2022		29-Apr-2022	03-May-2022	

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	25 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220426-111
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	648036
Order Number:	LD2733

This report has been revised and directly supersedes 646228 in its entirety.

We received 15 samples on Saturday April 23, 2022 and 15 of these samples were scheduled for analysis which was completed on Wednesday May 25, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26186820	TP212		1.50 - 1.50	21/04/2022
26186827	TP213		0.60 - 0.60	21/04/2022
26186814	TP214		2.00 - 2.00	21/04/2022
26186871	TP216		0.60 - 0.60	20/04/2022
26186866	TP217		4.00 - 4.00	20/04/2022
26186854	TP237		2.00 - 2.00	20/04/2022
26186860	TP237		4.00 - 4.00	20/04/2022
26186849	TP238		4.00 - 4.00	20/04/2022
26186833	TP240		2.00 - 2.00	21/04/2022
26186876	TP245		2.00 - 2.00	20/04/2022
26186808	TP248		1.00 - 1.00	20/04/2022
26186882	TP248		4.50 - 4.50	20/04/2022
26186887	TP250		1.00 - 1.00	21/04/2022
26186844	WS308		3.50 - 4.00	21/04/2022
26186839	WS313		3.50 - 4.00	21/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26186820	TP212		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26186827	TP213		0.60 - 0.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
			26186814	TP214		2.00 - 2.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
			26186871	TP216		0.60 - 0.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26186866	TP217		4.00 - 4.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
			26186854	TP237		2.00 - 2.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26186860	TP237		4.00 - 4.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26186849	TP238		4.00 - 4.00	1kg TUB with Handle (ALE260)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 8		X						X				X			X			
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 8	X						X				X			X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2	X																	
Boron Water Soluble	All	NDPs: 0 Tests: 8		X						X				X			X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 8		X						X				X			X			
Easily Liberated Sulphide	All	NDPs: 0 Tests: 8		X						X				X			X			
EPH CWG GC (S)	All	NDPs: 0 Tests: 10		X						X				X			X			
GRO by GC-FID (S)	All	NDPs: 0 Tests: 10			X						X				X			X		
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 8		X						X				X			X			
Metals in solid samples by OES	All	NDPs: 0 Tests: 8		X						X				X			X			
PAH by GCMS	All	NDPs: 0 Tests: 8		X						X				X			X			
PCBs by GCMS	All	NDPs: 0 Tests: 8		X						X				X			X			
PFAS (Post Ox.) Solids	All	NDPs: 0 Tests: 2				X		X												
PFAS Solids	All	NDPs: 0 Tests: 5				X		X					X							X
pH	All	NDPs: 0 Tests: 8		X						X				X			X			

26186839	WS313		3.50 - 4.00	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S								x											
26186844	WS308		3.50 - 4.00	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S								x											
26186887	TP250		1.00 - 1.00	250g Amber Jar (ALE210)	S																		
				1kg TUB with Handle (ALE260)	S																	x	
26186882	TP248		4.50 - 4.50	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S	x			x	x	x	x			x	x	x	x					x	
				1kg TUB with Handle (ALE260)	S		x																	
26186808	TP248		1.00 - 1.00	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S	x			x	x	x	x			x	x	x	x					x	
				1kg TUB with Handle (ALE260)	S		x																	
26186876	TP245		2.00 - 2.00	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S	x			x	x	x	x			x	x	x	x					x	
				1kg TUB with Handle (ALE260)	S		x	x																
26186833	TP240		2.00 - 2.00	60g VOC (ALE215)	S									x									
				250g Amber Jar (ALE210)	S	x			x	x	x	x			x	x	x	x					x	
				1kg TUB with Handle (ALE260)	S		x																	
26186849	TP238		4.00 - 4.00	250g Amber Jar (ALE210)	S																		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26186820	26186827	26186814	26186871	26186866	26186854	26186860	26186849										
Customer Sample Reference			TP212	TP213	TP214	TP216	TP217	TP237	TP237	TP238										
AGS Reference																				
Depth (m)			1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	0.60 - 0.60	4.00 - 4.00	2.00 - 2.00	4.00 - 4.00	4.00 - 4.00										
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Phenols by HPLC (S)	All	NDPs: 0 Tests: 8		X							X				X			X		
Sample description	All	NDPs: 0 Tests: 15		X			X		X		X			X		X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 10		X							X				X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 8		X							X				X			X		
Total Sulphate	All	NDPs: 0 Tests: 8		X							X				X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 10		X							X				X			X		
VOC MS (S)	All	NDPs: 0 Tests: 10			X							X				X			X	

26186839	WS313		3.50 - 4.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S		X		X				X
26186844	WS308		3.50 - 4.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S		X		X				X
26186887	TP250		1.00 - 1.00	250g Amber Jar (ALE210)	S		X						
				1kg TUB with Handle (ALE260)	S								
26186882	TP248		4.50 - 4.50	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26186808	TP248		1.00 - 1.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26186876	TP245		2.00 - 2.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26186833	TP240		2.00 - 2.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26186849	TP238		4.00 - 4.00	250g Amber Jar (ALE210)	S		X						

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26186820	TP212	1.50 - 1.50	Dark Brown	Sandy Loam	Vegetation	Stones
26186827	TP213	0.60 - 0.60	Dark Brown	Sandy Silt Loam	Vegetation	Stones
26186814	TP214	2.00 - 2.00	Light Brown	Loamy Sand	Stones	Vegetation
26186871	TP216	0.60 - 0.60	Dark Brown	Sand	Vegetation	Stones
26186866	TP217	4.00 - 4.00	Dark Brown	Clay Loam	None	Stones
26186854	TP237	2.00 - 2.00	Dark Brown	Sand	Vegetation	Stones
26186860	TP237	4.00 - 4.00	Dark Brown	Silty Clay Loam	Stones	None
26186849	TP238	4.00 - 4.00	Grey	Sandy Silt Loam	Stones	N/A
26186833	TP240	2.00 - 2.00	Light Brown	Sandy Loam	Vegetation	Brick
26186876	TP245	2.00 - 2.00	Black	Sand	Stones	N/A
26186808	TP248	1.00 - 1.00	Black	Sand	Stones	N/A
26186882	TP248	4.50 - 4.50	Dark Brown	Sand	None	Stones
26186887	TP250	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	Vegetation
26186844	WS308	3.50 - 4.00	Light Brown	Loamy Sand	Stones	None
26186839	WS313	3.50 - 4.00	Black	Sand	Stones	N/A

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	TP212	TP213	TP214	TP216	TP217	TP237
Customer Sample Ref.								
Depth (m)			1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	0.60 - 0.60	4.00 - 4.00	2.00 - 2.00
Sample Type			Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Date Sampled			21/04/2022	21/04/2022	21/04/2022	20/04/2022	20/04/2022	20/04/2022
Sample Time			12:00	12:00	12:00	12:00	12:00	12:00
Date Received			23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
SDG Ref			220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
Lab Sample No.(s)			26186820	26186827	26186814	26186871	26186866	26186854
AGS Reference								
Moisture Content Ratio (% of as received sample)	%	PM024	15	19	19	21	12	19
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M			<0.01 M		<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M			<0.01 M		<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M			<0.015 M		<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M			<0.035 M		<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132	2.55 #			5.52 #		23.1 #
pH	1 pH Units	TM133	8.6 M			8 M		8.52 M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #			<0.6 #		<0.6 #
Cyanide, Total	<1 mg/kg	TM153	<1 M			<1 M		<1 M
PCB congener 28	<3 µg/kg	TM168	<15 M			<15 M		<3 M
PCB congener 52	<3 µg/kg	TM168	<15 M			16 M		<3 M
PCB congener 101	<3 µg/kg	TM168	<15 M			<15 M		<3 M
PCB congener 118	<3 µg/kg	TM168	<15 M			<15 M		<3 M
PCB congener 138	<3 µg/kg	TM168	<15 M			<15 M		<3 M
PCB congener 153	<3 µg/kg	TM168	<15 M			<15 M		<3 M
PCB congener 180	<3 µg/kg	TM168	<15 M			<15 M		<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<105			<105		<21
Sulphide, Easily liberated	<15 mg/kg	TM180	<15 @ M			84.1 @ M		<15 @ M
Arsenic	<0.6 mg/kg	TM181	11.3 M			30.5 M		16.7 M
Beryllium	<0.01 mg/kg	TM181	0.537 M			0.696 M		4.87 M
Cadmium	<0.02 mg/kg	TM181	4.59 M			2.73 M		<0.02 M
Chromium	<0.9 mg/kg	TM181	12.5 M			7.93 M		6.48 M
Copper	<1.4 mg/kg	TM181	59.4 M			174 M		135 M
Lead	<0.7 mg/kg	TM181	195 M			1410 M		47.4 M
Mercury	<0.1 mg/kg	TM181	<0.1 M			1.85 M		<0.1 M
Nickel	<0.2 mg/kg	TM181	52 M			14.5 M		54.3 M
Selenium	<1 mg/kg	TM181	<1 #			1.22 #		<1 #
Vanadium	<0.2 mg/kg	TM181	18.7 #			18.8 #		88.1 #
Zinc	<1.9 mg/kg	TM181	289 M			3950 M		117 M
Sulphate, Total	<48 mg/kg	TM221	1120 M			28000 M		1220 M
Boron, water soluble	<1 mg/kg	TM222	1.05 M			1.49 M		<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0863 M			1.55 M		0.0952 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304	0.0031 #					

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP213	TP214	TP216	TP217	TP237
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	0.60 - 0.60	4.00 - 4.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	21/04/2022	21/04/2022	20/04/2022	20/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186827	26186814	26186871	26186866	26186854
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		Chrysotile #					
Analysts Comments		TM304		Fibre bundles in soil					
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0031 #					
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338			<3	<3		<3	
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338			<3	<3		<3	
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338			<2	<2		<2	
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338			<1	<1		<1	
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338			<1	<1		<1	
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338			1.09	<1		<1	
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338			<1	<1		<1	
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338			<1	<1		<1	
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338			<1	<1		<1	
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338			<1	<1		<1	
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338			2.99	3.05		<1	
Branched PFOS	<1 µg/kg	TM338			<1	<1		<1	
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338			<1	<1		<1	
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338			<1	<1		<1	
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338			<1	<1		<1	
6:2-FTS (27619-97-2)	<1 µg/kg	TM338			<1	<1		<1	
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338			<1	<1		<1	
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338			<1	<1		<1	
Total PFOS	<1 µg/kg	TM338			2.99	3.05		<1	
PFBA (Post Ox.) Perfluoro-n-butanoic acid	<3 µg/kg	TM428			<3	<3			
PFPA (Post Ox.) Perfluoro-n-pentanoic acid	<3 µg/kg	TM428			<3	<3			
PFHxA (Post Ox.) Perfluoro-n-hexanoic acid	<2 µg/kg	TM428			<2	<2			
PFBS (Post Ox.) Perfluoro-1-butanesulfonate	<1 µg/kg	TM428			<1	<1			
PFHpA (Post Ox.) Perfluoro-n-heptanoic acid	<1 µg/kg	TM428			<1	<1			
6:2 PTS (Post Ox.) Perfluoro-octane sulfonate 6:2	<1 µg/kg	TM428			<1	<1			
PFOA (Post Ox.) Perfluoro-n-octanoic acid	<1 µg/kg	TM428			1.49	1.3			
PFHxS (Post Ox.) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM428			<1	<1			
PFNA (Post Ox.) Perfluoro-n-nonanoic acid	<1 µg/kg	TM428			<1	<1			
PFHpS (Post Ox.) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM428			<1	<1			

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP213	TP214	TP216	TP217	TP237
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	0.60 - 0.60	4.00 - 4.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	21/04/2022	21/04/2022	20/04/2022	20/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186827	26186814	26186871	26186866	26186854
			AGS Reference						
PFDA (Post Ox.) Perfluoro-n-decanoic acid	<1 µg/kg	TM428			<1	<1			
Linear PFOS (Post Ox.) Perfluoro-1-octanesulfonate	<1 µg/kg	TM428			2.84	3.25			
Branched PFOS (Post Ox.)	<1 µg/kg	TM428			<1	<1			
PFUnA (Post Ox.) Perfluoro-n-undecanoic acid	<1 µg/kg	TM428			<1	<1			
PFDoA (Post Ox.) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM428			<1	<1			
PFOSA (Post Ox.) Perfluoro-octanesulfonamide	<1 µg/kg	TM428			<1	<1			
PFDS (Post Ox.) Perfluoro-1-decanesulfonate	<1 µg/kg	TM428			<1	<1			
PFPeS (Post Ox.) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM428			<1	<1			
Total PFOS (Post Ox.)	<2 µg/kg	TM428			2.84	3.25			

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP237	TP238	TP240	TP245	TP248	TP248
			Depth (m)	4.00 - 4.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00	1.00 - 1.00	4.50 - 4.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	20/04/2022	20/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186860	26186849	26186833	26186876	26186808	26186882
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	23	28	29	13	25
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M		<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M		<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M		<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M		<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.65 #		5.59 #	18.1 #	24.1 #	20.7 #
pH	1 pH Units	TM133		8.85 M		7.25 M	7.48 M	7.41 M	10.6 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #		1.73 #	0.94 #	5.1 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 M		<1 M	<1 M	<1 M	<1 M
PCB congener 28	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 52	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 101	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 118	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 138	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 153	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
PCB congener 180	<3 µg/kg	TM168		<3 M		<15 M	<15 M	<15 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21		<105	<105	<105	<21
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M		632 @ M	1220 @ M	<15 @ M	235 @ M
Arsenic	<0.6 mg/kg	TM181		17.3 M		15 M	19.7 M	31.2 M	29.6 M
Beryllium	<0.01 mg/kg	TM181		1.11 M		0.575 M	3.46 M	1.54 M	1.77 M
Cadmium	<0.02 mg/kg	TM181		0.0243 M		2.53 M	1.78 M	0.489 M	0.164 M
Chromium	<0.9 mg/kg	TM181		13.9 M		460 M	60.8 M	62.8 M	59.9 M
Copper	<1.4 mg/kg	TM181		24.5 M		152 M	166 M	1040 M	214 M
Lead	<0.7 mg/kg	TM181		20.6 M		850 M	1120 M	277 M	350 M
Mercury	<0.1 mg/kg	TM181		<0.1 M		0.922 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		32 M		309 M	189 M	48.6 M	37.1 M
Selenium	<1 mg/kg	TM181		<1 #		<1 #	2.3 #	2.48 #	1.76 #
Vanadium	<0.2 mg/kg	TM181		28.1 #		22.2 #	49.3 #	58.2 #	43.8 #
Zinc	<1.9 mg/kg	TM181		68.3 M		466 M	995 M	620 M	153 M
Sulphate, Total	<48 mg/kg	TM221		363 M		15200 M	2920 M	1200 M	2430 M
Boron, water soluble	<1 mg/kg	TM222		1.53 M		1.35 M	3.44 M	<1 M	1.4 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0731 M		1.55 M	0.467 M	0.106 M	0.137 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					0.0645 #		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP237	TP238	TP240	TP245	TP248	TP248
			Depth (m)	4.00 - 4.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00	1.00 - 1.00	4.50 - 4.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	20/04/2022	20/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186860	26186849	26186833	26186876	26186808	26186882
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					ACM debris in soil		
Asbestos Quantification - Total - %	<0.001 %	TM304					0.0647 #		
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338		<3					
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338		<3					
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338		<2					
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338		<1					
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338		<1					
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338		<1					
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338		<1					
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338		<1					
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338		<1					
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338		<1					
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338		<1					
Branched PFOS	<1 µg/kg	TM338		<1					
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338		<1					
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338		<1					
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338		<1					
6:2-FTS (27619-97-2)	<1 µg/kg	TM338		<1					
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338		<1					
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338		<1					
Total PFOS	<1 µg/kg	TM338		<1					

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP250	WS308	WS313			
			Depth (m)	1.00 - 1.00	3.50 - 4.00	3.50 - 4.00			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	21/04/2022	21/04/2022	21/04/2022			
			Sample Time	12:00	12:00	12:00			
			Date Received	23/04/2022	23/04/2022	23/04/2022			
			SDG Ref	220426-111	220426-111	220426-111			
			Lab Sample No.(s)	26186887	26186844	26186839			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	14	7.1			
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338		<3					
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338		<3					
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338		<2					
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338		<1					
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338		<1					
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338		<1					
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338		<1					
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338		<1					
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338		<1					
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338		<1					
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338		<1					
Branched PFOS	<1 µg/kg	TM338		<1					
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338		<1					
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338		<1					
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338		<1					
6:2-FTS (27619-97-2)	<1 µg/kg	TM338		<1					
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338		<1					
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338		<1					
Total PFOS	<1 µg/kg	TM338		<1					

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.7	89.6	87.2	106	96.4	103
Acenaphthene-d10 % recovery**	%	TM218		97.9	91.4	91.9	104	96.6	105
Phenanthrene-d10 % recovery**	%	TM218		102	97.9	87.5	106	97.9	110
Chrysene-d12 % recovery**	%	TM218		104	94.4	73.6	94.4	102	104
Perylene-d12 % recovery**	%	TM218		97.7	87.4	52.1	84.2	99.7	88.6
Naphthalene	<9 µg/kg	TM218		53.2 M	<45 M	32.5 @ M	<9 M	<18 M	174 M
Acenaphthylene	<12 µg/kg	TM218		178 M	<60 M	<12 @ M	<12 M	<24 M	<60 M
Acenaphthene	<8 µg/kg	TM218		293 M	<40 M	<8 @ M	<8 M	<16 M	192 M
Fluorene	<10 µg/kg	TM218		291 M	<50 M	<10 @ M	<10 M	<20 M	178 M
Phenanthrene	<15 µg/kg	TM218		3380 M	2300 M	78.3 @ M	137 M	<30 M	1500 M
Anthracene	<16 µg/kg	TM218		896 M	<80 M	<16 @ M	24.9 M	<32 M	396 M
Fluoranthene	<17 µg/kg	TM218		5870 M	4110 M	64.6 @ M	205 M	<34 M	3620 M
Pyrene	<15 µg/kg	TM218		5480 M	4270 M	64.4 @ M	195 M	<30 M	3240 M
Benz(a)anthracene	<14 µg/kg	TM218		2880 M	1600 M	30 @ M	80.1 M	<28 M	1530 M
Chrysene	<10 µg/kg	TM218		2710 M	1580 M	32.4 @ M	87.6 M	<20 M	1750 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		3130 M	2530 M	35 @ M	80.8 M	<30 M	2580 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1240 M	<70 M	<14 @ M	25.7 M	<28 M	859 M
Benzo(a)pyrene	<15 µg/kg	TM218		2560 M	1880 M	21.8 @ M	44.3 M	<30 M	1660 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1730 M	2020 M	<18 @ M	29.1 M	<36 M	1500 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		304 M	326 M	<23 @ M	<23 M	<46 M	240 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1440 M	1790 M	<24 @ M	<24 M	<48 M	1280 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		32400	22400	359	909	<118	20700

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248				
			Depth (m)	1.00 - 1.00	4.50 - 4.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	20/04/2022	20/04/2022				
			Sample Time	12:00	12:00				
			Date Received	23/04/2022	23/04/2022				
			SDG Ref	220426-111	220426-111				
			Lab Sample No.(s)	26186808	26186882				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.8	92.5				
Acenaphthene-d10 % recovery**	%	TM218		97.3	89.7				
Phenanthrene-d10 % recovery**	%	TM218		102	87.1				
Chrysene-d12 % recovery**	%	TM218		93.2	78.5				
Perylene-d12 % recovery**	%	TM218		79.1	80.5				
Naphthalene	<9 µg/kg	TM218		211 M	79.9 M				
Acenaphthylene	<12 µg/kg	TM218		230 M	75.1 M				
Acenaphthene	<8 µg/kg	TM218		828 M	228 M				
Fluorene	<10 µg/kg	TM218		634 M	174 M				
Phenanthrene	<15 µg/kg	TM218		8360 M	1700 M				
Anthracene	<16 µg/kg	TM218		2180 M	491 M				
Fluoranthene	<17 µg/kg	TM218		13100 M	2310 M				
Pyrene	<15 µg/kg	TM218		12900 M	2220 M				
Benz(a)anthracene	<14 µg/kg	TM218		6020 M	1190 M				
Chrysene	<10 µg/kg	TM218		6120 M	1140 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		7010 M	1390 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		2310 M	553 M				
Benzo(a)pyrene	<15 µg/kg	TM218		5520 M	1120 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		3620 M	781 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		635 M	131 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		3190 M	683 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		72900	14300				

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
			AGS Reference						
Phenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Pentachlorophenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Nitrobenzene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Isophorone	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Hexachloroethane	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Hexachlorobutadiene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Hexachlorobenzene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
n-Dioctyl phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Dimethyl phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Diethyl phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
n-Dibutyl phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Dibenzofuran	<100 µg/kg	TM157		971	<500	<100	<100	<500	<200
Carbazole	<100 µg/kg	TM157		636	<500	<100	<100	<500	<200
Butylbenzyl phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<500	<500	<100	<100	885	398
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
Azobenzene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Nitrophenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Nitroaniline	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Methylphenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Chlorophenylphenylether	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Chloroaniline	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
4-Bromophenylphenylether	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
3-Nitroaniline	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
2-Nitrophenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
2-Nitroaniline	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
2-Methylphenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200
2-Chlorophenol	<100 µg/kg	TM157		<500	<500	<100	<100	<500	<200

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
# ISO17025 accredited.							
M mCERTS accredited.							
aq Aqueous / settled sample.	Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
diss.filt Dissolved / filtered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
tot.unfilt Total / unfiltered sample.	Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
* Subcontracted - refer to subcontractor report for accreditation status.	Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
(F) Trigger breach confirmed	SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
1-4+§@ Sample deviation (see appendix)	Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
	AGS Reference						

Component	LOD/Units	Method						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2,4-Dinitrotoluene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2,4-Dimethylphenol	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2,4-Dichlorophenol	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
1,4-Dichlorobenzene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
1,3-Dichlorobenzene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
1,2-Dichlorobenzene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2-Chloronaphthalene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
2-Methylnaphthalene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
Acenaphthylene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
Acenaphthene	<100 µg/kg	TM157	2720	<500	<100	<100	<500	<200
Anthracene	<100 µg/kg	TM157	3420	<500	<100	<100	<500	<200
Benzo(a)anthracene	<100 µg/kg	TM157	7320	1620	<100	<100	2160	961
Benzo(b)fluoranthene	<100 µg/kg	TM157	3690	996	<100	<100	1240	737
Benzo(k)fluoranthene	<100 µg/kg	TM157	4830	1330	<100	<100	1510	953
Benzo(a)pyrene	<100 µg/kg	TM157	6020	1350	<100	<100	1700	978
Benzo(g,h,i)perylene	<100 µg/kg	TM157	3110	1060	<100	<100	968	812
Chrysene	<100 µg/kg	TM157	7270	1630	<100	<100	2030	1110
Fluoranthene	<100 µg/kg	TM157	19500	3180	<100	<100	4170	1750
Fluorene	<100 µg/kg	TM157	1500	<500	<100	<100	<500	<200
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	6140	1530	<100	<100	2350	1410
Phenanthrene	<100 µg/kg	TM157	16100	2090	<100	<100	2470	805
Pyrene	<100 µg/kg	TM157	18000	3710	<100	<100	3710	1620
Naphthalene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<500	<500	<100	<100	<500	<200

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
Phenol	<100 µg/kg	TM157		<200	<100	<100	<100		
Pentachlorophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<200	<100	<100	<100		
Nitrobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
Isophorone	<100 µg/kg	TM157		<200	<100	<100	<100		
Hexachloroethane	<100 µg/kg	TM157		<200	<100	<100	<100		
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<100	<100	<100		
Hexachlorobutadiene	<100 µg/kg	TM157		<200	<100	<100	<100		
Hexachlorobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
n-Dioctyl phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
Dimethyl phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
Diethyl phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
n-Dibutyl phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
Dibenzofuran	<100 µg/kg	TM157		<200	<100	<100	<100		
Carbazole	<100 µg/kg	TM157		<200	<100	<100	<100		
Butylbenzyl phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<200	<100	<100	<100		
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<200	<100	<100	<100		
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<200	<100	<100	<100		
Azobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Nitrophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Nitroaniline	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Methylphenol	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Chlorophenylphenylether	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Chloroaniline	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<200	<100	<100	<100		
4-Bromophenylphenylether	<100 µg/kg	TM157		<200	<100	<100	<100		
3-Nitroaniline	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Nitrophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Nitroaniline	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Methylphenol	<100 µg/kg	TM157		<200	<100	<100	<100		
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Chlorophenol	<100 µg/kg	TM157		<200	<100	<100	<100		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<100	<100		
2,4-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<100	<100		
2,4-Dimethylphenol	<100 µg/kg	TM157		<200	<100	<100	<100		
2,4-Dichlorophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<100	<100		
1,4-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
1,3-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
1,2-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Chloronaphthalene	<100 µg/kg	TM157		<200	<100	<100	<100		
2-Methylnaphthalene	<100 µg/kg	TM157		<200	<100	<100	169		
Acenaphthylene	<100 µg/kg	TM157		<200	<100	<100	<100		
Acenaphthene	<100 µg/kg	TM157		287	160	<100	<100		
Anthracene	<100 µg/kg	TM157		749	239	<100	<100		
Benzo(a)anthracene	<100 µg/kg	TM157		2770	829	<100	<100		
Benzo(b)fluoranthene	<100 µg/kg	TM157		2140	481	<100	<100		
Benzo(k)fluoranthene	<100 µg/kg	TM157		2210	691	<100	<100		
Benzo(a)pyrene	<100 µg/kg	TM157		2920	745	<100	<100		
Benzo(g,h,i)perylene	<100 µg/kg	TM157		1850	409	<100	<100		
Chrysene	<100 µg/kg	TM157		2590	817	<100	<100		
Fluoranthene	<100 µg/kg	TM157		5300	1480	<100	<100		
Fluorene	<100 µg/kg	TM157		238	<100	<100	<100		
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		3730	631	<100	<100		
Phenanthrene	<100 µg/kg	TM157		3270	972	<100	118		
Pyrene	<100 µg/kg	TM157		5420	1580	<100	<100		
Naphthalene	<100 µg/kg	TM157		<200	<100	<100	153		
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<200	<100	<100	<100		
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<200	<100	<100	<100		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		89.2	101 @	96.3 @	98.7 @	75.7	102 @
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	44.8 @
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	63 @
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	195 @
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	4170 #	<1000 #	<1000 #	<1000 #	11700 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	35800 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		4460 #	8290 #	<1000 #	<1000 #	19700 #	113000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		22500 #	57800 #	1310 #	<1000 #	416000 #	1260000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		2430	13500	<1000	<1000	113000	320000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		29500	84700	<5000	<5000	549000	1750000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		105000	358000	22500	<10000	785000	2090000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	<10 @
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	<10 @
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10 @	<10 @	<10 @	<10	130 @
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	1190 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	4950 #	2080 #	<1000 #	2930 #	13000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		12900 #	75100 #	7460 #	<1000 #	17300 #	35400 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		54700 #	164000 #	9770 #	2240 #	199000 #	287000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		7250	28100	<1000	<1000	16200	12700
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1250	6160	<1000	<1000	11300	3280
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		75700	273000	20500	<5000	236000	349000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		105000	358000	20500	<10000	785000	2100000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50	<50 @	<50 @	<50 @	<50	302 @
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	<50 @	<50 @	<50 @	<50	130 @
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20	<20 @	<20 @	<20 @	<20	433 @

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		103 @	86.1 @	142 4 @	90.7 @		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		69 @	<10 @	41.8 4 @	11.8 @		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		306 @	<10 @	324 4 @	12.9 @		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		321 @	<10 @	631 4 @	10.8 @		
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		3480 #	<1000 #	<1000 #	<1000 #		
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		5070 #	<1000 #	1110 #	<1000 #		
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		8310 #	4630 #	5330 #	1780 #		
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		117000 #	36100 #	10100 #	3490 #		
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		16000	3210	3090	<1000		
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		149000	44100	19700	6300		
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		395000	123000	24200	12000		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 4 @	<10 @		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 4 @	<10 @		
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		214 @	<10 @	421 4 @	<10 @		
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #		
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		4750 #	2370 #	<1000 #	<1000 #		
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		45200 #	15500 #	<1000 #	<1000 #		
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		161000 #	60200 #	2830 #	2450 #		
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		33800	<1000	<1000	1130		
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		8230	<1000	<1000	<1000		
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		245000	79100	<5000	5720		
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		396000	123000	20600	12100		
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		696 @	<50 @	996 4 @	<50 @		
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		214 @	<50 @	421 4 @	<50 @		
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		910 @	<20 @	1420 4 @	<20 @		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
			AGS Reference						
Dibromofluoromethane**	%	TM116		112 @	110 @	111 @	105 @	110 @	111 @
Toluene-d8**	%	TM116		102 @	105 @	100 @	98.8 @	101 @	99.4 @
4-Bromofluorobenzene**	%	TM116		90.9 @	90.2 @	91.3 @	92 @	88.4 @	106 @
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<120 @ #	<120 @ #	<120 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116		<140 @ #	<140 @ #	<140 @ #	<140 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		211 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
			Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
			SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
			Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
Dibromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	<80 @ M	<80 @ M	<80 @ M	<80 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Styrene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Bromoform	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<100 @ #	<100 @ #	<100 @ #	<100 @ #	<100 @ #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ M	<320 @ M	<320 @ M	<320 @ M	<320 @ M	<320 @ M
Bromobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Propylbenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<280 @ #	<280 @ #	<280 @ #	<280 @ #	<280 @ #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<220 @	<220 @	<220 @	<220 @	<220 @
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ M	<280 @ M	<280 @ M	<280 @ M	<280 @ M	<280 @ M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @	<400 @	<400 @
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @	<400 @	<400 @
Naphthalene	<13 µg/kg	TM116		<260 @ M	<260 @ M	<260 @ M	<260 @ M	<260 @ M	<260 @ M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<400 @ #	<400 @ #	<400 @ #	<400 @ #	<400 @ #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<400	<400

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend		Customer Sample Ref.	TP212	TP216	TP237	TP237	TP240	TP245
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
tot.unfilt	Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	21/04/2022	20/04/2022	20/04/2022	20/04/2022	21/04/2022	20/04/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
		Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022	23/04/2022
		SDG Ref	220426-111	220426-111	220426-111	220426-111	220426-111	220426-111
(F)	Trigger breach confirmed	Lab Sample No.(s)	26186820	26186871	26186854	26186860	26186833	26186876
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.4 @	<0.4 @	<0.4 @	<0.4 @	<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116	<800 @	<800 @	<800 @	<800 @	<800 @	<800 @

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
Dibromofluoromethane**	%	TM116		106 @	110 @	114 @	104 @		
Toluene-d8**	%	TM116		97.8 @	101 @	103 @	97.5 @		
4-Bromofluorobenzene**	%	TM116		99.2 @	85.9 @	96.4 @	86 @		
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<120 @ #	<120 @ #	<120 @ #		
Chloromethane	<7 µg/kg	TM116		<140 @ #	<140 @ #	<140 @ #	<140 @ #		
Vinyl Chloride	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M		
Bromomethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Chloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M		
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
Carbon Disulphide	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M		
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M		
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M		
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @		
Bromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Chloroform	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M		
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M		
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Carbontetrachloride	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M		
Benzene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M		
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<180 @ #	<180 @ #		
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Dibromomethane	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M		
Bromodichloromethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M		
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Toluene	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M		
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @		
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M		
Dibromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Chlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M		
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	<80 @ M	<80 @ M	<80 @ M		
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
o-Xylene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Styrene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
Bromoform	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<100 @ #	<100 @ #	<100 @ #		
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ M	<320 @ M	<320 @ M	<320 @ M		
Bromobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
Propylbenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M		
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M		
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<280 @ #	<280 @ #	<280 @ #		
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<180 @ #	<180 @ #		
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @		
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @		
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M		
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M		
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<220 @	<220 @	<220 @		
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M		
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ M	<280 @ M	<280 @ M	<280 @ M		
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #		
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @		
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @		
Naphthalene	<13 µg/kg	TM116		<260 @ M	<260 @ M	<260 @ M	<260 @ M		
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<400 @ #	<400 @ #	<400 @ #		
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP248	TP248	WS308	WS313		
			Depth (m)	1.00 - 1.00	4.50 - 4.50	3.50 - 4.00	3.50 - 4.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	20/04/2022	20/04/2022	21/04/2022	21/04/2022		
			Sample Time	12:00	12:00	12:00	12:00		
			Date Received	23/04/2022	23/04/2022	23/04/2022	23/04/2022		
			SDG Ref	220426-111	220426-111	220426-111	220426-111		
			Lab Sample No.(s)	26186808	26186882	26186844	26186839		
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.4 @	<0.4 @	<0.4 @		
Sum of BTEX	<40 µg/kg	TM116		<800 @	<800 @	<800 @	<800 @		

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend
ISO17025 accredited.
M *m*CERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5&+$@ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP212 1.50 - 1.50 SOLID 21/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186820 TM048	04/05/2022	Emily Anderton	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP216 0.60 - 0.60 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186871 TM048	04/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP237 2.00 - 2.00 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186854 TM048	03/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP237 4.00 - 4.00 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186860 TM048	03/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP240 2.00 - 2.00 SOLID 21/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186833 TM048	03/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP245 2.00 - 2.00 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186876 TM048	03/05/2022	Emily Anderton	Fibre bundle in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP248 1.00 - 1.00 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186808 TM048	04/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP248 4.50 - 4.50 SOLID 20/04/2022 00:00:00 23/04/2022 05:00:00 220426-111 26186882 TM048	04/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP212	Chrysotile (#)	Fibre bundles in soil	0.0031 (#)	<0.001 (#)	0.0031 (#)
Depth (m)	1.50 - 1.50					
Sample Type	SOLID					
Date Sampled	21/04/2022 00:00:00					
Date Received	23/04/2022 05:00:00					
SDG	220426-111					
Original Sample	26186820					
Method Number	TM304					
Cust. Sample Ref.	TP245	None (#)	ACM debris in soil	0.0645 (#)	<0.001 (#)	0.0647 (#)
Depth (m)	2.00 - 2.00					
Sample Type	SOLID					
Date Sampled	20/04/2022 00:00:00					
Date Received	23/04/2022 05:00:00					
SDG	220426-111					
Original Sample	26186876					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM428	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220426-111 **Report Number:** 648036 **Superseded Report:** 646228
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26186820	26186827	26186814	26186871	26186866	26186854	26186860	26186849	26186833	26186876
Customer Sample Ref.	TP212	TP213	TP214	TP216	TP217	TP237	TP237	TP238	TP240	TP245
AGS Ref.										
Depth	1.50 - 1.50	0.60 - 0.60	2.00 - 2.00	0.60 - 0.60	4.00 - 4.00	2.00 - 2.00	4.00 - 4.00	4.00 - 4.00	2.00 - 2.00	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	03-May-2022			03-May-2022		03-May-2022	03-May-2022		03-May-2022	03-May-2022
Asbestos ID in Solid Samples	04-May-2022			04-May-2022		03-May-2022	03-May-2022		03-May-2022	03-May-2022
Asbestos Quantification - Full	13-May-2022									14-May-2022
Boron Water Soluble	04-May-2022			04-May-2022		04-May-2022	29-Apr-2022		04-May-2022	04-May-2022
Cyanide Comp/Free/Total/Thiocyanate	04-May-2022			04-May-2022		04-May-2022	04-May-2022		04-May-2022	04-May-2022
Easily Liberated Sulphide	29-Apr-2022			29-Apr-2022		29-Apr-2022	29-Apr-2022		03-May-2022	29-Apr-2022
EPH CWG GC (S)	03-May-2022			03-May-2022		03-May-2022	29-Apr-2022		03-May-2022	03-May-2022
GRO by GC-FID (S)	04-May-2022			04-May-2022		06-May-2022	04-May-2022		04-May-2022	06-May-2022
Hexavalent Chromium (s)	29-Apr-2022			29-Apr-2022		29-Apr-2022	29-Apr-2022		04-May-2022	29-Apr-2022
Metals in solid samples by OES	03-May-2022			03-May-2022		03-May-2022	29-Apr-2022		04-May-2022	03-May-2022
PAH by GCMS	29-Apr-2022			29-Apr-2022		04-May-2022	28-Apr-2022		03-May-2022	03-May-2022
PCBs by GCMS	04-May-2022			04-May-2022		04-May-2022	04-May-2022		04-May-2022	04-May-2022
PFAS (Post Ox.) Solids		25-May-2022	25-May-2022							
PFAS Solids		06-May-2022	06-May-2022		05-May-2022			05-May-2022		
pH	03-May-2022			03-May-2022		03-May-2022	03-May-2022		03-May-2022	03-May-2022
Phenols by HPLC (S)	29-Apr-2022			03-May-2022		29-Apr-2022	29-Apr-2022		03-May-2022	29-Apr-2022
Sample description	28-Apr-2022	27-Apr-2022	28-Apr-2022	28-Apr-2022	27-Apr-2022	28-Apr-2022	27-Apr-2022	27-Apr-2022	28-Apr-2022	27-Apr-2022
Semi Volatile Organic Compounds	29-Apr-2022			29-Apr-2022		29-Apr-2022	29-Apr-2022		03-May-2022	29-Apr-2022
Total Organic Carbon	04-May-2022			04-May-2022		04-May-2022	04-May-2022		04-May-2022	04-May-2022
Total Sulphate	04-May-2022			04-May-2022		04-May-2022	28-Apr-2022		04-May-2022	04-May-2022
TPH CWG GC (S)	05-May-2022			05-May-2022		06-May-2022	05-May-2022		05-May-2022	06-May-2022
VOC MS (S)	05-May-2022			05-May-2022		05-May-2022	05-May-2022		05-May-2022	05-May-2022

Lab Sample No(s)	26186808	26186882	26186887	26186844	26186839
Customer Sample Ref.	TP248	TP248	TP250	WS308	WS313
AGS Ref.					
Depth	1.00 - 1.00	4.50 - 4.50	1.00 - 1.00	3.50 - 4.00	3.50 - 4.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	03-May-2022	03-May-2022			
Asbestos ID in Solid Samples	04-May-2022	04-May-2022			
Boron Water Soluble	29-Apr-2022	29-Apr-2022			
Cyanide Comp/Free/Total/Thiocyanate	04-May-2022	04-May-2022			
Easily Liberated Sulphide	29-Apr-2022	29-Apr-2022			
EPH CWG GC (S)	03-May-2022	29-Apr-2022		03-May-2022	03-May-2022
GRO by GC-FID (S)	06-May-2022	04-May-2022		06-May-2022	06-May-2022
Hexavalent Chromium (s)	29-Apr-2022	29-Apr-2022			
Metals in solid samples by OES	03-May-2022	29-Apr-2022			
PAH by GCMS	28-Apr-2022	28-Apr-2022			
PCBs by GCMS	04-May-2022	28-Apr-2022			
PFAS Solids			06-May-2022		
pH	03-May-2022	03-May-2022			
Phenols by HPLC (S)	29-Apr-2022	29-Apr-2022			
Sample description	27-Apr-2022	27-Apr-2022	27-Apr-2022	28-Apr-2022	27-Apr-2022
Semi Volatile Organic Compounds	29-Apr-2022	29-Apr-2022		03-May-2022	29-Apr-2022
Total Organic Carbon	04-May-2022	05-May-2022			
Total Sulphate	28-Apr-2022	28-Apr-2022			
TPH CWG GC (S)	06-May-2022	05-May-2022		06-May-2022	06-May-2022
VOC MS (S)	05-May-2022	05-May-2022		05-May-2022	05-May-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	06 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220427-30
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	645150
Order Number:	LD2734

This report has been revised and directly supersedes 645125 in its entirety.

We received 5 samples on Tuesday April 26, 2022 and 5 of these samples were scheduled for analysis which was completed on Friday May 06, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26189232	CP205		5.00 - 6.00	22/04/2022
26189241	CP205		7.00 - 8.00	22/04/2022
26189247	WS301		2.80 - 3.00	22/04/2022
26189254	WS304		1.50 - 2.00	22/04/2022
26189262	WS314		0.50 - 0.50	22/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26189232	CP205		5.00 - 6.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189241	CP205		7.00 - 8.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189247	WS301		2.80 - 3.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189254	WS304		1.50 - 2.00	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189262	WS314		0.50 - 0.50	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3		X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X		
Boron Water Soluble	All	NDPs: 0 Tests: 3		X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3		X			X	
Easily Liberated Sulphide	All	NDPs: 0 Tests: 3		X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 5		X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 3		X			X	
PAH by GCMS	All	NDPs: 0 Tests: 3		X			X	
PCBs by GCMS	All	NDPs: 0 Tests: 3		X			X	
pH	All	NDPs: 0 Tests: 3		X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3		X			X	
Sample description	All	NDPs: 0 Tests: 5		X			X	
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 5		X			X	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X **Test**

N **No Determination Possible**

Sample Ty9es -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26189232	CP205		5.00 - 6.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189241	CP205		7.00 - 8.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189247	WS301		2.80 - 3.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189254	WS304		1.50 - 2.00	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26189262	WS314		0.50 - 0.50	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
Total Organic Carbon	All	NDPs: 0 Tests: 3		X				X						X				X	
Total Sulphate	All	NDPs: 0 Tests: 3		X				X						X				X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 5		X				X			X		X					X	
VOC MS (S)	All	NDPs: 0 Tests: 5			X				X			X			X				X

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26189232	CP205	5.00 - 6.00	Dark Brown	Clay	Stones	None
26189241	CP205	7.00 - 8.00	Dark Brown	Sand	Stones	None
26189247	WS301	2.80 - 3.00	Grey	Loamy Sand	Stones	Brick
26189254	WS304	1.50 - 2.00	Black	Sandy Silt Loam	Stones	Vegetation
26189262	WS314	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Crushed Brick

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314	
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30	
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262	
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		25	15	14	11	7.5	
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M			<0.01 M	
Cresols	<0.01 mg/kg	TM062 (S)		0.0134 M	<0.01 M			0.0108 M	
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M			<0.015 M	
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M			<0.035 M	
Soil Organic Matter (SOM)	<0.35 %	TM132		5.93 #	1.52 #			5.64 #	
pH	1 pH Units	TM133		7.76 M	8.13 M			8.18 M	
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #			<0.6 #	
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M			<1 M	
PCB congener 28	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 52	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 101	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 118	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 138	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 153	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
PCB congener 180	<3 µg/kg	TM168		<3 M	<3 M			<150 M	
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<21			<1050	
Sulphide, Easily liberated	<15 mg/kg	TM180		23.8 @ M	78.5 @ M			190 @ M	
Arsenic	<0.6 mg/kg	TM181		19.1 M	21.1 M			4.83 M	
Beryllium	<0.01 mg/kg	TM181		1.25 M	0.367 M			4.71 M	
Cadmium	<0.02 mg/kg	TM181		0.115 M	0.0318 M			<0.02 M	
Chromium	<0.9 mg/kg	TM181		16.2 M	6.05 M			54.4 M	
Copper	<1.4 mg/kg	TM181		73.9 M	16 M			94.6 M	
Lead	<0.7 mg/kg	TM181		245 M	29.9 M			75.5 M	
Mercury	<0.1 mg/kg	TM181		0.35 M	<0.1 M			<0.1 M	
Nickel	<0.2 mg/kg	TM181		31.2 M	12.9 M			40.8 M	
Selenium	<1 mg/kg	TM181		<1 #	<1 #			3.95 #	
Vanadium	<0.2 mg/kg	TM181		34.9 #	11.9 #			60.7 #	
Zinc	<1.9 mg/kg	TM181		108 M	34.1 M			499 M	
Sulphate, Total	<48 mg/kg	TM221		599 M	323 M			3270 M	
Boron, water soluble	<1 mg/kg	TM222		2.15 M	1.83 M			1.16 M	
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0863 M	0.0997 M			0.0816 M	

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS314			
			Depth (m)	5.00 - 6.00	7.00 - 8.00	0.50 - 0.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	22/04/2022	22/04/2022	22/04/2022			
			Sample Time	12:00	12:00	12:00			
			Date Received	26/04/2022	26/04/2022	26/04/2022			
			SDG Ref	220427-30	220427-30	220427-30			
			Lab Sample No.(s)	26189232	26189241	26189262			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.3	94.4	89			
Acenaphthene-d10 % recovery**	%	TM218		95.9	96.9	94.4			
Phenanthrene-d10 % recovery**	%	TM218		99	104	100			
Chrysene-d12 % recovery**	%	TM218		94.1	107	92.2			
Perylene-d12 % recovery**	%	TM218		88.4	98.7	85.6			
Naphthalene	<9 µg/kg	TM218		1220 M	349 M	<180 M			
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<240 M			
Acenaphthene	<8 µg/kg	TM218		590 M	305 M	<160 M			
Fluorene	<10 µg/kg	TM218		367 M	200 M	<200 M			
Phenanthrene	<15 µg/kg	TM218		1180 M	906 M	<300 M			
Anthracene	<16 µg/kg	TM218		296 M	246 M	<320 M			
Fluoranthene	<17 µg/kg	TM218		871 M	1150 M	585 M			
Pyrene	<15 µg/kg	TM218		693 M	925 M	609 M			
Benz(a)anthracene	<14 µg/kg	TM218		280 M	477 M	<280 M			
Chrysene	<10 µg/kg	TM218		270 M	424 M	349 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		316 M	516 M	520 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		108 M	185 M	<280 M			
Benzo(a)pyrene	<15 µg/kg	TM218		229 M	389 M	404 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		165 M	277 M	390 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	45.7 M	<460 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		144 M	226 M	<480 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6720	6620	2860			

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314	
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30	
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262	
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100	<1000	650	<1000	
Pentachlorophenol	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Nitrobenzene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Isophorone	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Hexachloroethane	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Diethyl phthalate	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100	<1000	274	<1000	
Dibenzofuran	<100 µg/kg	TM157		<100	<100	<1000	141	<1000	
Carbazole	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
Azobenzene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
4-Nitrophenol	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
4-Nitroaniline	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
4-Methylphenol	<100 µg/kg	TM157		<100	<100	<1000	185	<1000	
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
4-Chloroaniline	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100	<1000	124	<1000	
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
3-Nitroaniline	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
2-Nitrophenol	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
2-Nitroaniline	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
2-Methylphenol	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	
2-Chlorophenol	<100 µg/kg	TM157		<100	<100	<1000	<100	<1000	

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend								
#	ISO17025 accredited.	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314	
M	mCERTS accredited.							
aq	Aqueous / settled sample.	Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50	
diss.filt	Dissolved / filtered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
tot.unfilt	Total / unfiltered sample.	Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022	
*	Subcontracted - refer to subcontractor report for accreditation status.	Sample Time	12:00	12:00	12:00	12:00	12:00	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	
		SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30	
(F)	Trigger breach confirmed	Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262	
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2,4-Dimethylphenol	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2,4-Dichlorophenol	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2-Chloronaphthalene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
2-Methylnaphthalene	<100 µg/kg	TM157	<100	<100	<1000	417	<1000	
Acenaphthylene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
Acenaphthene	<100 µg/kg	TM157	271	<100	1950	<100	<1000	
Anthracene	<100 µg/kg	TM157	188	<100	1860	<100	<1000	
Benzo(a)anthracene	<100 µg/kg	TM157	367	121	3860	245	<1000	
Benzo(b)fluoranthene	<100 µg/kg	TM157	232	<100	1920	246	<1000	
Benzo(k)fluoranthene	<100 µg/kg	TM157	267	<100	2650	185	<1000	
Benzo(a)pyrene	<100 µg/kg	TM157	286	<100	3010	141	<1000	
Benzo(g,h,i)perylene	<100 µg/kg	TM157	143	<100	1460	<100	<1000	
Chrysene	<100 µg/kg	TM157	349	126	3340	216	<1000	
Fluoranthene	<100 µg/kg	TM157	788	272	9900	460	<1000	
Fluorene	<100 µg/kg	TM157	157	<100	1700	<100	<1000	
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	268	<100	2640	141	<1000	
Phenanthrene	<100 µg/kg	TM157	808	260	2710	448	<1000	
Pyrene	<100 µg/kg	TM157	724	251	9030	479	<1000	
Naphthalene	<100 µg/kg	TM157	351	<100	<1000	308	<1000	
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100	<100	<1000	<100	<1000	

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		74.2	74.7	106	89.1 @	72
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	<10	12.9	58.8 @	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		40.2	17.7	53.8	120 @	17.3
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		68.3	14.2	179	269 @	15.1
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	15700 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	23900 #	82900 #	2650 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	104000 #	73300 #	8540 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		1440 #	1160 #	109000 #	191000 #	25600 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	<1000	26900	36400	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	<5000	264000	399000	36900
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		32000	<10000	445000	683000	621000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	22.6 @	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	10.2 @	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		45.6	<10	119	180 @	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	38600 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		2870 #	<1000 #	11700 #	60600 #	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		9150 #	2600 #	40000 #	18200 #	11200 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		15800 #	2080 #	84700 #	165000 #	288000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	43900	<1000	284000
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	16100	<1000	90500
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		29800	6560	180000	284000	584000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		29800	<10000	445000	684000	621000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		109	<50	246	447 @	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	<50	119	212 @	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		109	<20	365	660 @	<20

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262
			AGS Reference					
Dibromofluoromethane**	%	TM116		104 @	115	106 @	104 @	112 @
Toluene-d8**	%	TM116		95.5 @	91.2	95.2 @	95.6 @	90.9 @
4-Bromofluorobenzene**	%	TM116		95.8 @	74.1	97.9 @	91.2 @	92.4 @
Dichlorodifluoromethane	<6 µg/kg	TM116		<60 @ #	<6 #	<120 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116		<70 @ #	<7 #	<140 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116		<60 @ M	<6 @ M	<120 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116		<60 @ M	<6 M	<120 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116		<100 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116		<70 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116		<100 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116		<80 @ M	<8 M	<160 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<60 @ M	<6 M	<120 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116		<100 @	<10	<200 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116		<80 @ M	<8 M	<160 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<70 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116		<50 @ M	<5 M	<100 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<90 @ M	<9 M	<180 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116		<90 @ #	<9 #	<180 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116		<90 @ M	<9 M	<180 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116		<70 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		<70 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<100 @	<10	<200 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116		<70 @ M	<7 M	<140 @ M	<140 @ M	<140 @ M

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262
			AGS Reference					
Tetrachloroethene	<5 µg/kg	TM116		<50 @ M	<5 M	<100 @ M	<100 @ M	<100 @ M
Dibromochloromethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromoethane	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Chlorobenzene	<5 µg/kg	TM116		<50 @ M	<5 M	<100 @ M	<100 @ M	<100 @ M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<100 3 @ M	<10 M	<200 3 @ M	<200 3 @ M	<200 3 @ M
Ethylbenzene	<4 µg/kg	TM116		<40 @ M	<4 M	<80 @ M	<80 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<100 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Styrene	<10 µg/kg	TM116		<100 @ #	<10 @ #	<200 @ #	<200 @ #	<200 @ #
Bromoform	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Isopropylbenzene	<5 µg/kg	TM116		<50 @ #	<5 #	<100 @ #	<100 @ #	<100 @ #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<100 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<160 @ M	<16 M	<320 @ M	<320 @ M	<320 @ M
Bromobenzene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
Propylbenzene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
2-Chlorotoluene	<9 µg/kg	TM116		<90 @ M	<9 M	<180 @ M	<180 @ M	<180 @ M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<80 @ M	<8 M	<160 @ M	<160 @ M	<160 @ M
4-Chlorotoluene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
tert-Butylbenzene	<14 µg/kg	TM116		<140 @ #	<14 #	<280 @ #	<280 @ #	<280 @ #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<90 @ #	<9 #	<180 @ #	<180 @ #	<180 @ #
sec-Butylbenzene	<10 µg/kg	TM116		<100 @	<10	<200 @	<200 @	<200 @
4-Isopropyltoluene	<10 µg/kg	TM116		<100 @	<10	<200 @	<200 @	<200 @
1,3-Dichlorobenzene	<8 µg/kg	TM116		<80 @ M	<8 M	<160 @ M	<160 @ M	<160 @ M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<50 @ M	<5 M	<100 @ M	<100 @ M	<100 @ M
n-Butylbenzene	<11 µg/kg	TM116		<110 @	<11	<220 @	<220 @	<220 @
1,2-Dichlorobenzene	<10 µg/kg	TM116		<100 @ M	<10 M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<140 @ M	<14 M	<280 @ M	<280 @ M	<280 @ M
Tert-amyl methyl ether	<10 µg/kg	TM116		<100 @ #	<10 #	<200 @ #	<200 @ #	<200 @ #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<200 @	<20	<400 @	<400 @	<400 @
Hexachlorobutadiene	<20 µg/kg	TM116		<200 @	<20	<400 @	<400 @	<400 @
Naphthalene	<13 µg/kg	TM116		1520 @ M	26.8 M	<260 @ M	<260 @ M	<260 @ M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<200 @ #	<20 #	<400 @ #	<400 @ #	<400 @ #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<200	<20	<400	<400	<400

Validated

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314
			Depth (m)	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	22/04/2022	22/04/2022	22/04/2022	22/04/2022	22/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022
			SDG Ref	220427-30	220427-30	220427-30	220427-30	220427-30
			Lab Sample No.(s)	26189232	26189241	26189247	26189254	26189262
			AGS Reference					
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.2 @	<0.02	<0.4 @	<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<400 @	<40	<800 @	<800 @	<800 @

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP205 5.00 - 6.00 SOLID 22/04/2022 00:00:00 26/04/2022 05:00:00 220427-30 26189232 TM048	04/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	CP205 7.00 - 8.00 SOLID 22/04/2022 00:00:00 26/04/2022 05:00:00 220427-30 26189241 TM048	04/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS301 2.80 - 3.00 SOLID 22/04/2022 00:00:00 26/04/2022 05:00:00 220427-30 26189247 TM048	06/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS314 0.50 - 0.50 SOLID 22/04/2022 00:00:00 26/04/2022 05:00:00 220427-30 26189262 TM048	04/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.
Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220427-30 **Report Number:** 645150 **Superseded Report:** 645125
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26189232	26189241	26189247	26189254	26189262
Customer Sample Ref.	CP205	CP205	WS301	WS304	WS314
AGS Ref.					
Depth	5.00 - 6.00	7.00 - 8.00	2.80 - 3.00	1.50 - 2.00	0.50 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	03-May-2022	03-May-2022			03-May-2022
Asbestos ID in Solid Samples	04-May-2022	04-May-2022	06-May-2022		04-May-2022
Boron Water Soluble	04-May-2022	04-May-2022			04-May-2022
Cyanide Comp/Free/Total/Thiocyanate	04-May-2022	04-May-2022			04-May-2022
Easily Liberated Sulphide	03-May-2022	03-May-2022			03-May-2022
EPH CWG GC (S)	03-May-2022	03-May-2022	03-May-2022	03-May-2022	03-May-2022
GRO by GC-FID (S)	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022
Hexavalent Chromium (s)	04-May-2022	04-May-2022			04-May-2022
Metals in solid samples by OES	04-May-2022	04-May-2022			04-May-2022
PAH by GCMS	03-May-2022	03-May-2022			03-May-2022
PCBs by GCMS	04-May-2022	04-May-2022			04-May-2022
pH	03-May-2022	03-May-2022			03-May-2022
Phenols by HPLC (S)	03-May-2022	03-May-2022			03-May-2022
Sample description	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
Semi Volatile Organic Compounds	03-May-2022	03-May-2022	03-May-2022	29-Apr-2022	03-May-2022
Total Organic Carbon	05-May-2022	05-May-2022			05-May-2022
Total Sulphate	04-May-2022	04-May-2022			04-May-2022
TPH CWG GC (S)	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022
VOC MS (S)	06-May-2022	05-May-2022	06-May-2022	06-May-2022	06-May-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	25 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220429-150
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	648031
Order Number:	LD2744

This report has been revised and directly supersedes 646596 in its entirety.

We received 12 samples on Friday April 29, 2022 and 12 of these samples were scheduled for analysis which was completed on Wednesday May 25, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26209459	TP201		0.80 - 0.80	26/04/2022
26209466	TP202		1.30 - 1.30	26/04/2022
26209449	TP210		0.90 - 0.90	26/04/2022
26209454	TP210		2.10 - 2.10	26/04/2022
26209441	TP211		1.80 - 1.80	26/04/2022
26209413	TP219		1.50 - 1.50	25/04/2022
26209436	TP222		2.00 - 2.00	26/04/2022
26209427	TP223		1.00 - 1.00	26/04/2022
26209391	TP225		0.40 - 0.40	26/04/2022
26209421	TP227		1.10 - 1.10	26/04/2022
26209404	TP251		2.00 - 2.00	25/04/2022
26209398	TP256		0.35 - 0.35	26/04/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26209459	TP201		0.80 - 0.80	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26209466	TP202		1.30 - 1.30	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26209449	TP210		0.90 - 0.90	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26209454	TP210		2.10 - 2.10	1kg TUB with Handle (ALE260)	S
							60g VOC (ALE215)	S
			26209441	TP211		1.80 - 1.80	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26209413	TP219		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			26209436	TP222		2.00 - 2.00	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 12		X				X		X		X		X		X		X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	X			X			X			X		X			X			X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2												X							
Boron Water Soluble	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
Easily Liberated Sulphide	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 12			X			X			X		X			X			X		
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
PCBs by GCMS	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X
PFAS (Post Ox.) Solids	All	NDPs: 0 Tests: 1							X												
PFAS Solids	All	NDPs: 0 Tests: 2							X												
pH	All	NDPs: 0 Tests: 12		X			X			X		X			X			X			X

26209398	TP256		0.35 - 0.35	60g VOC (ALE215)	S									X									
				250g Amber Jar (ALE210)	S	X			X	X	X	X			X	X	X	X					X
				1kg TUB with Handle (ALE260)	S		X																
26209404	TP251		2.00 - 2.00	60g VOC (ALE215)	S									X									
				250g Amber Jar (ALE210)	S	X			X	X	X	X			X	X	X	X					X
				1kg TUB with Handle (ALE260)	S		X	X															
26209421	TP227		1.10 - 1.10	60g VOC (ALE215)	S									X									
				250g Amber Jar (ALE210)	S	X			X	X	X	X			X	X	X	X					X
				1kg TUB with Handle (ALE260)	S		X																
26209391	TP225		0.40 - 0.40	60g VOC (ALE215)	S									X									
				250g Amber Jar (ALE210)	S	X			X	X	X	X			X	X	X	X					X
				1kg TUB with Handle (ALE260)	S		X															X	
26209427	TP223		1.00 - 1.00	60g VOC (ALE215)	S									X									
				250g Amber Jar (ALE210)	S	X			X	X	X	X			X	X	X	X					X
				1kg TUB with Handle (ALE260)	S		X																
26209436	TP222		2.00 - 2.00	60g VOC (ALE215)	S									X									

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26209459		26209466			26209449			26209454			26209441			26209413			26209436
Customer Sample Reference			TP201		TP202			TP210			TP210			TP211			TP219			TP222
AGS Reference																				
Depth (m)			0.80 - 0.80		1.30 - 1.30			0.90 - 0.90			2.10 - 2.10			1.80 - 1.80			1.50 - 1.50			2.00 - 2.00
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Phenols by HPLC (S)	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
Sample description	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
Total Sulphate	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 12		X			X			X			X			X			X			X
VOC MS (S)	All	NDPs: 0 Tests: 12			X			X			X		X			X			X			

26209398	TP256		0.35 - 0.35	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26209404	TP251		2.00 - 2.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26209421	TP227		1.10 - 1.10	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26209391	TP225		0.40 - 0.40	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26209427	TP223		1.00 - 1.00	60g VOC (ALE215)	S								X
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X		
				1kg TUB with Handle (ALE260)	S								
26209436	TP222		2.00 - 2.00	60g VOC (ALE215)	S								X

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26209459	TP201	0.80 - 0.80	Dark Brown	Sandy Clay Loam	Stones	Brick
26209466	TP202	1.30 - 1.30	Dark Brown	Silty Clay Loam	Stones	None
26209449	TP210	0.90 - 0.90	Dark Brown	Sandy Silt Loam	Glass & Stones	Brick
26209454	TP210	2.10 - 2.10	Dark Brown	Sandy Loam	Brick	Stones
26209441	TP211	1.80 - 1.80	Dark Brown	Loamy Sand	Brick	Stones
26209413	TP219	1.50 - 1.50	Light Brown	Sandy Loam	Stones	Brick
26209436	TP222	2.00 - 2.00	Dark Brown	Sandy Loam	Stones	Vegetation
26209427	TP223	1.00 - 1.00	Dark Brown	Sandy Loam	Brick	Stones
26209391	TP225	0.40 - 0.40	Dark Brown	Sand	Brick	Stones
26209421	TP227	1.10 - 1.10	Dark Brown	Sandy Silt Loam	Stones	Brick
26209404	TP251	2.00 - 2.00	Dark Brown	Silty Clay Loam	Stones	None
26209398	TP256	0.35 - 0.35	Dark Brown	Loamy Sand	Stones	Brick

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	25	19	12	14	15
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0118 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0468 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	0.62 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	0.667 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		8.48 #	4.69 #	3.03 #	3.93 #	11.1 #	4.09 #
pH	1 pH Units	TM133		7.68 M	5.9 M	7.89 M	8.16 M	7.77 M	10.1 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	1.05 M
PCB congener 28	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 52	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 101	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 118	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 138	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 153	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 180	<3 µg/kg	TM168		<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<21	<21	<21	<21	<21
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	<15 @ M	<15 @ M	24.7 @ M	<15 @ M
Arsenic	<0.6 mg/kg	TM181		19.8 M	12.1 M	21.5 M	20.6 M	26.7 M	16.4 M
Beryllium	<0.01 mg/kg	TM181		1.22 M	1.11 M	1.19 M	1.45 M	1.32 M	0.717 M
Cadmium	<0.02 mg/kg	TM181		0.302 M	0.0705 M	0.468 M	0.111 M	0.276 M	0.633 M
Chromium	<0.9 mg/kg	TM181		6.56 M	16.3 M	17.1 M	12.9 M	172 M	26.9 M
Copper	<1.4 mg/kg	TM181		47.8 M	31.8 M	74.1 M	37.7 M	162 M	79.9 M
Lead	<0.7 mg/kg	TM181		87.3 M	41.2 M	97.1 M	34.1 M	379 M	246 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	0.785 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		32.6 M	19.5 M	24.6 M	34.2 M	40.2 M	15.8 M
Selenium	<1 mg/kg	TM181		1.53 #	1.1 #	1.59 #	1.15 #	1.8 #	3.11 #
Vanadium	<0.2 mg/kg	TM181		22.6 #	33.3 #	37 #	34.1 #	31.6 #	48.7 #
Zinc	<1.9 mg/kg	TM181		131 M	54.8 M	230 M	108 M	253 M	266 M
Sulphate, Total	<48 mg/kg	TM221		2440 M	533 M	2890 M	327 M	1830 M	9190 M
Boron, water soluble	<1 mg/kg	TM222		<1 M	1.42 M	<1 M	3.72 M	1.21 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.288 M	0.0923 M	0.499 M	0.122 M	0.564 M	1.26 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338				<3			
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338				<3			
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338				<2			
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338				<1			
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338				<1			
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338				1.01			
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338				<1			
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338				<1			
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338				<1			
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338				<1			
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338				2.73			
Branched PFOS	<1 µg/kg	TM338				1.62			
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338				<1			
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338				<1			
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338				<1			
6:2-FTS (27619-97-2)	<1 µg/kg	TM338				<1			
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338				<1			
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338				<1			
Total PFOS	<1 µg/kg	TM338				4.35			
PFBA (Post Ox.) Perfluoro-n-butanoic acid	<3 µg/kg	TM428				<3			
PFPA (Post Ox.) Perfluoro-n-pentanoic acid	<3 µg/kg	TM428				<3			
PFHxA (Post Ox.) Perfluoro-n-hexanoic acid	<2 µg/kg	TM428				<2			
PFBS (Post Ox.) Perfluoro-1-butanesulfonate	<1 µg/kg	TM428				<1			
PFHpA (Post Ox.) Perfluoro-n-heptanoic acid	<1 µg/kg	TM428				<1			
6:2 PTS (Post Ox.) Perfluoro-octane sulfonate 6:2	<1 µg/kg	TM428				<1			
PFOA (Post Ox.) Perfluoro-n-octanoic acid	<1 µg/kg	TM428				2.44			
PFHxS (Post Ox.) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM428				<1			
PFNA (Post Ox.) Perfluoro-n-nonanoic acid	<1 µg/kg	TM428				<1			
PFHpS (Post Ox.) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM428				<1			

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
PFDA (Post Ox.) Perfluoro-n-decanoic acid	<1 µg/kg	TM428				<1			
Linear PFOS (Post Ox.) Perfluoro-1-octanesulfonate	<1 µg/kg	TM428				4.54			
Branched PFOS (Post Ox.)	<1 µg/kg	TM428				1.24			
PFUnA (Post Ox.) Perfluoro-n-undecanoic acid	<1 µg/kg	TM428				<1			
PFDoA (Post Ox.) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM428				<1			
PFOSA (Post Ox.) Perfluoro-octanesulfonamide	<1 µg/kg	TM428				<1			
PFDS (Post Ox.) Perfluoro-1-decanesulfonate	<1 µg/kg	TM428				<1			
PFPeS (Post Ox.) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM428				<1			
Total PFOS (Post Ox.)	<2 µg/kg	TM428				5.79			

Validated

CERTIFICATE OF ANALYSIS

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Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	10	6.2	8.4	22	20
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0336 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0896 M	0.032 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	0.0896 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	0.213 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		3.17 #	5.33 #	1.21 #	33.3 #	9.76 #	5.21 #
pH	1 pH Units	TM133		8.05 M	8.23 M	8.42 M	5.43 M	6.51 @ M	7.45 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
PCB congener 28	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 52	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 101	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 118	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 138	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 153	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
PCB congener 180	<3 µg/kg	TM168		<3 M	<15 M	<3 M	<3 M	<3 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<105	<21	<21	<21	<21
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 @ M	<15 @ M	<15 @ M	<15 @ M	281 @ M	<15 @ M
Arsenic	<0.6 mg/kg	TM181		6.16 M	12.9 M	3.27 M	21.4 M	25.4 M	65.5 M
Beryllium	<0.01 mg/kg	TM181		1.04 M	1.16 M	0.213 M	1.05 M	1.53 M	2.43 M
Cadmium	<0.02 mg/kg	TM181		0.0707 M	0.0708 M	0.0858 M	0.0817 M	0.287 M	0.181 M
Chromium	<0.9 mg/kg	TM181		15 M	12.5 M	45.4 M	3.3 M	11.5 M	20.7 M
Copper	<1.4 mg/kg	TM181		25.2 M	53.3 M	18.3 M	50.5 M	57.8 M	111 M
Lead	<0.7 mg/kg	TM181		13.6 M	22.4 M	32.2 M	40.9 M	120 M	103 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		36.9 M	32.1 M	33.3 M	31.9 M	30.6 M	43.9 M
Selenium	<1 mg/kg	TM181		<1 #	1.2 #	<1 #	1.49 #	1.66 #	1.76 #
Vanadium	<0.2 mg/kg	TM181		25 #	28.5 #	7.16 #	13.6 #	40.1 #	55.6 #
Zinc	<1.9 mg/kg	TM181		63.1 M	63.1 M	29.4 M	56.6 M	140 M	156 M
Sulphate, Total	<48 mg/kg	TM221		151 M	344 M	159 M	2000 M	421 M	513 M
Boron, water soluble	<1 mg/kg	TM222		1.31 M	1.36 M	<1 M	<1 M	1.31 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0616 M	0.0722 M	0.0187 M	0.0997 M	0.0347 M	0.0426 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend			Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
(F)	Trigger breach confirmed		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
1-4+§@	Sample deviation (see appendix)		Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Component	**LOD/Units**	**Method**							
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338				<3			
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338				<3			
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338				<2			
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338				<1			
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338				<1			
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338				<1			
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338				<1			
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338				<1			
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338				<1			
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338				<1			
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338				<1			
Branched PFOS	<1 µg/kg	TM338				<1			
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338				<1			
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338				<1			
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338				<1			
6:2-FTS (27619-97-2)	<1 µg/kg	TM338				<1			
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338				<1			
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338				<1			
Total PFOS	<1 µg/kg	TM338				<1			

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.1	93.2	90.7	90.3	86.2	91.2
Acenaphthene-d10 % recovery**	%	TM218		90.5	92.2	92.4	90.1	87	93.9
Phenanthrene-d10 % recovery**	%	TM218		87.9	93.8	92.8	89.4	89.4	95
Chrysene-d12 % recovery**	%	TM218		84.3	86.4	83.4	78.5	82.2	88.3
Perylene-d12 % recovery**	%	TM218		84	87	84.3	76.8	82	92.1
Naphthalene	<9 µg/kg	TM218		122 M	<9 M	55 M	80.9 M	281 M	108 M
Acenaphthylene	<12 µg/kg	TM218		18.7 M	<12 M	33 M	28 M	43.3 M	71.4 M
Acenaphthene	<8 µg/kg	TM218		70.3 M	13.9 M	637 M	83.5 M	184 M	193 M
Fluorene	<10 µg/kg	TM218		51.6 M	<10 M	385 M	80.1 M	140 M	195 M
Phenanthrene	<15 µg/kg	TM218		662 M	110 M	4390 M	793 M	1560 M	1600 M
Anthracene	<16 µg/kg	TM218		118 M	32.6 M	1020 M	189 M	339 M	328 M
Fluoranthene	<17 µg/kg	TM218		832 M	136 M	6440 M	1180 M	2050 M	2050 M
Pyrene	<15 µg/kg	TM218		735 M	124 M	5670 M	1100 M	1910 M	2000 M
Benz(a)anthracene	<14 µg/kg	TM218		390 M	63.3 M	2700 M	560 M	826 M	1020 M
Chrysene	<10 µg/kg	TM218		408 M	64.6 M	2560 M	526 M	820 M	1000 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		495 M	66.3 M	2860 M	590 M	960 M	1250 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		180 M	21.7 M	1060 M	203 M	363 M	451 M
Benzo(a)pyrene	<15 µg/kg	TM218		391 M	50.9 M	2280 M	458 M	731 M	1030 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		289 M	31.3 M	1590 M	302 M	526 M	759 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		53.6 M	<23 M	277 M	59.7 M	89.9 M	131 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		274 M	34.4 M	1400 M	286 M	463 M	733 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5090	750	33400	6520	11300	12900

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.9	90.8	95.3	90.8	91.4	89.9
Acenaphthene-d10 % recovery**	%	TM218		92.4	96.7	94.6	93.1	91.4	90.1
Phenanthrene-d10 % recovery**	%	TM218		91.2	99.2	91.2	92.1	90	88.6
Chrysene-d12 % recovery**	%	TM218		84.4	93.1	78.7	76.4	83.3	77.4
Perylene-d12 % recovery**	%	TM218		84.1	92.1	76.4	70.7	82.8	74.5
Naphthalene	<9 µg/kg	TM218		<9 M	4730 M	12 M	817 M	19.3 M	94.4 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	495 M	<12 M	<12 M	<12 M	<24 M
Acenaphthene	<8 µg/kg	TM218		<8 M	32400 M	8.77 M	9.6 M	70.4 M	1000 M
Fluorene	<10 µg/kg	TM218		<10 M	12000 M	<10 M	22 M	53.5 M	701 M
Phenanthrene	<15 µg/kg	TM218		<15 M	29600 M	62.4 M	403 M	424 M	6760 M
Anthracene	<16 µg/kg	TM218		<16 M	11200 M	<16 M	35.2 M	97.3 M	1680 M
Fluoranthene	<17 µg/kg	TM218		<17 M	50400 M	128 M	116 M	652 M	10200 M
Pyrene	<15 µg/kg	TM218		<15 M	39500 M	121 M	113 M	563 M	9050 M
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	7000 M	64 M	78.9 M	278 M	4120 M
Chrysene	<10 µg/kg	TM218		<10 M	7520 M	64 M	87.4 M	270 M	4060 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	3970 M	88.5 M	70.4 M	330 M	4830 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	1360 M	31 M	19.9 M	106 M	1870 M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	2360 M	67.7 M	40.8 M	239 M	4080 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	916 M	57.1 M	25.8 M	189 M	2920 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<230 M	<23 M	<23 M	33.6 M	509 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	718 M	53.8 M	41.1 M	166 M	2610 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	204000	758	1880	3490	54500

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Phenol	<100 µg/kg	TM157		<200	<100	<1000	<100	269	<500
Pentachlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<200	<100	<900
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Nitrobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Isophorone	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Hexachloroethane	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Hexachlorobutadiene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Hexachlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
n-Dioctyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	1510
Dimethyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	652
Diethyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
n-Dibutyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Dibenzofuran	<100 µg/kg	TM157		234	<100	<1000	804	239	<500
Carbazole	<100 µg/kg	TM157		<200	<100	<1000	548	<100	<500
Butylbenzyl phthalate	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<200	<100	13700	<100	<100	790
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Azobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
4-Nitrophenol	<100 µg/kg	TM157		<1000	<500	<5000	<500	<500	<2500
4-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
4-Methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100	1240	<500
4-Chlorophenylphenylether	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
4-Chloroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
4-Bromophenylphenylether	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
3-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Nitrophenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Nitroaniline	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Methylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100	254	<500
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Chlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
(F)	Trigger breach confirmed		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
1-4+§@	Sample deviation (see appendix)		Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Component	**LOD/Units**	**Method**							
2,6-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2,4-Dinitrotoluene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2,4-Dimethylphenol	<100 µg/kg	TM157		<200	<100	<1000	<100	482	<500
2,4-Dichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
1,4-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
1,3-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
1,2-Dichlorobenzene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Chloronaphthalene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
2-Methylnaphthalene	<100 µg/kg	TM157		535	<100	<1000	622	229	<500
Acenaphthylene	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500
Acenaphthene	<100 µg/kg	TM157		<200	<100	<1000	1560	185	<500
Anthracene	<100 µg/kg	TM157		240	<100	<1000	1980	268	684
Benzo(a)anthracene	<100 µg/kg	TM157		792	<100	2980	2860	655	1880
Benzo(b)fluoranthene	<100 µg/kg	TM157		692	<100	2440	1850	559	1140
Benzo(k)fluoranthene	<100 µg/kg	TM157		677	<100	2070	2000	557	1520
Benzo(a)pyrene	<100 µg/kg	TM157		601	<100	1750	2120	625	1150
Benzo(g,h,i)perylene	<100 µg/kg	TM157		437	<100	<1000	1050	404	725
Chrysene	<100 µg/kg	TM157		876	<100	3210	3140	690	2100
Fluoranthene	<100 µg/kg	TM157		1610	<100	5750	7700	1320	3970
Fluorene	<100 µg/kg	TM157		<200	<100	<1000	1090	<100	<500
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		854	<100	2650	2110	868	2110
Phenanthrene	<100 µg/kg	TM157		1230	<100	3950	8050	1100	3050
Pyrene	<100 µg/kg	TM157		1410	<100	5520	6830	1230	3690
Naphthalene	<100 µg/kg	TM157		481	<100	<1000	481	394	<500
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<200	<100	<1000	197	<100	<500
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<200	<100	<1000	<100	<100	<500

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<500	257	<100	<100	<100
Pentachlorophenol	<100 µg/kg	TM157		<100	<500	<100	<150	<100	<300
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Nitrobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Isophorone	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Hexachloroethane	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Hexachlorobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Dimethyl phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Diethyl phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Dibenzofuran	<100 µg/kg	TM157		<100	5830	<100	703	<100	201
Carbazole	<100 µg/kg	TM157		<100	1200	<100	<100	<100	189
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Azobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Nitrophenol	<100 µg/kg	TM157		<500	<2500	<500	<500	<500	<500
4-Nitroaniline	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Methylphenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Chloroaniline	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
3-Nitroaniline	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Nitrophenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Nitroaniline	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Methylphenol	<100 µg/kg	TM157		<100	<500	<100	112	<100	<100
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Chlorophenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.		Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
tot.unfilt	Total / unfiltered sample.		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.		Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
(F)	Trigger breach confirmed		Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
1-4+§@	Sample deviation (see appendix)		AGS Reference						
Component	**LOD/Units**	**Method**							
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
2-Methylnaphthalene	<100 µg/kg	TM157		<100	3010	<100	3230	<100	137
Acenaphthylene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100
Acenaphthene	<100 µg/kg	TM157		<100	21100	<100	<100	<100	706
Anthracene	<100 µg/kg	TM157		<100	8250	<100	<100	175	1140
Benzo(a)anthracene	<100 µg/kg	TM157		<100	4730	<100	157	601	3620
Benzo(b)fluoranthene	<100 µg/kg	TM157		<100	2240	<100	<100	433	2380
Benzo(k)fluoranthene	<100 µg/kg	TM157		<100	1830	<100	<100	443	2900
Benzo(a)pyrene	<100 µg/kg	TM157		<100	1270	<100	<100	452	2980
Benzo(g,h,i)perylene	<100 µg/kg	TM157		<100	<500	<100	<100	246	1790
Chrysene	<100 µg/kg	TM157		<100	5100	<100	164	628	4030
Fluoranthene	<100 µg/kg	TM157		<100	33200	<100	156	1220	8560
Fluorene	<100 µg/kg	TM157		<100	7980	<100	<100	<100	445
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		<100	1180	<100	<100	529	4010
Phenanthrene	<100 µg/kg	TM157		<100	22300	<100	861	805	5060
Pyrene	<100 µg/kg	TM157		<100	26200	<100	161	1090	8230
Naphthalene	<100 µg/kg	TM157		<100	3770	<100	2360	<100	162
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<500	<100	<100	<100	327
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<500	<100	<100	<100	<100

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		90.1 @	130 @	80.3 @	72.2 @	84.5 @	92.5 @
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	36.6 @
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	19.9 @	54.3 @
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	15.2 @	60.2 @
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	5710 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		1860 #	<1000 #	<1000 #	<1000 #	<1000 #	144000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		3780 #	<1000 #	<1000 #	1700 #	<1000 #	396000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		10800 #	7160 #	6640 #	4190 #	11100 #	816000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		1590	<1000	2980	<1000	<1000	24700
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		18600	7620	10500	6490	12400	1390000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		450000	10900	95800	26900	37800	1610000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	10.5 @	40.1 @
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		5980 #	<1000 #	<1000 #	<1000 #	<1000 #	1180 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		56300 #	<1000 #	2670 #	2150 #	2130 #	25700 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		163000 #	<1000 #	26600 #	6830 #	9280 #	46500 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		186000 #	1200 #	51200 #	10500 #	12900 #	128000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		20400	1920	4490	<1000	<1000	18300
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		2610	<1000	<1000	<1000	<1000	9550
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		432000	<5000	85200	20500	25400	220000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		450000	<10000	95800	26900	37800	1610000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50 @	<50 @	<50 @	<50 @	<50 @	151 @
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50 @	<50 @	<50 @	<50 @	<50 @	<50 @
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20 @	<20 @	<20 @	<20 @	<20 @	151 @

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74.2 @	84.2 @	107 @	85.3 @	117 @	111 @
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	30.2 @	19.2 @	12 @	63.2 @	<10 @
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	121 @	25.6 @	75.3 @	101 @	52.5 @
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		<10 @	388 @	24.5 @	52.4 @	91.6 @	63.8 @
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	24300 #	<1000 #	9440 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	276000 #	<1000 #	12000 #	<1000 #	1380 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	460000 #	<1000 #	6450 #	<1000 #	1450 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	1990000 #	5780 #	7160 #	15800 #	5120 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	453000	<1000	5120	4900	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	3210000	5990	40200	21700	8780
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		<10000	5320000	14800	162000	79100	483000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10 @	258 @	16 @	34.9 @	61.9 @	42.5 @
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	42100 #	<1000 #	3970 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	661000 #	<1000 #	21900 #	2710 #	20300 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	671000 #	1020 #	12200 #	17400 #	149000 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	734000 #	6800 #	39800 #	30700 #	262000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	43800	6680	43300
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	18400	2120	7320
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	2110000	8830	122000	57500	475000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		<10000	5320000	14900	162000	79400	484000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50 @	539 @	69.3 @	140 @	255 @	116 @
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50 @	258 @	<50 @	<50 @	61.9 @	<50 @
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20 @	796 @	69.3 @	140 @	317 @	116 @

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Dibromofluoromethane**	%	TM116		111 @	110 @	110 @	111 @	114 @	111 @
Toluene-d8**	%	TM116		97.8 @	98 @	97.6 @	98.2 @	98.5 @	97.2 @
4-Bromofluorobenzene**	%	TM116		89.2 @	92.3 @	86.9 @	86.2 @	88.4 @	92.3 @
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<120 @ #	<60 @ #	<60 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116		<140 @ #	<140 @ #	<70 @ #	<70 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116		<120 @ M	<120 @ M	<60 @ M	<60 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ M	<120 @ M	<60 @ M	<60 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116		<140 @ M	<140 @ M	<70 @ M	<70 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ M	<160 @ M	<80 @ M	<80 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ M	<120 @ M	<60 @ M	<60 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<200 @	<100 @	<100 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116		<160 @ M	<160 @ M	<80 @ M	<80 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<70 @ M	<70 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ M	<100 @ M	<50 @ M	<50 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<90 @ M	<90 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<90 @ #	<90 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116		<180 @ M	<180 @ M	<90 @ M	<90 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<70 @ M	<70 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		<140 @ M	<140 @ M	<70 @ M	<70 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<200 @	<100 @	<100 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<70 @ M	<70 @ M	<140 @ M	<140 @ M

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<50 @ M	<50 @ M	<100 @ M	<100 @ M
Dibromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Chlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<50 @ M	<50 @ M	<100 @ M	<100 @ M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	<80 @ M	<40 @ M	<40 @ M	<80 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Styrene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
Bromoform	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<100 @ #	<50 @ #	<50 @ #	<100 @ #	<100 @ #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ M	<320 @ M	<160 @ M	<160 @ M	<320 @ M	<320 @ M
Bromobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
Propylbenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<90 @ M	<90 @ M	<180 @ M	<180 @ M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<80 @ M	<80 @ M	<160 @ M	<160 @ M
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<280 @ #	<140 @ #	<140 @ #	<280 @ #	<280 @ #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<90 @ #	<90 @ #	<180 @ #	<180 @ #
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<200 @	<100 @	<100 @	<200 @	<200 @
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<200 @	<100 @	<100 @	<200 @	<200 @
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<80 @ M	<80 @ M	<160 @ M	<160 @ M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<50 @ M	<50 @ M	<100 @ M	<100 @ M
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<220 @	<110 @	<110 @	<220 @	<220 @
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<100 @ M	<100 @ M	<200 @ M	<200 @ M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ M	<280 @ M	<140 @ M	<140 @ M	<280 @ M	<280 @ M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<200 @ #	<100 @ #	<100 @ #	<200 @ #	<200 @ #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<400 @	<200 @	<200 @	<400 @	<400 @
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<400 @	<200 @	<200 @	<400 @	<400 @
Naphthalene	<13 µg/kg	TM116		<260 @ M	<260 @ M	<130 @ M	<130 @ M	<260 @ M	<260 @ M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<400 @ #	<200 @ #	<200 @ #	<400 @ #	<400 @ #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<200	<200	<400	<400

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209459	26209466	26209449	26209454	26209441	26209413
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.4 @	<0.2 @	<0.2 @	<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<800 @	<800 @	<400 @	<400 @	<800 @	<800 @

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Dibromofluoromethane**	%	TM116		109 @	116 @	109 @	104 @	112 @	109 @
Toluene-d8**	%	TM116		96.7 @	91.3 @	97.6 @	96 @	98.2 @	98.2 @
4-Bromofluorobenzene**	%	TM116		85.4 @	72.8 @	93 @	80.3 @	88.8 @	93 @
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 @ #	<120 @ #	<120 @ #	<120 @ #	<120 @ #	<120 @ #
Chloromethane	<7 µg/kg	TM116		<140 @ #	<140 @ #	<140 @ #	<140 @ #	<140 @ #	<140 @ #
Vinyl Chloride	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
Bromomethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Carbon Disulphide	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
Dichloromethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M	<120 @ M
2,2-Dichloropropane	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
Bromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chloroform	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Carbontetrachloride	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
Trichloroethene	<9 µg/kg	TM116		<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Dibromomethane	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
Bromodichloromethane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M	<140 @ M

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
Dibromochloromethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Chlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Ethylbenzene	<4 µg/kg	TM116		<80 @ M	<80 @ M	<80 @ M	<80 @ M	<80 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Styrene	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
Bromoform	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Isopropylbenzene	<5 µg/kg	TM116		<100 @ #	<100 @ #	<100 @ #	<100 @ #	<100 @ #	<100 @ #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 @ M	<320 @ M	<320 @ M	<320 @ M	<320 @ M	<320 @ M
Bromobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
Propylbenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
2-Chlorotoluene	<9 µg/kg	TM116		<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M	<180 @ M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
4-Chlorotoluene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
tert-Butylbenzene	<14 µg/kg	TM116		<280 @ #	<280 @ #	<280 @ #	<280 @ #	<280 @ #	<280 @ #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 @ #	305 @ #	<180 @ #	<180 @ #	<180 @ #	<180 @ #
sec-Butylbenzene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
4-Isopropyltoluene	<10 µg/kg	TM116		<200 @	<200 @	<200 @	<200 @	<200 @	<200 @
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M	<160 @ M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
n-Butylbenzene	<11 µg/kg	TM116		<220 @	<220 @	<220 @	<220 @	<220 @	<220 @
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 @ M	<280 @ M	<280 @ M	<280 @ M	<280 @ M	<280 @ M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #	<200 @ #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @	<400 @	<400 @
Hexachlorobutadiene	<20 µg/kg	TM116		<400 @	<400 @	<400 @	<400 @	<400 @	<400 @
Naphthalene	<13 µg/kg	TM116		<260 @ M	16500 @ M	<260 @ M	<260 @ M	<260 @ M	<260 @ M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 @ #	<400 @ #	<400 @ #	<400 @ #	<400 @ #	<400 @ #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<400	<400

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP222	TP223	TP225	TP227	TP251	TP256
			Depth (m)	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10	2.00 - 2.00	0.35 - 0.35
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/04/2022	26/04/2022	26/04/2022	26/04/2022	25/04/2022	26/04/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022	29/04/2022
			SDG Ref	220429-150	220429-150	220429-150	220429-150	220429-150	220429-150
			Lab Sample No.(s)	26209436	26209427	26209391	26209421	26209404	26209398
			AGS Reference						
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4 @	<0.4 @	<0.4 @	<0.4 @	<0.4 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<800 @	<800 @	<800 @	<800 @	<800 @	<800 @

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP201 0.80 - 0.80 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209459 TM048	05/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP202 1.30 - 1.30 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209466 TM048	05/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP210 0.90 - 0.90 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209449 TM048	06/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP210 2.10 - 2.10 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209454 TM048	05/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP211 1.80 - 1.80 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209441 TM048	06/05/2022	James Richards	Fibre bundles in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP219 1.50 - 1.50 SOLID 25/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209413 TM048	05/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP222 2.00 - 2.00 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209436 TM048	05/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP223 1.00 - 1.00 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209427 TM048	05/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596

Client Ref.: LD10385 **Location:** Ten Acres Lane

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP225 0.40 - 0.40 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209391 TM048	06/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP227 1.10 - 1.10 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209421 TM048	05/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP251 2.00 - 2.00 SOLID 25/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209404 TM048	06/05/2022	James Richards	ACM debris in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP256 0.35 - 0.35 SOLID 26/04/2022 00:00:00 29/04/2022 05:00:00 220429-150 26209398 TM048	06/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP211	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.80 - 1.80					
Sample Type	SOLID					
Date Sampled	26/04/2022 00:00:00					
Date Received	29/04/2022 05:00:00					
SDG	220429-150					
Original Sample	26209441					
Method Number	TM304					
Cust. Sample Ref.	TP251	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.00 - 2.00					
Sample Type	SOLID					
Date Sampled	25/04/2022 00:00:00					
Date Received	29/04/2022 05:00:00					
SDG	220429-150					
Original Sample	26209404					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM428	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220429-150 **Report Number:** 648031 **Superseded Report:** 646596
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26209459	26209466	26209449	26209454	26209441	26209413	26209436	26209427	26209391	26209421
Customer Sample Ref.	TP201	TP202	TP210	TP210	TP211	TP219	TP222	TP223	TP225	TP227
AGS Ref.										
Depth	0.80 - 0.80	1.30 - 1.30	0.90 - 0.90	2.10 - 2.10	1.80 - 1.80	1.50 - 1.50	2.00 - 2.00	1.00 - 1.00	0.40 - 0.40	1.10 - 1.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022
Asbestos ID in Solid Samples	05-May-2022	05-May-2022	06-May-2022	05-May-2022	06-May-2022	05-May-2022	05-May-2022	05-May-2022	06-May-2022	05-May-2022
Asbestos Quantification - Full					12-May-2022					
Boron Water Soluble	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022
Cyanide Comp/Free/Total/Thiocyanate	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	06-May-2022	09-May-2022
Easily Liberated Sulphide	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022
EPH CWG GC (S)	06-May-2022	05-May-2022	06-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022
GRO by GC-FID (S)	10-May-2022	10-May-2022	11-May-2022	11-May-2022	11-May-2022	10-May-2022	11-May-2022	11-May-2022	10-May-2022	11-May-2022
Hexavalent Chromium (s)	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022
Metals in solid samples by OES	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022
PAH by GCMS	04-May-2022	05-May-2022	04-May-2022	04-May-2022	06-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
PCBs by GCMS	06-May-2022	06-May-2022	06-May-2022	06-May-2022	09-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022	06-May-2022
PFAS (Post Ox.) Solids			25-May-2022							
PFAS Solids			05-May-2022						05-May-2022	
pH	06-May-2022	06-May-2022	09-May-2022	09-May-2022	09-May-2022	06-May-2022	09-May-2022	09-May-2022	09-May-2022	06-May-2022
Phenols by HPLC (S)	09-May-2022	05-May-2022	05-May-2022	06-May-2022	05-May-2022	05-May-2022	06-May-2022	09-May-2022	06-May-2022	05-May-2022
Sample description	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022	30-Apr-2022
Semi Volatile Organic Compounds	05-May-2022	05-May-2022	05-May-2022	06-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022	05-May-2022
Total Organic Carbon	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022	09-May-2022
Total Sulphate	05-May-2022	05-May-2022	05-May-2022	06-May-2022	06-May-2022	05-May-2022	09-May-2022	06-May-2022	06-May-2022	05-May-2022
TPH CWG GC (S)	11-May-2022	11-May-2022	11-May-2022	11-May-2022	11-May-2022	11-May-2022	11-May-2022	12-May-2022	11-May-2022	12-May-2022
VOC MS (S)	11-May-2022	11-May-2022	11-May-2022	11-May-2022	12-May-2022	11-May-2022	11-May-2022	12-May-2022	11-May-2022	11-May-2022

Lab Sample No(s)	26209404	26209398
Customer Sample Ref.	TP251	TP256
AGS Ref.		
Depth	2.00 - 2.00	0.35 - 0.35
Type	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	05-May-2022	05-May-2022
Asbestos ID in Solid Samples	06-May-2022	06-May-2022
Asbestos Quantification - Full	12-May-2022	
Boron Water Soluble	05-May-2022	05-May-2022
Cyanide Comp/Free/Total/Thiocyanate	09-May-2022	09-May-2022
Easily Liberated Sulphide	06-May-2022	06-May-2022
EPH CWG GC (S)	05-May-2022	06-May-2022
GRO by GC-FID (S)	10-May-2022	11-May-2022
Hexavalent Chromium (s)	09-May-2022	05-May-2022
Metals in solid samples by OES	06-May-2022	06-May-2022
PAH by GCMS	04-May-2022	04-May-2022
PCBs by GCMS	06-May-2022	06-May-2022
pH	09-May-2022	09-May-2022
Phenols by HPLC (S)	06-May-2022	05-May-2022
Sample description	30-Apr-2022	30-Apr-2022
Semi Volatile Organic Compounds	06-May-2022	05-May-2022
Total Organic Carbon	09-May-2022	09-May-2022
Total Sulphate	05-May-2022	05-May-2022
TPH CWG GC (S)	11-May-2022	11-May-2022
VOC MS (S)	12-May-2022	11-May-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	26 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220511-75
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	648262
Order Number:	LD2783

This report has been revised and directly supersedes 647850 in its entirety.

We received 11 samples on Wednesday May 11, 2022 and 11 of these samples were scheduled for analysis which was completed on Thursday May 26, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26260215	TP204		0.90 - 0.90	09/05/2022
26260224	TP204		2.50 - 2.50	09/05/2022
26260241	TP206		1.00 - 1.00	09/05/2022
26260235	TP207		3.00 - 3.00	09/05/2022
26260229	TP208		2.50 - 2.50	09/05/2022
26260248	TP226		1.50 - 1.50	09/05/2022
26260187	TP226		4.00 - 4.00	09/05/2022
26260202	TP242		2.50 - 2.50	09/05/2022
26260207	TP254		1.30 - 1.30	09/05/2022
26260181	TP258		2.50 - 2.50	09/05/2022
26260195	TP217A		1.60 - 1.60	09/05/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)																			
			26260215			26260224			26260241			26260235			26260229			26260248			26260187	
			Customer Sample Reference			TP204			TP204			TP206			TP207			TP208			TP226		
			AGS Reference																				
			Depth (m)			0.90 - 0.90			2.50 - 2.50			1.00 - 1.00			3.00 - 3.00			2.50 - 2.50			1.50 - 1.50		
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 11		X			X			X			X			X			X			X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 3				X						X										
Boron Water Soluble	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
Easily Liberated Sulphide	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 11				X			X			X			X			X			X		
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
PCBs by GCMS	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
PFAS Solids	All	NDPs: 0 Tests: 2											X										X
pH	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 11			X			X			X			X			X			X		

26260195	TP217A		1.60 - 1.60	60g VOC (ALE215)	S								X							
				250g Amber Jar (ALE210)	S	X			X	X	X	X		X	X	X	X		X	X
				1kg TUB with Handle (ALE260)	S		X													
26260181	TP258		2.50 - 2.50	60g VOC (ALE215)	S								X							
				250g Amber Jar (ALE210)	S	X	X		X	X	X	X		X	X	X	X		X	X
26260207	TP254		1.30 - 1.30	60g VOC (ALE215)	S								X							
				250g Amber Jar (ALE210)	S	X	X		X	X	X	X		X	X	X	X		X	X
26260202	TP242		2.50 - 2.50	60g VOC (ALE215)	S								X							
				250g Amber Jar (ALE210)	S	X	X	X	X	X	X	X		X	X	X	X		X	X
26260187	TP226		4.00 - 4.00	60g VOC (ALE215)	S								X							
				250g Amber Jar (ALE210)	S	X			X	X	X	X		X	X	X	X		X	X

Results Legend

- X Test
- N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26260215			26260224			26260241			26260235			26260229			26260248			26260187
Customer Sample Reference			TP204			TP204			TP206			TP207			TP208			TP226			TP226
AGS Reference																					
Depth (m)			0.90 - 0.90			2.50 - 2.50			1.00 - 1.00			3.00 - 3.00			2.50 - 2.50			1.50 - 1.50			4.00 - 4.00
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Sample description	All	NDPs: 0 Tsi ė :n11		X			X			X			X			X			X		
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 11		X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 11		X			X			X			X			X			X		
Total Sulphate	All	NDPs: 0 Tests: 11		X			X			X			X			X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 11		X			X			X			X			X			X		
VOC MS (S)	All	NDPs: 0 Tests: 11			X			X			X			X			X			X	

26260195	TP217A		1.60 - 1.60	60g VOC (ALE215)	S												X
				250g Amber Jar (ALE210)	S		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S												
26260181	TP258		2.50 - 2.50	60g VOC (ALE215)	S												X
				250g Amber Jar (ALE210)	S		X		X		X		X		X		
26260207	TP254		1.30 - 1.30	60g VOC (ALE215)	S												X
				250g Amber Jar (ALE210)	S		X		X		X		X		X		
26260202	TP242		2.50 - 2.50	60g VOC (ALE215)	S												X
				250g Amber Jar (ALE210)	S		X		X		X		X		X		
26260187	TP226		4.00 - 4.00	60g VOC (ALE215)	S												X
				250g Amber Jar (ALE210)	S		X		X		X		X		X		

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
26260215	TP204	0.90 - 0.90	Dark Brown	Sandy Clay	Stones	Brick
26260224	TP204	2.50 - 2.50	Dark Brown	Sandy Clay Loam	Stones	Brick
26260241	TP206	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	Brick
26260235	TP207	3.00 - 3.00	Dark Brown	Loamy Sand	Stones	Brick
26260229	TP208	2.50 - 2.50	Dark Brown	Sandy Silt Loam	Stones	Vegetation
26260187	TP226	4.00 - 4.00	Dark Brown	Sandy Clay Loam	Stones	None
26260248	TP226	1.50 - 1.50	Dark Brown	Sandy Loam	Stones	Brick
26260202	TP242	2.50 - 2.50	Dark Brown	Loamy Sand	Stones	Brick
26260207	TP254	1.30 - 1.30	Dark Brown	Sand	Stones	Brick
26260181	TP258	2.50 - 2.50	Dark Brown	Sandy Loam	Brick	Glass & Stones
26260195	TP217A	1.60 - 1.60	Grey	Silty Clay	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
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Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	22	9	14	19	16
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0329 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.242 M	<0.01 M	0.0124 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	0.802 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	1.08 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		8.45 #	6.36 #	11.6 #	5.71 #	5.52 #	5.97 #
pH	1 pH Units	TM133		7.8 M	8.06 M	8 M	7.7 M	7.65 M	8.34 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	1.52 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		1.7 M	4.49 M	2.98 M	1.6 M	<1 M	2.18 M
PCB congener 28	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 52	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 101	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 118	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 138	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 153	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
PCB congener 180	<3 µg/kg	TM168		<30 M	<3 M	<15 M	<15 M	<30 M	<30 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<210	<21	<105	<105	<210	<210
Sulphide, Easily liberated	<15 mg/kg	TM180		95.6 M	168 M	<15 M	<15 M	<15 M	<15 M
Arsenic	<0.6 mg/kg	TM181		26.8 M	26.9 M	41.9 M	16 M	22.4 M	23.4 M
Beryllium	<0.01 mg/kg	TM181		1.31 M	1.29 M	1.79 M	0.73 M	0.937 M	1.33 M
Cadmium	<0.02 mg/kg	TM181		2.89 M	1.11 M	0.248 M	0.424 M	0.653 M	1.05 M
Chromium	<0.9 mg/kg	TM181		9.44 M	17.7 M	497 M	10.1 M	10.9 M	46.1 M
Copper	<1.4 mg/kg	TM181		99.7 M	117 M	213 M	66.4 M	126 M	142 M
Lead	<0.7 mg/kg	TM181		901 M	194 M	1170 M	272 M	237 M	753 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	5.38 M	<0.1 M	<0.1 M	0.571 M
Nickel	<0.2 mg/kg	TM181		36 M	55.6 M	54.5 M	16.3 M	28.5 M	41.8 M
Selenium	<1 mg/kg	TM181		1.12 #	1.26 #	1.59 #	<1 #	1.62 #	1.49 #
Vanadium	<0.2 mg/kg	TM181		31.4 #	27.8 #	46.9 #	19.9 #	30.7 #	32.7 #
Zinc	<1.9 mg/kg	TM181		1280 M	566 M	826 M	203 M	347 M	345 M
Sulphate, Total	<48 mg/kg	TM221		1040 M	887 M	1200 M	15600 M	5930 M	663 M
Boron, water soluble	<1 mg/kg	TM222		2.63 M	2.11 M	2.34 M	1.34 M	1.25 M	1.18 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.119 M	0.0497 M	0.127 M	1.52 M	1.44 M	0.0385 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			<0.001 #		0.0173 #		

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Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #		<0.001 #			
Additional Asbestos Components (Using TM048)		TM304		None #		None #			
Analysts Comments		TM304		N/A		N/A			
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #		0.0173 #			
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338				<3			
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338				<3			
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338				<2			
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338				<1			
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338				<1			
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338				<1			
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338				<1			
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338				<1			
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338				<1			
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338				<1			
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338				<1			
Branched PFOS	<1 µg/kg	TM338				<1			
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338				<1			
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338				<1			
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338				<1			
6:2-FTS (27619-97-2)	<1 µg/kg	TM338				<1			
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338				<1			
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338				<1			
Total PFOS	<1 µg/kg	TM338				<1			

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SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		16	13	9.5	15	8.1
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		6.29 #	10 #	4.88 #	4.22 #	5.45 #
pH	1 pH Units	TM133		8.11 M	8.19 M	8.31 M	7.57 M	8.36 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Cyanide, Total	<1 mg/kg	TM153		40.6 M	2.69 M	<1 M	<1 M	<1 M
PCB congener 28	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 52	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 101	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 118	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 138	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 153	<3 µg/kg	TM168		<3 M	<30 M	<30 M	<30 M	<3 M
PCB congener 180	<3 µg/kg	TM168		<3 M	42.6 M	<30 M	<30 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168		<21	<210	<210	<210	<21
Sulphide, Easily liberated	<15 mg/kg	TM180		<15 M	<15 M	<15 M	237 M	<15 M
Arsenic	<0.6 mg/kg	TM181		16.8 M	27.1 M	10.4 M	9.25 M	17.8 M
Beryllium	<0.01 mg/kg	TM181		1.01 M	1.5 M	0.582 M	0.958 M	0.413 M
Cadmium	<0.02 mg/kg	TM181		0.0936 M	0.656 M	5.42 M	0.404 M	0.223 M
Chromium	<0.9 mg/kg	TM181		12.4 M	20.7 M	18.6 M	10.7 M	5.43 M
Copper	<1.4 mg/kg	TM181		78.3 M	146 M	50.6 M	52.5 M	12.7 M
Lead	<0.7 mg/kg	TM181		198 M	10400 M	135 M	98.6 M	22.9 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	1.07 M
Nickel	<0.2 mg/kg	TM181		29.4 M	30.1 M	35.8 M	18.9 M	5.55 M
Selenium	<1 mg/kg	TM181		<1 #	1.17 #	<1 #	<1 #	1.07 #
Vanadium	<0.2 mg/kg	TM181		23.8 #	38.3 #	22.3 #	23.1 #	12.5 #
Zinc	<1.9 mg/kg	TM181		283 M	353 M	190 M	217 M	22.4 M
Sulphate, Total	<48 mg/kg	TM221		681 M	2400 M	8200 M	6850 M	1350 M
Boron, water soluble	<1 mg/kg	TM222		1.24 M	3.19 M	1.67 M	1.24 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0803 M	0.261 M	1.38 M	1.44 M	0.037 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			<0.001 #			

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A	
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195	
			AGS Reference						
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304			<0.001 #				
Additional Asbestos Components (Using TM048)		TM304			None #				
Analysts Comments		TM304			N/A				
Asbestos Quantification - Total - %	<0.001 %	TM304			<0.001 #				
PFBA (375-22-4) Perfluoro-n-butanoic acid	<3 µg/kg	TM338		<3					
PFPA (2706-90-3) Perfluoro-n-pentanoic acid	<3 µg/kg	TM338		<3					
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	<2 µg/kg	TM338		<2					
PFBS (375-73-5) Perfluoro-1-butanesulfonate	<1 µg/kg	TM338		<1					
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	<1 µg/kg	TM338		<1					
PFOA (335-67-1) Perfluoro-n-octanoic acid	<1 µg/kg	TM338		<1					
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	<1 µg/kg	TM338		<1					
PFNA (375-95-1) Perfluoro-n-nonanoic acid	<1 µg/kg	TM338		<1					
PFHpS (375-92-8) Perfluoro-1-heptanesulfonate	<1 µg/kg	TM338		<1					
PFDA (335-76-2) Perfluoro-n-decanoic acid	<1 µg/kg	TM338		<1					
Linear PFOS(1763-23-1) Perfluoro-1-octanesulfonate	<1 µg/kg	TM338		<1					
Branched PFOS	<1 µg/kg	TM338		<1					
PFUnA (2058-94-8) Perfluoro-n-undecanoic acid	<1 µg/kg	TM338		<1					
PFDoA (307-55-1) Perfluoro-n-dodecanoic acid	<1 µg/kg	TM338		<1					
PFOSA (754-91-6) Perfluoro-octanesulfonamide	<1 µg/kg	TM338		<1					
6:2-FTS (27619-97-2)	<1 µg/kg	TM338		<1					
PFDS (335-73-3) Perfluoro-1-decanesulfonate	<1 µg/kg	TM338		<1					
PFPeS (2706-91-4) Perfluoro-1-pentanesulfonate	<1 µg/kg	TM338		<1					
Total PFOS	<1 µg/kg	TM338		<1					

Validated

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.1	98.5	102	102	101	101
Acenaphthene-d10 % recovery**	%	TM218		97.2	99.3	98.4	102	99.2	100
Phenanthrene-d10 % recovery**	%	TM218		96.4	101	104	103	103	103
Chrysene-d12 % recovery**	%	TM218		81.3	95.9	93	95.1	95.3	91.6
Perylene-d12 % recovery**	%	TM218		84.5	92.2	85.5	92.6	92.4	89.6
Naphthalene	<9 µg/kg	TM218		250 M	39.1 M	1240 M	260 M	590 M	207 M
Acenaphthylene	<12 µg/kg	TM218		261 M	22.4 M	190 M	<60 M	<60 M	409 M
Acenaphthene	<8 µg/kg	TM218		7130 M	161 M	4430 M	684 M	1370 M	829 M
Fluorene	<10 µg/kg	TM218		6060 M	113 M	2930 M	499 M	1170 M	1050 M
Phenanthrene	<15 µg/kg	TM218		47100 M	535 M	6120 M	4450 M	8280 M	7750 M
Anthracene	<16 µg/kg	TM218		9410 M	169 M	1510 M	1070 M	2170 M	2850 M
Fluoranthene	<17 µg/kg	TM218		43000 M	950 M	7220 M	5670 M	7670 M	12100 M
Pyrene	<15 µg/kg	TM218		38800 M	897 M	6290 M	5190 M	7500 M	10200 M
Benz(a)anthracene	<14 µg/kg	TM218		13800 M	379 M	2350 M	2490 M	3310 M	5430 M
Chrysene	<10 µg/kg	TM218		12600 M	347 M	2390 M	2330 M	3160 M	5060 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<75 M	384 M	2230 M	1850 M	1990 M	5770 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		5050 M	153 M	936 M	1010 M	1230 M	2370 M
Benzo(a)pyrene	<15 µg/kg	TM218		12200 M	359 M	2000 M	2190 M	2920 M	5040 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		7710 M	239 M	1270 M	1410 M	1770 M	3250 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		1320 M	46.9 M	254 M	283 M	351 M	596 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		7330 M	226 M	1200 M	1270 M	1700 M	2850 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		212000	5020	42600	30700	45200	65800

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		99.1	104	105	99.1	98.1
Acenaphthene-d10 % recovery**	%	TM218		97.3	103	104	97.4	98.2
Phenanthrene-d10 % recovery**	%	TM218		99.2	109	106	103	97.1
Chrysene-d12 % recovery**	%	TM218		94	95.9	98.1	93.6	93
Perylene-d12 % recovery**	%	TM218		89.9	91.5	94.8	91.8	88.7
Naphthalene	<9 µg/kg	TM218		84.9 M	8580 M	131 M	134 M	<9 M
Acenaphthylene	<12 µg/kg	TM218		18.3 M	<120 M	<120 M	73.6 M	<12 M
Acenaphthene	<8 µg/kg	TM218		403 M	2730 M	391 M	910 M	12.5 M
Fluorene	<10 µg/kg	TM218		338 M	2100 M	287 M	995 M	12.1 M
Phenanthrene	<15 µg/kg	TM218		2140 M	15600 M	4390 M	7230 M	107 M
Anthracene	<16 µg/kg	TM218		474 M	3760 M	1160 M	2330 M	25.5 M
Fluoranthene	<17 µg/kg	TM218		2140 M	15100 M	7350 M	9770 M	167 M
Pyrene	<15 µg/kg	TM218		1890 M	13900 M	6650 M	8280 M	171 M
Benz(a)anthracene	<14 µg/kg	TM218		785 M	6350 M	2800 M	4280 M	80.7 M
Chrysene	<10 µg/kg	TM218		750 M	6070 M	2540 M	3950 M	80.3 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		756 M	5830 M	2560 M	3610 M	61.8 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		304 M	2220 M	897 M	1950 M	27 M
Benzo(a)pyrene	<15 µg/kg	TM218		703 M	5370 M	2180 M	3950 M	76.6 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		457 M	3440 M	1410 M	2670 M	51.5 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		86.6 M	668 M	<230 M	494 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		423 M	3080 M	1270 M	2190 M	52.6 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		11800	94800	34000	52800	926

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Phenol	<100 µg/kg	TM157		<100	<100	703	<500	<200	<1000
Pentachlorophenol	<100 µg/kg	TM157		<100	<100	<500	3350	<200	<1000
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Nitrobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Isophorone	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Hexachloroethane	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100	<5000	<500	<200	<1000
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Diethyl phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Dibenzofuran	<100 µg/kg	TM157		135	<100	2120	<500	<200	1990
Carbazole	<100 µg/kg	TM157		<100	<100	1980	<500	<200	1450
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Azobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
4-Nitrophenol	<100 µg/kg	TM157		<100	<100	<5000	<500	<200	<1000
4-Nitroaniline	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
4-Methylphenol	<100 µg/kg	TM157		<100	<100	2330	<500	<200	<1000
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
4-Chloroaniline	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
3-Nitroaniline	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Nitrophenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Nitroaniline	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Methylphenol	<100 µg/kg	TM157		<100	<100	564	<500	<200	<1000
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Chlorophenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<100	1380	<500	<200	2440
Acenaphthylene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Acenaphthene	<100 µg/kg	TM157		219	<100	6320	<500	282	3420
Anthracene	<100 µg/kg	TM157		355	<100	3970	778	503	4800
Benzo(a)anthracene	<100 µg/kg	TM157		1060	413	8300	2250	1800	10300
Benzo(b)fluoranthene	<100 µg/kg	TM157		1020	366	5580	1560	1620	8860
Benzo(k)fluoranthene	<100 µg/kg	TM157		889	338	6020	1680	1280	6000
Benzo(a)pyrene	<100 µg/kg	TM157		1060	376	5800	2060	1560	8560
Benzo(g,h,i)perylene	<100 µg/kg	TM157		652	233	3120	1130	886	4230
Chrysene	<100 µg/kg	TM157		997	363	9040	1970	1600	9090
Fluoranthene	<100 µg/kg	TM157		2130	779	17900	4450	3670	22900
Fluorene	<100 µg/kg	TM157		170	<100	3710	<500	<200	2380
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		1150	473	3360	2850	2220	9450
Phenanthrene	<100 µg/kg	TM157		1130	432	17900	3360	2130	19300
Pyrene	<100 µg/kg	TM157		2050	791	20000	4220	3700	19200
Naphthalene	<100 µg/kg	TM157		159	<100	2460	586	<200	6840
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<100	<500	<500	<200	<1000

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
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- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
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- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
Phenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Pentachlorophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Nitrobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Isophorone	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Hexachloroethane	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Hexachlorobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Dimethyl phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Diethyl phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Dibenzofuran	<100 µg/kg	TM157		261	<1000	<500	2020	<100
Carbazole	<100 µg/kg	TM157		188	<1000	<500	2500	<100
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
Azobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Nitrophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Nitroaniline	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Methylphenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Chloroaniline	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
3-Nitroaniline	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
2-Nitrophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
2-Nitroaniline	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
2-Methylphenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100
2-Chlorophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Semi Volatile Organic Compounds

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A	
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60	
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195	
			AGS Reference						
2,6-Dinitrotoluene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2,4-Dinitrotoluene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2,4-Dimethylphenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2,4-Dichlorophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2,4,6-Trichlorophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2,4,5-Trichlorophenol	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
1,4-Dichlorobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
1,3-Dichlorobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
1,2-Dichlorobenzene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2-Chloronaphthalene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
2-Methylnaphthalene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
Acenaphthylene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
Acenaphthene	<100 µg/kg	TM157		791	1370	<500	3560	<100	
Anthracene	<100 µg/kg	TM157		1080	3140	885	7840	<100	
Benzo(a)anthracene	<100 µg/kg	TM157		2040	7710	2820	11000	<100	
Benzo(b)fluoranthene	<100 µg/kg	TM157		1560	5830	2260	8640	<100	
Benzo(k)fluoranthene	<100 µg/kg	TM157		1440	5770	2040	7950	<100	
Benzo(a)pyrene	<100 µg/kg	TM157		1740	6880	2540	9300	<100	
Benzo(g,h,i)perylene	<100 µg/kg	TM157		867	4300	1450	4600	<100	
Chrysene	<100 µg/kg	TM157		1730	6550	2490	9010	<100	
Fluoranthene	<100 µg/kg	TM157		5710	16400	5890	31600	<100	
Fluorene	<100 µg/kg	TM157		514	<1000	<500	3370	<100	
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157		1870	9570	3540	8840	<100	
Phenanthrene	<100 µg/kg	TM157		5010	11700	3480	28400	<100	
Pyrene	<100 µg/kg	TM157		5060	13900	5210	24900	<100	
Naphthalene	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	
Dibenzo(a,h)anthracene	<100 µg/kg	TM157		137	<1000	<500	<1000	<100	
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157		<100	<1000	<500	<1000	<100	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		114	88.1	78.9	76.4	89.1	112
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		63.6	93.4	<10	<10	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		132	221	34	86.6	33.5	102
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		344	1180	34	77.2	31	48.8
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		5520 #	<1000 #	<1000 #	<1000 #	<1000 #	14400 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		7360 #	2840 #	1370 #	2340 #	1540 #	38300 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		34800 #	40700 #	4250 #	14800 #	14700 #	77800 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		52300	71400	<1000	2120	1720	1310
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		100000	115000	6630	20200	18300	132000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		132000	145000	125000	217000	152000	518000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		229	787	23.1	51.5	21.1	33.3
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	3770 #	<1000 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1430 #	1860 #	24400 #	7380 #	3410 #	10700 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		7230 #	6860 #	37500 #	47600 #	31700 #	83500 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		21900 #	19900 #	51100 #	111000 #	76100 #	250000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	1040	1430	30600	22000	40800
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	<1000	<1000	9040	5970	7890
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		31600	29700	118000	197000	133000	385000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		133000	147000	125000	218000	152000	518000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		540	1500	68.1	164	64.5	151
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		229	787	<50	51.5	<50	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		769	2280	68.1	215	64.5	151

Validated

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		118	83.6	86.6	85.1	95.8
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10	12.7	<10	16.5	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		13.2	19.6	<10	27.1	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		10.8	31.1	<10	64.9	<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	2090 #	<1000 #	4710 #	<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #	14700 #	<1000 #	18600 #	<1000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		1990 #	67300 #	12700 #	31200 #	<1000 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000	14000	2720	15300	<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000	98300	16100	69800	<5000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		28900	261000	99800	380000	<10000
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10	<10	<10	<10	<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10	20.7	<10	43.7	<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	<1000 #	<1000 #	<1000 #	<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #	3610 #	1570 #	8260 #	<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		8690 #	33400 #	16100 #	61700 #	<1000 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		15800 #	109000 #	54000 #	195000 #	<1000 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	16300	11800	45800	<1000
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000	5020	2570	14800	<1000
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		26200	162000	83700	311000	<5000
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		26200	261000	99800	381000	<10000
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50	63.3	<50	109	<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50	<50	<50	<50	<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20	63.3	<20	109	<20

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Dibromofluoromethane**	%	TM116		111	108	107	111	109	108
Toluene-d8**	%	TM116		96.1	103	93.7	99.6	103	95.4
4-Bromofluorobenzene**	%	TM116		83.3	88	85.1	92.1	88.1	89.3
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 #	<120 #	<120 #	<120 #	<120 #	<120 #
Chloromethane	<7 µg/kg	TM116		<140 #	<140 #	<140 #	<140 #	<140 #	<140 #
Vinyl Chloride	<6 µg/kg	TM116		<120 ♦ M	<120 ♦ M	<120 ♦ M	<120 ♦ M	<120 ♦ M	<120 ♦ M
Bromomethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Chloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M	<120 M	<120 M	<120 M	<120 M	<120 M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
Carbon Disulphide	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Dichloromethane	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<160 M	<160 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M	<120 M	<120 M	<120 M	<120 M	<120 M
2,2-Dichloropropane	<10 µg/kg	TM116		<200	<200	<200	<200	<200	<200
Bromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Chloroform	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<160 M	<160 M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Carbontetrachloride	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<100 M	<100 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Trichloroethene	<9 µg/kg	TM116		<180 #	<180 #	<180 #	<180 #	<180 #	409 #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Dibromomethane	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Bromodichloromethane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200	<200	<200	<200	<200	<200
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
			Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Tetrachloroethene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<100 M	<100 M
Dibromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Chlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<100 M	<100 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Styrene	<10 µg/kg	TM116		<200 ♦ #	<200 ♦ #	<200 ♦ #	<200 ♦ #	<200 ♦ #	<200 ♦ #
Bromoform	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Isopropylbenzene	<5 µg/kg	TM116		<100 #	<100 #	<100 #	<100 #	<100 #	<100 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M	<320 M	<320 M	<320 M	<320 M	<320 M
Bromobenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Propylbenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
2-Chlorotoluene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<160 M	<160 M
4-Chlorotoluene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
tert-Butylbenzene	<14 µg/kg	TM116		<280 #	<280 #	<280 #	<280 #	<280 #	<280 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #	<180 #	<180 #	<180 #	<180 #	<180 #
sec-Butylbenzene	<10 µg/kg	TM116		<200	<200	<200	<200	<200	<200
4-Isopropyltoluene	<10 µg/kg	TM116		<200	<200	<200	<200	<200	<200
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<160 M	<160 M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<100 M	<100 M
n-Butylbenzene	<11 µg/kg	TM116		<220	<220	<220	<220	<220	<220
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M	<280 M	<280 M	<280 M	<280 M	<280 M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<400	<400
Hexachlorobutadiene	<20 µg/kg	TM116		<400	<400	<400	<400	<400	<400
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #	<400 #	<400 #	<400 #	<400 #	<400 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<400	<400

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend			Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.		Depth (m)	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	1.50 - 1.50
tot.unfilt	Total / unfiltered sample.		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted - refer to subcontractor report for accreditation status.		Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Sample Time	12:00	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
(F)	Trigger breach confirmed		SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	220511-75
1-4+§@	Sample deviation (see appendix)		Lab Sample No.(s)	26260215	26260224	26260241	26260235	26260229	26260248
			AGS Reference						
Component	**LOD/Units**	**Method**							
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
Dibromofluoromethane**	%	TM116		106	108	110	108	102
Toluene-d8**	%	TM116		94.8	98.7	95.7	103	107
4-Bromofluorobenzene**	%	TM116		87	89.9	88.4	82.7	81.9
Dichlorodifluoromethane	<6 µg/kg	TM116		<120 #	<120 #	<120 #	<120 #	<6 #
Chloromethane	<7 µg/kg	TM116		<140 #	<140 #	<140 #	<140 #	<7 #
Vinyl Chloride	<6 µg/kg	TM116		<120 ♦ M	<120 ♦ M	<120 ♦ M	<120 ♦ M	<6 ♦ M
Bromomethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Chloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Trichlorofluorormethane	<6 µg/kg	TM116		<120 M	<120 M	<120 M	<120 M	<6 M
1,1-Dichloroethene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<10 #
Carbon Disulphide	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<7 M
Dichloromethane	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<10 #
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
trans-1,2-Dichloroethene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
1,1-Dichloroethane	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<8 M
cis-1,2-Dichloroethene	<6 µg/kg	TM116		<120 M	<120 M	<120 M	<120 M	<6 M
2,2-Dichloropropane	<10 µg/kg	TM116		<200	<200	<200	<200	<10
Bromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Chloroform	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<8 M
1,1,1-Trichloroethane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<7 M
1,1-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Carbontetrachloride	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
1,2-Dichloroethane	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<5 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<9 M
Trichloroethene	<9 µg/kg	TM116		<180 #	<180 #	<180 #	<180 #	<9 #
1,2-Dichloropropane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Dibromomethane	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<9 M
Bromodichloromethane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<7 M
cis-1,3-Dichloropropene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<7 M
trans-1,3-Dichloropropene	<10 µg/kg	TM116		<200	<200	<200	<200	<10
1,1,2-Trichloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
1,3-Dichloropropane	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<7 M

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4♦§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A
			Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022
			SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75
			Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195
			AGS Reference					
Tetrachloroethene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<5 M
Dibromochloromethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
1,2-Dibromoethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Chlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<5 M
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<4 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<10 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Styrene	<10 µg/kg	TM116		<200 ♦ #	<200 ♦ #	<200 ♦ #	<200 ♦ #	<10 ♦ #
Bromoform	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Isopropylbenzene	<5 µg/kg	TM116		<100 #	<100 #	<100 #	<100 #	<5 #
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<10 #
1,2,3-Trichloropropane	<16 µg/kg	TM116		<320 M	<320 M	<320 M	<320 M	<16 M
Bromobenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
Propylbenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
2-Chlorotoluene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<9 M
1,3,5-Trimethylbenzene	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<8 M
4-Chlorotoluene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
tert-Butylbenzene	<14 µg/kg	TM116		<280 #	<280 #	<280 #	<280 #	<14 #
1,2,4-Trimethylbenzene	<9 µg/kg	TM116		<180 #	<180 #	<180 #	<180 #	<9 #
sec-Butylbenzene	<10 µg/kg	TM116		<200	<200	<200	<200	<10
4-Isopropyltoluene	<10 µg/kg	TM116		<200	<200	<200	<200	<10
1,3-Dichlorobenzene	<8 µg/kg	TM116		<160 M	<160 M	<160 M	<160 M	<8 M
1,4-Dichlorobenzene	<5 µg/kg	TM116		<100 M	<100 M	<100 M	<100 M	<5 M
n-Butylbenzene	<11 µg/kg	TM116		<220	<220	<220	<220	<11
1,2-Dichlorobenzene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<10 M
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116		<280 M	<280 M	<280 M	<280 M	<14 M
Tert-amyl methyl ether	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<10 #
1,2,4-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<20
Hexachlorobutadiene	<20 µg/kg	TM116		<400	<400	<400	<400	<20
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<13 M
1,2,3-Trichlorobenzene	<20 µg/kg	TM116		<400 #	<400 #	<400 #	<400 #	<20 #
1,3,5-Trichlorobenzene	<20 µg/kg	TM116		<400	<400	<400	<400	<20

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (S)

Results Legend		Customer Sample Ref.	TP226	TP242	TP254	TP258	TP217A	
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	4.00 - 4.00	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50	1.60 - 1.60	
tot.unfilt	Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	09/05/2022	09/05/2022	09/05/2022	09/05/2022	09/05/2022	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:00	12:00	12:00	12:00	12:00	
		Date Received	11/05/2022	11/05/2022	11/05/2022	11/05/2022	11/05/2022	
		SDG Ref	220511-75	220511-75	220511-75	220511-75	220511-75	
(F)	Trigger breach confirmed	Lab Sample No.(s)	26260187	26260202	26260207	26260181	26260195	
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.4	<0.4	<0.4	<0.4	<0.02	
Sum of BTEX	<40 µg/kg	TM116	<800	<800	<800	<800	<40	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref.	TP204	18/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.90 - 0.90										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260215										
Method Number	TM048										
Cust. Sample Ref.	TP204	17/05/2022	Paul Poynton	Loose fibres in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Depth (m)	2.50 - 2.50										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260224										
Method Number	TM048										
Cust. Sample Ref.	TP206	17/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.00 - 1.00										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260241										
Method Number	TM048										
Cust. Sample Ref.	TP207	18/05/2022	James Richards	ACM debris in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Depth (m)	3.00 - 3.00										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260235										
Method Number	TM048										
Cust. Sample Ref.	TP208	18/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Depth (m)	2.50 - 2.50										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260229										
Method Number	TM048										
Cust. Sample Ref.	TP226	18/05/2022	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.50 - 1.50										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260248										
Method Number	TM048										
Cust. Sample Ref.	TP226	17/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	4.00 - 4.00										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260187										
Method Number	TM048										
Cust. Sample Ref.	TP242	17/05/2022	Emily Anderton	ACM fragment in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	2.50 - 2.50										
Sample Type	SOLID										
Date Sampled	09/05/2022 00:00:00										
Date Received	11/05/2022 05:00:00										
SDG	220511-75										
Original Sample	26260202										
Method Number	TM048										

Validated

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850

Client Ref.: LD10385 **Location:** Ten Acres Lane

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP254 1.30 - 1.30 SOLID 09/05/2022 00:00:00 11/05/2022 05:00:00 220511-75 26260207 TM048	17/05/22	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP258 2.50 - 2.50 SOLID 09/05/2022 00:00:00 11/05/2022 05:00:00 220511-75 26260181 TM048	17/05/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP217A 1.60 - 1.60 SOLID 09/05/2022 00:00:00 11/05/2022 05:00:00 220511-75 26260195 TM048	18/05/2022	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	TP204	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.50 - 2.50					
Sample Type	SOLID					
Date Sampled	09/05/2022 00:00:00					
Date Received	11/05/2022 05:00:00					
SDG	220511-75					
Original Sample	26260224					
Method Number	TM304					
Cust. Sample Ref.	TP207	None (#)	N/A	0.0173 (#)	<0.001 (#)	0.0173 (#)
Depth (m)	3.00 - 3.00					
Sample Type	SOLID					
Date Sampled	09/05/2022 00:00:00					
Date Received	11/05/2022 05:00:00					
SDG	220511-75					
Original Sample	26260235					
Method Number	TM304					
Cust. Sample Ref.	TP242	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.50 - 2.50					
Sample Type	SOLID					
Date Sampled	09/05/2022 00:00:00					
Date Received	11/05/2022 05:00:00					
SDG	220511-75					
Original Sample	26260202					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM243		Mixed Anions In Soils By Kone
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM338	PFAS In Solids	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids in Solids
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220511-75 **Report Number:** 648262 **Superseded Report:** 647850
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26260215	26260224	26260241	26260235	26260229	26260187	26260248	26260202	26260207	26260181
Customer Sample Ref.	TP204	TP204	TP206	TP207	TP208	TP226	TP226	TP242	TP254	TP258
AGS Ref.										
Depth	0.90 - 0.90	2.50 - 2.50	1.00 - 1.00	3.00 - 3.00	2.50 - 2.50	4.00 - 4.00	1.50 - 1.50	2.50 - 2.50	1.30 - 1.30	2.50 - 2.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	17-May-2022	16-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	16-May-2022	16-May-2022	17-May-2022	16-May-2022
Asbestos ID in Solid Samples	18-May-2022	17-May-2022	17-May-2022	18-May-2022	18-May-2022	17-May-2022	18-May-2022	17-May-2022	17-May-2022	17-May-2022
Asbestos Quantification - Full		24-May-2022		26-May-2022				23-May-2022		
Boron Water Soluble	17-May-2022	16-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	16-May-2022	17-May-2022	17-May-2022
Cyanide Comp/Free/Total/Thiocyanate	18-May-2022	18-May-2022	18-May-2022	18-May-2022	17-May-2022	19-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022
Easily Liberated Sulphide	16-May-2022	16-May-2022	16-May-2022	13-May-2022	17-May-2022	17-May-2022	16-May-2022	16-May-2022	13-May-2022	16-May-2022
EPH CWG GC (S)	17-May-2022	17-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	17-May-2022	20-May-2022	17-May-2022
GRO by GC-FID (S)	19-May-2022	19-May-2022	20-May-2022	20-May-2022	20-May-2022	19-May-2022	20-May-2022	19-May-2022	19-May-2022	19-May-2022
Hexavalent Chromium (s)	14-May-2022	14-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	14-May-2022	14-May-2022	14-May-2022	14-May-2022
Metals in solid samples by OES	18-May-2022	16-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	17-May-2022	17-May-2022	18-May-2022	17-May-2022
PAH by GCMS	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022
PCBs by GCMS	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022
PFAS Solids				18-May-2022		18-May-2022				
pH	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022	13-May-2022
Phenols by HPLC (S)	16-May-2022	16-May-2022	16-May-2022	16-May-2022	17-May-2022	17-May-2022	16-May-2022	16-May-2022	16-May-2022	16-May-2022
Sample description	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022	12-May-2022
Semi Volatile Organic Compounds	17-May-2022	17-May-2022	17-May-2022	13-May-2022	17-May-2022	17-May-2022	17-May-2022	17-May-2022	13-May-2022	17-May-2022
Total Organic Carbon	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022
Total Sulphate	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	16-May-2022	16-May-2022	19-May-2022	19-May-2022
TPH CWG GC (S)	19-May-2022	19-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	20-May-2022	19-May-2022	20-May-2022	19-May-2022
VOC MS (S)	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022	19-May-2022

Lab Sample No(s)	26260195
Customer Sample Ref.	TP217A
AGS Ref.	
Depth	1.60 - 1.60
Type	Soil/Solid (S)
Anions by Kone (soil)	17-May-2022
Asbestos ID in Solid Samples	18-May-2022
Boron Water Soluble	17-May-2022
Cyanide Comp/Free/Total/Thiocyanate	18-May-2022
Easily Liberated Sulphide	16-May-2022
EPH CWG GC (S)	20-May-2022
GRO by GC-FID (S)	19-May-2022
Hexavalent Chromium (s)	17-May-2022
Metals in solid samples by OES	18-May-2022
PAH by GCMS	17-May-2022
PCBs by GCMS	20-May-2022
pH	13-May-2022
Phenols by HPLC (S)	16-May-2022
Sample description	12-May-2022
Semi Volatile Organic Compounds	17-May-2022
Total Organic Carbon	19-May-2022
Total Sulphate	19-May-2022
TPH CWG GC (S)	20-May-2022
VOC MS (S)	18-May-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	31 May 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220523-8
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	648714
Order Number:	LD2817

We received 5 samples on Sunday May 22, 2022 and 5 of these samples were scheduled for analysis which was completed on Tuesday May 31, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26326767	CP209		0.00 - 0.00	19/05/2022
26326810	RH202		0.00 - 0.00	19/05/2022
26326797	RH204		0.00 - 0.00	19/05/2022
26326754	RH206		0.00 - 0.00	19/05/2022
26326784	WS318		0.00 - 0.00	19/05/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26326767	CP209		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26326810	RH202		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26326797	RH204		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 5		X				X		X
Anions by Kone (w)	All	NDPs: 0 Tests: 5		X				X		X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5				X			X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 5				X			X	
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 5	X				X			X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5			X			X			X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5			X			X			X
GRO by GC-FID (W)	All	NDPs: 0 Tests: 5				X			X		
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 5		X				X			X
Mercury Dissolved	All	NDPs: 0 Tests: 5				X			X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 5			X			X			X
PFAS Liquids	All	NDPs: 0 Tests: 2		X							
pH Value	All	NDPs: 0 Tests: 5		X				X			X
Phenols by HPLC (W)	All	NDPs: 0 Tests: 5			X				X		
Redox Potential	All	NDPs: 0 Tests: 5	X				X			X	

26326784	WS318		0.00 - 0.00	ZnAc (ALE246)	GW															
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW														X	
				500ml Plastic (ALE208)	GW	X	X							X			X	X		
				250ml Amber Gl. PTFE/PE (ALE219)	GW						X	X				X				
				0.5l glass bottle (ALE227)	GW					X										X
26326754	RH206		0.00 - 0.00	ZnAc (ALE246)	GW															
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW														X	
				500ml Plastic (ALE208)	GW	X	X							X				X		
				250ml Amber Gl. PTFE/PE (ALE219)	GW						X	X				X				
				0.5l glass bottle (ALE227)	GW					X										X
26326797	RH204		0.00 - 0.00	ZnAc (ALE246)	GW															
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW														X	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Ty9es -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26326767	CP209		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26326810	RH202		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26326797	RH204		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
Sulphide	All	NDPs: 0 Tests: 5						
							ZnAc (ALE246)	X
							ZnAc (ALE246)	X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 5						
							0.5l glass bottle (ALE227)	X
							0.5l glass bottle (ALE227)	X
							0.5l glass bottle (ALE227)	X
TPH CWG (W)	All	NDPs: 0 Tests: 5						
							0.5l glass bottle (ALE227)	X
							0.5l glass bottle (ALE227)	X
							0.5l glass bottle (ALE227)	X
VOC MS (W)	All	NDPs: 0 Tests: 5						
							Vial (ALE297)	X
							Vial (ALE297)	X

26326784	WS318		0.00 - 0.00	ZnAc (ALE246)	GW		X						
				Vial (ALE297)	GW								X
				NaOH (ALE245)	GW								
				HNO3 Filtered (ALE204)	GW								
				H2SO4 (ALE244)	GW								
				500ml Plastic (ALE208)	GW								
				250ml Amber Gl. PTFE/PE (ALE219)	GW								
				0.5l glass bottle (ALE227)	GW				X		X		
26326754	RH206		0.00 - 0.00	ZnAc (ALE246)	GW		X						
				Vial (ALE297)	GW								X
				NaOH (ALE245)	GW								
				HNO3 Filtered (ALE204)	GW								
				H2SO4 (ALE244)	GW								
				500ml Plastic (ALE208)	GW								
				250ml Amber Gl. PTFE/PE (ALE219)	GW								
				0.5l glass bottle (ALE227)	GW				X		X		
26326797	RH204		0.00 - 0.00	ZnAc (ALE246)	GW		X						
				Vial (ALE297)	GW								X
				NaOH (ALE245)	GW								
				HNO3 Filtered (ALE204)	GW								
				H2SO4 (ALE244)	GW								

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022	
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8	
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784	
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		580 #	356 #	319 #	413 #	470 #	
Carbon, Organic (diss.filt)	<3 mg/l	TM090		<6	3.11	<3	3.11	6.8	
Sulphide	<0.01 mg/l	TM101		<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #	
Redox potential	mV	TM110		138	139	132	140	137	
Arsenic (diss.filt)	<0.5 µg/l	TM152		3.86 #	2.11 #	12.5 #	6.25 #	2.91 #	
Boron (diss.filt)	<10 µg/l	TM152		134 #	111 #	42.6 #	48.1 #	739 #	
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #	
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	
Copper (diss.filt)	<0.3 µg/l	TM152		1.59 #	<0.3 #	<0.3 #	0.715 #	0.885 #	
Lead (diss.filt)	<0.2 µg/l	TM152		6.95 #	<0.2 #	<0.2 #	0.987 #	1.82 #	
Manganese (diss.filt)	<3 µg/l	TM152		936 #	253 #	318 #	360 #	264 #	
Nickel (diss.filt)	<0.4 µg/l	TM152		3.73 #	3.76 #	2.77 #	0.728 #	1.49 #	
Selenium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	
Zinc (diss.filt)	<1 µg/l	TM152		12.2 #	1.14 #	5.12 #	2.57 #	54.5 #	
Calcium (Dis.Filt)	<0.2 mg/l	TM152		182 #	58.3 #	85.7 #	91.9 #	207 #	
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #	
Sulphate	<2 mg/l	TM184		807 #	52.3 #	36.4 #	30.9 #	126 #	
Cyanide, Total	<0.05 mg/l	TM227		<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	
Cyanide, Free	<0.05 mg/l	TM227		<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	
Thiocyanate	<0.05 mg/l	TM227		<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	<0.05 @ #	
pH	<1 pH Units	TM256		7.41 #	7.95 #	7.73 #	7.68 #	7.2 #	
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #	
Cresols	<0.006 mg/l	TM259		<0.006 #	<0.006 #	<0.006 #	<0.006 #	<0.006 #	
Xylenols	<0.008 mg/l	TM259		<0.008 #	<0.008 #	<0.008 #	<0.008 #	<0.008 #	
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #	
Low Level Hexavalent Chromium	<0.003 mg/l	TM331		<0.003	<0.003	<0.003	<0.003	<0.003	
PFBA (375-22-4)	<2 ng/l	TM337		<2 #				<2 #	
PFPA (2706-90-3)	<1 ng/l	TM337		<1 #				<1 #	
PFHxA (307-24-4)	<1 ng/l	TM337		<1 #				1.53 #	
PFBS (375-73-5)	<1 ng/l	TM337		<1 #				2.1 #	
PFHpA (375-85-9)	<1 ng/l	TM337		<1 #				<1 #	
6:2 FTS (27619-97-2)	<1 ng/l	TM337		<1 #				<1 #	
PFOA (335-67-1)	<0.65 ng/l	TM337		<1.9 #				8.81 #	

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022	
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8	
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784	
			AGS Reference						
PFHxS (355-46-4)	<1 ng/l	TM337		<1 #				3.27 #	
PFNA (375-95-1)	<1 ng/l	TM337		<1 #				<1 #	
PFHpS (375-92-8)	<1 ng/l	TM337		<1 #				<1 #	
PFDA (335-76-2)	<1 ng/l	TM337		<1 #				<1 #	
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337		<0.65 #				1.65 #	
Branched PFOS	<0.65 ng/l	TM337		<0.65 #				3.41 #	
PFUnA (2058-94-8)	<1 ng/l	TM337		<1 #				<1 #	
PFDoA (307-55-1)	<1 ng/l	TM337		<1 #				<1 #	
PFOSA (754-91-6)	<2 ng/l	TM337		<2 #				<2 #	
PFDS (335-77-3)	<1 ng/l	TM337		<1				<1	
PFPeS (2706-91-4)	<1 ng/l	TM337		<1 #				<1 #	
Total PFOS	<0.65 ng/l	TM337		<0.65 #				5.06 #	

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		<0.01 #	0.505 #	0.0131 #	<0.1 #	0.0663 #
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0093 #	<0.005 #	<0.05 #	0.114 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	<0.05 #	0.0064 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0101 #	0.0862 #	0.01 #	0.195 #	0.544 #
Anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0119 #	<0.005 #	<0.05 #	0.105 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0059 #	0.111 #	0.0088 #	0.116 #	0.38 #
Fluorene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0236 #	<0.005 #	<0.05 #	0.062 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0701 #	<0.005 #	0.177 #	0.235 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0112 #	0.0937 #	0.0092 #	0.211 #	0.517 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0304 #	<0.005 #	<0.05 #	0.207 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0669 #	<0.005 #	0.195 #	0.262 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0226 #	<0.005 #	<0.05 #	0.111 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		<0.002 #	0.0386 #	<0.002 #	<0.02 #	0.22 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	<0.05 #	0.0269 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0398 #	<0.005 #	0.0856 #	0.154 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0296 #	<0.005 #	<0.05 #	0.143 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		<0.082 #	1.14 #	<0.082 #	0.979 #	3.15 #

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+$@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784
			AGS Reference					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Methylphenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
4-Methylphenol (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1
Azobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
Acenaphthylene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
Acenaphthene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
Anthracene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<4 #	<20 #	104 #	<20 #	<2 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	1.01 #

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022	
			Sample Time	12:00	12:00	12:00	12:00	12:00	
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022	
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8	
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784	
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	1.06 #	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Carbazole (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Chrysene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	1.03 #	
Dibenzofuran (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Diethyl phthalate (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Dimethyl phthalate (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<10 #	<50 #	<20 #	<50 #	<5 #	
Fluoranthene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	2.1 #	
Fluorene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Hexachlorobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Pentachlorophenol (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1	
Phenol (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Hexachloroethane (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Nitrobenzene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Naphthalene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Isophorone (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<2	<10	<4	<10	<1	
Phenanthrene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	1.29 #	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	<1 #	
Pyrene (aq)	<1 µg/l	TM176		<2 #	<10 #	<4 #	<10 #	2.06 #	

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784
			AGS Reference					
GRO Surrogate % recovery**	%	TM245		98	97	95	71	94
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10	<100	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	<10	<100	<10

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784
			AGS Reference					
Dibromofluoromethane**	%	TM208		114	113	109	98.1	108
Toluene-d8**	%	TM208		99.9	99.2	97.4	89.2	97.8
4-Bromofluorobenzene**	%	TM208		99.5	94.7	94.1	71	95.4
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	2.47 #	2.96 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend		Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318	
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
tot.unfilt	Total / unfiltered sample.	Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:00	12:00	12:00	12:00	12:00	
(F)	Trigger breach confirmed	Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022	
1-4+§@	Sample deviation (see appendix)	SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8	
		Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784	
		AGS Reference						

Component	LOD/Units	Method						
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Chlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
o-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Isopropylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Propylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Naphthalene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022
			Sample Time	12:00	12:00	12:00	12:00	12:00
			Date Received	22/05/2022	22/05/2022	22/05/2022	22/05/2022	22/05/2022
			SDG Ref	220523-8	220523-8	220523-8	220523-8	220523-8
			Lab Sample No.(s)	26326767	26326810	26326797	26326754	26326784
			AGS Reference					
Sum of detected Xylenes	<2 µg/l	TM208		<2	<2	<2	<2	<2
Sum of BTEX	<5 µg/l	TM208		<5	<5	<5	<5	<5

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220523-8 **Report Number:** 648714 **Superseded Report:**
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26326767	26326810	26326797	26326754	26326784
Customer Sample Ref.	CP209	RH202	RH204	RH206	WS318
AGS Ref.					
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
Anions by Kone (w)	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
Cyanide Comp/Free/Total/Thiocyanate	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
Dissolved Metals by ICP-MS	27-May-2022	25-May-2022	25-May-2022	27-May-2022	25-May-2022
Dissolved Organic/Inorganic Carbon	27-May-2022	26-May-2022	25-May-2022	26-May-2022	27-May-2022
EPH CWG (Aliphatic) Aqueous GC (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
EPH CWG (Aromatic) Aqueous GC (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
GRO by GC-FID (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
Low Level Hexavalent Chromium (w)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
Mercury Dissolved	27-May-2022	30-May-2022	30-May-2022	27-May-2022	30-May-2022
PAH Spec MS - Aqueous (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
PFAS Liquids	31-May-2022				31-May-2022
pH Value	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022
Phenols by HPLC (W)	27-May-2022	27-May-2022	26-May-2022	27-May-2022	27-May-2022
Redox Potential	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
Sulphide	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
SVOC MS (W) - Aqueous	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
TPH CWG (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
VOC MS (W)	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	24 June 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220620-6
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	651985
Order Number:	LD2897

This report has been revised and directly supersedes 651819 in its entirety.

We received 7 samples on Sunday June 19, 2022 and 7 of these samples were scheduled for analysis which was completed on Friday June 24, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

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CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26455734	CP202		0.00 - 0.00	15/06/2022
26455752	CP207		0.00 - 0.00	15/06/2022
26455672	Downstream		0.00 - 0.00	16/06/2022
26455708	Midstream		0.00 - 0.00	16/06/2022
26455786	RH203		0.00 - 0.00	16/06/2022
26455767	RH205		0.00 - 0.00	15/06/2022
26455689	Upstream		0.00 - 0.00	16/06/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Results Legend

- X Test
- N No Determination Possible

Sample Types -

- S - Soil/Solid
- UNS - Unspecified Solid
- GW - Ground Water
- SW - Surface Water
- LE - Land Leachate
- PL - Prepared Leachate
- PR - Process Water
- SA - Saline Water
- TE - Trade Effluent
- TS - Treated Sewage
- US - Untreated Sewage
- RE - Recreational Water
- DW - Drinking Water Non-regulatory
- UNL - Unspecified Liquid
- SL - Sludge
- G - Gas
- OTH - Other

Lab Sample No(s)			26455734								26455752								26455672		
Customer Sample Reference			CP202								CP207								Downstream		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	SW	SW	SW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 7			X								X								
Anions by Kone (w)	All	NDPs: 0 Tests: 7			X								X								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7						X								X					
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 7					X								X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 7	X								X								X		
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7		X								X									X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7		X								X									X
GRO by GC-FID (W)	All	NDPs: 0 Tests: 7							X								X				
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 7			X								X								
Mercury Dissolved	All	NDPs: 0 Tests: 7					X								X						
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 7		X								X									X
PFAS (Post Ox.) Liquids	All	NDPs: 0 Tests: 3																		X	
PFAS Liquids	All	NDPs: 0 Tests: 3																		X	
pH Value	All	NDPs: 0 Tests: 7			X								X								
Phenols by HPLC (W)	All	NDPs: 0 Tests: 7				X								X							

26455786	RH203		0.00 - 0.00	NaOH (ALE245)	GW				X													
				HNO3 Filtered (ALE204)	GW					X								X					
				H2SO4 (ALE244)	GW																		X	
				500ml Plastic (ALE208)	GW		X		X								X					X		
				250ml Amber Gl. PTFE/PE (ALE219)	GW								X		X					X				
				0.5l glass bottle (ALE227)	GW							X												
26455708	Midstream		0.00 - 0.00	ZnAc (ALE246)	SW																			
				Vial (ALE297)	SW											X								
				NaOH (ALE245)	SW				X															
				HNO3 Filtered (ALE204)	SW					X								X						
				H2SO4 (ALE244)	SW																		X	
				500ml Plastic (ALE208)	SW		X		X								X					X		
				250ml Amber Gl. PTFE/PE (ALE219)	SW								X		X					X				
				1lplastic (ALE221)	SW																X		X	
				0.5l glass bottle (ALE227)	SW							X												
26455672	Downstream		0.00 - 0.00	ZnAc (ALE246)	SW																			
				Vial (ALE297)	SW											X								
				NaOH (ALE245)	SW				X															
				HNO3 Filtered (ALE204)	SW					X								X						
				H2SO4 (ALE244)	SW																		X	
				500ml Plastic (ALE208)	SW		X		X								X					X		

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26455734								26455752								26455672				
Customer Sample Reference			CP202								CP207								Downstream				
AGS Reference																							
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00				
Container			0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)		
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	SW	SW	SW		
Redox Potential	All	NDPs: 0 Tests: 7	X								X								X				
Sulphide	All	NDPs: 0 Tests: 7								X								X					
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 7	X								X								X				
TPH CWG (W)	All	NDPs: 0 Tests: 7	X								X								X				
VOC MS (W)	All	NDPs: 0 Tests: 7							X								X						

26455786	RH203		0.00 - 0.00	NaOH (ALE245)	GW						
				HNO3 Filtered (ALE204)	GW						
				H2SO4 (ALE244)	GW						
				500ml Plastic (ALE208)	GW						
				250ml Amber Gl. PTFE/PE (ALE219)	GW						
				0.5l glass bottle (ALE227)	GW	X		X	X		
26455708	Midstream		0.00 - 0.00	ZnAc (ALE246)	SW		X				
				Vial (ALE297)	SW						X
				NaOH (ALE245)	SW						
				HNO3 Filtered (ALE204)	SW						
				H2SO4 (ALE244)	SW						
				500ml Plastic (ALE208)	SW						
				250ml Amber Gl. PTFE/PE (ALE219)	SW						
				1lplastic (ALE221)	SW						
				0.5l glass bottle (ALE227)	SW	X		X	X		
26455672	Downstream		0.00 - 0.00	ZnAc (ALE246)	SW		X				
				Vial (ALE297)	SW						X
				NaOH (ALE245)	SW						
				HNO3 Filtered (ALE204)	SW						
				H2SO4 (ALE244)	SW						
				500ml Plastic (ALE208)	SW						

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26455786						26455767										26455689				
Customer Sample Reference			RH203						RH205										Upstream				
AGS Reference																							
Depth (m)			0.00 - 0.00						0.00 - 0.00										0.00 - 0.00				
Container			Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)		
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	SW	SW	SW	SW	SW	SW	SW	SW	SW		
Alkalinity as CaCO3	All	NDPs: 0 Tests: 7					X									X							
Anions by Kone (w)	All	NDPs: 0 Tests: 7					X									X							
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7								X									X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 7							X									X					
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 7			X								X										
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7				X									X								
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7				X									X								
GRO by GC-FID (W)	All	NDPs: 0 Tests: 7	X								X									X			
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 7					X									X							
Mercury Dissolved	All	NDPs: 0 Tests: 7							X									X					
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 7				X									X								
PFAS (Post Ox.) Liquids	All	NDPs: 0 Tests: 3												X									
PFAS Liquids	All	NDPs: 0 Tests: 3												X									
pH Value	All	NDPs: 0 Tests: 7					X									X							
Phenols by HPLC (W)	All	NDPs: 0 Tests: 7						X									X						

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

- X Test
- N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)				26455786								26455767								26455689
Customer Sample Reference				RH203								RH205								Upstream
AGS Reference																				
Depth (m)				0.00 - 0.00								0.00 - 0.00								0.00 - 0.00
Container			Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1plastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Redox Potential	All	NDPs: 0 Tests: 7			X								X								
Sulphide	All	NDPs: 0 Tests: 7		X								X									X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 7			X								X								
TPH CWG (W)	All	NDPs: 0 Tests: 7			X								X								
VOC MS (W)	All	NDPs: 0 Tests: 7	X								X									X	

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		1840 #	801 #	45.7 #	37.3 #	835 #	364 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090		178	13.3	5.37	6.03	8.47	<3
Sulphide	<0.01 mg/l	TM101		<0.05 #	<0.05 #	<0.01	<0.01	<0.01 #	<0.01 #
Redox potential	mV	TM110		78	69	74	50	126	64
Arsenic (diss.filt)	<0.5 µg/l	TM152		4.82 2 #	9.7 2 #	2.04 #	2.25 2 #	5.51 #	4.56 2 #
Boron (diss.filt)	<10 µg/l	TM152		17500 2 #	8520 2 #	22.1 #	13.6 2 #	314 #	691 2 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #	<0.08 #	<0.08 2 #	<0.08 #	<0.08 2 #
Chromium (diss.filt)	<1 µg/l	TM152		4.19 2 #	<1 2 #	<1 #	<1 2 #	<1 #	<1 2 #
Copper (diss.filt)	<0.3 µg/l	TM152		3.9 2 #	0.623 2 #	3.57 #	3.45 2 #	0.725 #	0.301 2 #
Lead (diss.filt)	<0.2 µg/l	TM152		13.9 2 #	1.53 2 #	4.89 #	5.57 2 #	1.1 #	0.583 2 #
Manganese (diss.filt)	<3 µg/l	TM152		408 2 #	487 2 #	33.8 #	41.8 2 #	807 #	332 2 #
Nickel (diss.filt)	<0.4 µg/l	TM152		7.74 2 #	2.52 2 #	1.98 #	2 2 #	6.54 #	0.684 2 #
Selenium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #	<1 #	<1 2 #	<1 #	<1 2 #
Zinc (diss.filt)	<1 µg/l	TM152		15.3 2 #	18.9 2 #	7.45 #	13.5 2 #	6.26 #	2.55 2 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		149 2 #	93.2 2 #	16.2 #	14.2 2 #	212 #	83.7 2 #
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #	<0.01	<0.01 2	<0.01 #	<0.01 2 #
Sulphate	<2 mg/l	TM184		73.3 #	169 #	15.8 #	13.2 #	344 #	30.2 #
Cyanide, Total	<0.05 mg/l	TM227		0.06 #	<0.05 #	<0.05	<0.05	<0.05 #	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05	<0.05	<0.05 #	<0.05 #
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05	<0.05	<0.05 #	<0.05 #
pH	<1 pH Units	TM256		7.69 #	7.43 #	7.95 #	7.74 #	7.26 #	7.67 #
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #	<0.002	<0.002	<0.002 #	<0.002 #
Cresols	<0.006 mg/l	TM259		0.02 #	<0.006 #	<0.006	<0.006	<0.006 #	<0.006 #
Xylenols	<0.008 mg/l	TM259		<0.008 #	<0.008 #	<0.008	<0.008	<0.008 #	<0.008 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		0.02 #	<0.016 #	<0.016	<0.016	<0.016 #	<0.016 #
Low Level Hexavalent Chromium	<0.003 mg/l	TM331		<0.015	<0.003	<0.003	<0.003	<0.003	<0.003
PFBA (375-22-4)	<2 ng/l	TM337				<20 #	<5 #		
PFPA (2706-90-3)	<1 ng/l	TM337				<10 #	<2 #		
PFHxA (307-24-4)	<1 ng/l	TM337				<10 #	<2 #		
PFBS (375-73-5)	<1 ng/l	TM337				<10 #	<2 #		
PFHpA (375-85-9)	<1 ng/l	TM337				<10 #	3.59 #		
6:2 FTS (27619-97-2)	<1 ng/l	TM337				<10 #	<2 #		
PFOA (335-67-1)	<0.65 ng/l	TM337				30.6 #	29.5 #		

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
PFHxS (355-46-4)	<1 ng/l	TM337				<10 #	<2 #		
PFNA (375-95-1)	<1 ng/l	TM337				<10 #	<2 #		
PFHpS (375-92-8)	<1 ng/l	TM337				<10 #	<2 #		
PFDA (335-76-2)	<1 ng/l	TM337				<10 #	<2 #		
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337				<6.5 #	1.87 #		
Branched PFOS	<0.65 ng/l	TM337				<6.5 #	<1.3 #		
PFUnA (2058-94-8)	<1 ng/l	TM337				<10 #	<2 #		
PFDoA (307-55-1)	<1 ng/l	TM337				<10 #	<2 #		
PFOSA (754-91-6)	<2 ng/l	TM337				<20 #	<4 #		
PFDS (335-77-3)	<1 ng/l	TM337				<10	<2		
PFPeS (2706-91-4)	<1 ng/l	TM337				<10 #	<2 #		
Total PFOS	<0.65 ng/l	TM337				<6.5 #	1.87 #		
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405				<20	4.16		
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405				<10	3.43		
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405				<10	4.04		
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405				<10	<2		
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405				<10	5.49		
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405				<10	<2		
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405				35.2	31.7		
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405				<10	<2		
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405				<10	<2		
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405				<10	<2		
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405				<10	<2		
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405				<10	2.19		
Branched PFOS (Post Ox.)	<2 ng/l	TM405				<10	<2		
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405				<10	<2		
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405				<10	<2		
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405				<20	<4		
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405				<10	<2		
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405				<10	<2		
Total PFOS (Post Ox.)	<2 ng/l	TM405				<10	2.19		

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Upstream
			Depth (m)	0.00 - 0.00
			Sample Type	Surface Water (SW)
			Date Sampled	16/06/2022
			Sample Time	00:00
			Date Received	19/06/2022
			SDG Ref	220620-6
			Lab Sample No.(s)	26455689
			AGS Reference	
Alkalinity, Total as CaCO3	<2 mg/l	TM043		42.4 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090		5.44
Sulphide	<0.01 mg/l	TM101		<0.01
Redox potential	mV	TM110		206
Arsenic (diss.filt)	<0.5 µg/l	TM152		2.22 #
Boron (diss.filt)	<10 µg/l	TM152		17.1 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #
Copper (diss.filt)	<0.3 µg/l	TM152		3.55 #
Lead (diss.filt)	<0.2 µg/l	TM152		3.96 #
Manganese (diss.filt)	<3 µg/l	TM152		60.7 #
Nickel (diss.filt)	<0.4 µg/l	TM152		2.21 #
Selenium (diss.filt)	<1 µg/l	TM152		<1 #
Zinc (diss.filt)	<1 µg/l	TM152		5.01 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		14.4 #
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01
Sulphate	<2 mg/l	TM184		13.7 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05
Thiocyanate	<0.05 mg/l	TM227		<0.05
pH	<1 pH Units	TM256		8.01 #
Phenol	<0.002 mg/l	TM259		<0.002
Cresols	<0.006 mg/l	TM259		<0.006
Xylenols	<0.008 mg/l	TM259		<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016
Low Level Hexavalent Chromium	<0.003 mg/l	TM331		<0.003
PFBA (375-22-4)	<2 ng/l	TM337		<20 #
PFPA (2706-90-3)	<1 ng/l	TM337		<10 #
PFHxA (307-24-4)	<1 ng/l	TM337		<10 #
PFBS (375-73-5)	<1 ng/l	TM337		<10 #
PFHpA (375-85-9)	<1 ng/l	TM337		<10 #
6:2 FTS (27619-97-2)	<1 ng/l	TM337		<10 #
PFOA (335-67-1)	<0.65 ng/l	TM337		31.6 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Customer Sample Ref.	Upstream
Depth (m)	0.00 - 0.00
Sample Type	Surface Water (SW)
Date Sampled	16/06/2022
Sample Time	00:00
Date Received	19/06/2022
SDG Ref	220620-6
Lab Sample No.(s)	26455689
AGS Reference	

Component	LOD/Units	Method	
PFHxS (355-46-4)	<1 ng/l	TM337	<10 #
PFNA (375-95-1)	<1 ng/l	TM337	<10 #
PFHpS (375-92-8)	<1 ng/l	TM337	<10 #
PFDA (335-76-2)	<1 ng/l	TM337	<10 #
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337	<6.5 #
Branched PFOS	<0.65 ng/l	TM337	<6.5 #
PFUnA (2058-94-8)	<1 ng/l	TM337	<10 #
PFDoA (307-55-1)	<1 ng/l	TM337	<10 #
PFOSA (754-91-6)	<2 ng/l	TM337	<20 #
PFDS (335-77-3)	<1 ng/l	TM337	<10
PFPeS (2706-91-4)	<1 ng/l	TM337	<10 #
Total PFOS	<0.65 ng/l	TM337	<6.5 #
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405	<20
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405	<10
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405	<10
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405	<10
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405	<10
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405	<10
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405	37
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405	<10
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405	<10
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405	<10
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405	<10
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405	<10
Branched PFOS (Post Ox.)	<2 ng/l	TM405	<10
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405	<10
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405	<10
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405	<20
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405	<10
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405	<10
Total PFOS (Post Ox.)	<2 ng/l	TM405	<10

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		1.13 #	0.53 #	0.0176 #	<0.01 #	0.812 #	<0.01 #
Acenaphthene (aq)	<0.005 µg/l	TM178		4.13 #	0.396 #	0.0117 #	<0.005 #	1.76 #	<0.005 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.1 #	<0.1 #	<0.005 #	<0.005 #	<0.1 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		9.51 #	1.22 #	0.0918 #	0.0413 #	8.55 #	0.00938 #
Anthracene (aq)	<0.005 µg/l	TM178		2.46 #	0.293 #	0.0115 #	<0.005 #	1.83 #	<0.005 #
Phenanthrene (aq)	<0.005 µg/l	TM178		6.71 #	1.27 #	0.0457 #	0.0162 #	6.09 #	0.00797 #
Fluorene (aq)	<0.005 µg/l	TM178		1.71 #	0.318 #	0.0221 #	<0.005 #	1.32 #	<0.005 #
Chrysene (aq)	<0.005 µg/l	TM178		3.8 #	0.478 #	0.0352 #	0.0168 #	4.07 #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		8.8 #	1.09 #	0.0841 #	0.0402 #	7.93 #	0.00977 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		3.32 #	0.279 #	0.0351 #	0.0249 #	3.23 #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		4.68 #	0.626 #	0.0514 #	0.0239 #	5.7 #	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		1.83 #	0.275 #	0.021 #	0.0115 #	2.07 #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		3.58 #	0.432 #	0.0307 #	0.0127 #	4.02 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.1 #	<0.1 #	<0.005 #	<0.005 #	0.513 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		2.74 #	0.256 #	0.0184 #	0.00682 #	3.56 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.1 #	<0.1 #	0.0256 #	<0.005 #	3.26 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		54.4 #	7.47 #	0.502 #	0.194 #	54.7 #	<0.082 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	Upstream
Depth (m)	0.00 - 0.00
Sample Type	Surface Water (SW)
Date Sampled	16/06/2022
Sample Time	00:00
Date Received	19/06/2022
SDG Ref	220620-6
Lab Sample No.(s)	26455689
AGS Reference	

Component	LOD/Units	Method	
Naphthalene (aq)	<0.01 µg/l	TM178	0.018 #
Acenaphthene (aq)	<0.005 µg/l	TM178	0.015 #
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178	0.123 #
Anthracene (aq)	<0.005 µg/l	TM178	0.0157 #
Phenanthrene (aq)	<0.005 µg/l	TM178	0.0701 #
Fluorene (aq)	<0.005 µg/l	TM178	0.0191 #
Chrysene (aq)	<0.005 µg/l	TM178	0.0539 #
Pyrene (aq)	<0.005 µg/l	TM178	0.117 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	0.0567 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	0.0737 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	0.0319 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	0.0263 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	0.62 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
4-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
Azobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Acenaphthylene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Acenaphthene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Anthracene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<20 #	<8 #	<2 #	<2 #	<20 #	<4 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Carbazole (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Chrysene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Dibenzofuran (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Diethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<50 #	<20 #	<5 #	<5 #	<50 #	<10 #
Fluoranthene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Fluorene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Pentachlorophenol (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
Phenol (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Hexachloroethane (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Nitrobenzene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Naphthalene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Isophorone (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<10	<4	<1	<1	<10	<2
Phenanthrene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #
Pyrene (aq)	<1 µg/l	TM176		<10 #	<4 #	<1 #	<1 #	<10 #	<2 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	Upstream
Depth (m)	0.00 - 0.00
Sample Type	Surface Water (SW)
Date Sampled	16/06/2022
Sample Time	00:00
Date Received	19/06/2022
SDG Ref	220620-6
Lab Sample No.(s)	26455689
AGS Reference	

Component	LOD/Units	Method	
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<2 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<2 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<2 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<2 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<2 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<2 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<2 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<2 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<2 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<2 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<2 #
2-Chlorophenol (aq)	<1 µg/l	TM176	<2 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<2 #
2-Methylphenol (aq)	<1 µg/l	TM176	<2 #
2-Nitroaniline (aq)	<1 µg/l	TM176	<2 #
2-Nitrophenol (aq)	<1 µg/l	TM176	<2 #
3-Nitroaniline (aq)	<1 µg/l	TM176	<2
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<2 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<2 #
4-Chloroaniline (aq)	<1 µg/l	TM176	<2
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<2 #
4-Methylphenol (aq)	<1 µg/l	TM176	<2 #
4-Nitroaniline (aq)	<1 µg/l	TM176	<2 #
4-Nitrophenol (aq)	<1 µg/l	TM176	<2
Azobenzene (aq)	<1 µg/l	TM176	<2 #
Acenaphthylene (aq)	<1 µg/l	TM176	<2 #
Acenaphthene (aq)	<1 µg/l	TM176	<2 #
Anthracene (aq)	<1 µg/l	TM176	<2 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<2 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<2 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<4 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<2 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<2 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.	Upstream
Depth (m)	0.00 - 0.00
Sample Type	Surface Water (SW)
Date Sampled	16/06/2022
Sample Time	00:00
Date Received	19/06/2022
SDG Ref	220620-6
Lab Sample No.(s)	26455689
AGS Reference	

Component	LOD/Units	Method	
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<2 #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<2 #
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<2 #
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<2 #
Carbazole (aq)	<1 µg/l	TM176	<2 #
Chrysene (aq)	<1 µg/l	TM176	<2 #
Dibenzofuran (aq)	<1 µg/l	TM176	<2 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<2 #
Diethyl phthalate (aq)	<1 µg/l	TM176	<2 #
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<2 #
Dimethyl phthalate (aq)	<1 µg/l	TM176	<2 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<10 #
Fluoranthene (aq)	<1 µg/l	TM176	<2 #
Fluorene (aq)	<1 µg/l	TM176	<2 #
Hexachlorobenzene (aq)	<1 µg/l	TM176	<2 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<2 #
Pentachlorophenol (aq)	<1 µg/l	TM176	<2
Phenol (aq)	<1 µg/l	TM176	<2
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<2 #
Hexachloroethane (aq)	<1 µg/l	TM176	<2 #
Nitrobenzene (aq)	<1 µg/l	TM176	<2 #
Naphthalene (aq)	<1 µg/l	TM176	<2 #
Isophorone (aq)	<1 µg/l	TM176	<2 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<2
Phenanthrene (aq)	<1 µg/l	TM176	<2 #
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<2 #
Pyrene (aq)	<1 µg/l	TM176	<2 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		91	94	94	101	72	104
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #	<50 #
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		30	<10	<10	<10	106	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		55	<10	<10	13	87	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		336	<10	<10	<10	689	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		421	<10	<10	13	882	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		62	<10	<10	<10	57	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		67	<10	<10	13	105	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		198	<10	25	57	365	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		327	<10	25	70	527	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		788	<10	25	83	1410	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		391	<10	<10	13	776	<10

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			Upstream	0.00 - 0.00	Surface Water (SW)	16/06/2022	00:00	19/06/2022	220620-6	26455689	
GRO Surrogate % recovery**	%	TM245	101								
GRO >C5-C12	<50 µg/l	TM245	<50 #								
Aliphatics >C5-C6	<10 µg/l	TM245	<10								
Aliphatics >C6-C8	<10 µg/l	TM245	<10								
Aliphatics >C8-C10	<10 µg/l	TM245	<10								
Aliphatics >C10-C12	<10 µg/l	TM245	<10								
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	<10								
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	<10								
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	<10								
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	<10								
Aromatics >EC5-EC7	<10 µg/l	TM245	<10								
Aromatics >EC7-EC8	<10 µg/l	TM245	<10								
Aromatics >EC8-EC10	<10 µg/l	TM245	<10								
Aromatics >EC10-EC12	<10 µg/l	TM245	<10								
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	<10								
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	<10								
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	<10								
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	<10								
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	<10								
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174	<10								

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
Dibromofluoromethane**	%	TM208		110	111	114	110	110	114
Toluene-d8**	%	TM208		98.5	98.2	99.5	99.9	97.2	99.9
4-Bromofluorobenzene**	%	TM208		92.7	93.2	99.6	99.7	93.5	97.9
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<6 #	<6 #	<6 #	<6 #	<6 #	<6 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	1.32 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		2.38 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend		Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
tot.unfilt	Total / unfiltered sample.	Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
		Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
		SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
(F)	Trigger breach confirmed	Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Surface Water (SW)	Surface Water (SW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	15/06/2022	15/06/2022	16/06/2022	16/06/2022	16/06/2022	15/06/2022
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-6	220620-6	220620-6	220620-6	220620-6	220620-6
			Lab Sample No.(s)	26455734	26455752	26455672	26455708	26455786	26455767
			AGS Reference						
Sum of detected Xylenes	<2 µg/l	TM208		<2	<2	<2	<2	<2	<2
Sum of BTEX	<5 µg/l	TM208		<5	<5	<5	<5	<5	<5

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Customer Sample Ref.			Upstream					
Depth (m)			0.00 - 0.00					
Sample Type			Surface Water (SW)					
Date Sampled			16/06/2022					
Sample Time			00:00					
Date Received			19/06/2022					
SDG Ref			220620-6					
Lab Sample No.(s)			26455689					
AGS Reference								
Component	**LOD/Units**	**Method**						
Dibromofluoromethane**	%	TM208	113					
Toluene-d8**	%	TM208	99.2					
4-Bromofluorobenzene**	%	TM208	98.7					
Dichlorodifluoromethane	<1 µg/l	TM208	<1 #					
Chloromethane	<1 µg/l	TM208	<1 #					
Vinyl chloride	<1 µg/l	TM208	<1 #					
Bromomethane	<1 µg/l	TM208	<1 #					
Chloroethane	<1 µg/l	TM208	<1 #					
Trichlorofluoromethane	<1 µg/l	TM208	<1 #					
1,1-Dichloroethene	<1 µg/l	TM208	<1 #					
Carbon disulphide	<1 µg/l	TM208	<1 #					
Dichloromethane	<3 µg/l	TM208	<6 #					
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1 #					
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 #					
1,1-Dichloroethane	<1 µg/l	TM208	<1 #					
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 #					
2,2-Dichloropropane	<1 µg/l	TM208	<1					
Bromochloromethane	<1 µg/l	TM208	<1 #					
Chloroform	<1 µg/l	TM208	<1 #					
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 #					
1,1-Dichloropropene	<1 µg/l	TM208	<1 #					
Carbontetrachloride	<1 µg/l	TM208	<1 #					
1,2-Dichloroethane	<1 µg/l	TM208	<1 #					
Benzene	<1 µg/l	TM208	<1 #					
Trichloroethene	<1 µg/l	TM208	<1 #					
1,2-Dichloropropane	<1 µg/l	TM208	<1 #					
Dibromomethane	<1 µg/l	TM208	<1 #					
Bromodichloromethane	<1 µg/l	TM208	<1 #					
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 #					
Toluene	<1 µg/l	TM208	<1 #					
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 #					
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 #					
1,3-Dichloropropane	<1 µg/l	TM208	<1 #					

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Upstream
			Depth (m)	0.00 - 0.00
			Sample Type	Surface Water (SW)
			Date Sampled	16/06/2022
			Sample Time	00:00
			Date Received	19/06/2022
			SDG Ref	220620-6
			Lab Sample No.(s)	26455689
			AGS Reference	
Tetrachloroethene	<1 µg/l	TM208		<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #
o-Xylene	<1 µg/l	TM208		<1 #
Styrene	<1 µg/l	TM208		<1 #
Bromoform	<1 µg/l	TM208		<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #
Bromobenzene	<1 µg/l	TM208		<1 #
Propylbenzene	<1 µg/l	TM208		<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #
Naphthalene	<1 µg/l	TM208		<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			Upstream	0.00 - 0.00	Surface Water (SW)	16/06/2022	00:00	19/06/2022	220620-6	26455689	
Sum of detected Xylenes	<2 µg/l	TM208	<2								
Sum of BTEX	<5 µg/l	TM208	<5								

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS
TM405	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 220620-6 **Report Number:** 651985 **Superseded Report:** 651819
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26455734	26455752	26455672	26455708	26455786	26455767	26455689
Customer Sample Ref.	CP202	CP207	Downstream	Midstream	RH203	RH205	Upstream
AGS Ref.							
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Surface Water	Surface Water	Ground Water	Ground Water	Surface Water
Alkalinity as CaCO3	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Anions by Kone (w)	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Cyanide Comp/Free/Total/Thiocyanate	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Dissolved Metals by ICP-MS	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Dissolved Organic/Inorganic Carbon	23-Jun-2022	23-Jun-2022	22-Jun-2022	22-Jun-2022	23-Jun-2022	22-Jun-2022	23-Jun-2022
EPH CWG (Aliphatic) Aqueous GC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
EPH CWG (Aromatic) Aqueous GC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
GRO by GC-FID (W)	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Low Level Hexavalent Chromium (w)	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Mercury Dissolved	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
PAH Spec MS - Aqueous (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
PFAS (Post Ox.) Liquids			24-Jun-2022	24-Jun-2022			24-Jun-2022
PFAS Liquids			22-Jun-2022	22-Jun-2022			22-Jun-2022
pH Value	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Phenols by HPLC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Redox Potential	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Sulphide	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
SVOC MS (W) - Aqueous	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
TPH CWG (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
VOC MS (W)	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	24 June 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220620-8
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	652003
Order Number:	LD2898

This report has been revised and directly supersedes 651820 in its entirety.

We received 5 samples on Sunday June 19, 2022 and 5 of these samples were scheduled for analysis which was completed on Friday June 24, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

1291

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26455986	CP109		0.00 - 0.00	17/06/2022
26455932	CP201		0.00 - 0.00	17/06/2022
26456053	WS306		0.00 - 0.00	17/06/2022
26456035	WS310		0.00 - 0.00	17/06/2022
26455957	WS315		0.00 - 0.00	17/06/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26455986	CP109		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26455932	CP201		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26456053	WS306		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 5						
				X				
							X	
Anions by Kone (w)	All	NDPs: 0 Tests: 5						
				X				
							X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5						
							X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 5						
							X	
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 5						
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5						
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5						
GRO by GC-FID (W)	All	NDPs: 0 Tests: 5						
Low Level Hexavalent Chromium (w)	All	NDPs: 1 Tests: 4						
				N				
							X	
Mercury Dissolved	All	NDPs: 0 Tests: 5						
							X	
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 5						
PFAS (Post Ox.) Liquids	All	NDPs: 0 Tests: 5						
PFAS Liquids	All	NDPs: 0 Tests: 5						
pH Value	All	NDPs: 0 Tests: 5						
							X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 5						

26455957	WS315		0.00 - 0.00	500ml Plastic (ALE208)	GW		X		X								X						X	
				250ml Amber Gl. PTFE/PE (ALE219)	GW								X		X				X					
				1lplastic (ALE221)	GW																X		X		
				0.5l glass bottle (ALE227)	GW							X													
26456035	WS310		0.00 - 0.00	ZnAc (ALE246)	GW																				
				Vial (ALE297)	GW											X									
				NaOH (ALE245)	GW					X															
				HNO3 Filtered (ALE204)	GW						X							X							
				H2SO4 (ALE244)	GW																				X
				500ml Plastic (ALE208)	GW		X		X								X						X		
				250ml Amber Gl. PTFE/PE (ALE219)	GW								X		X				X						
				1lplastic (ALE221)	GW																X		X		
				0.5l glass bottle (ALE227)	GW							X													
26456053	WS306		0.00 - 0.00	ZnAc (ALE246)	GW																				
				Vial (ALE297)	GW											X									
				NaOH (ALE245)	GW					X															
				HNO3 Filtered (ALE204)	GW						X							X							
				H2SO4 (ALE244)	GW																				X
				500ml Plastic (ALE208)	GW		X		X								X						X		
				250ml Amber Gl. PTFE/PE (ALE219)	GW								X		X				X						
				1lplastic (ALE221)	GW																X		X		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)																							26455986	26455932	26456053
Customer Sample Reference																							CP109	CP201	WS306
AGS Reference																									
Depth (m)																							0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Container																							0.5l glass bottle (ALE227)	ZnAc (ALE246)	0.5l glass bottle (ALE227)
Sample Type																							GW	GW	GW
Redox Potential	All	NDPs: 0 Tests: 5																					X		X
Sulphide	All	NDPs: 0 Tests: 5																						X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 5																					X		X
TPH CWG (W)	All	NDPs: 0 Tests: 5																					X		X
VOC MS (W)	All	NDPs: 0 Tests: 5																						X	

26455957	WS315		0.00 - 0.00	500ml Plastic (ALE208)	GW						
				250ml Amber Gl. PTFE/PE (ALE219)	GW						
				1lplastic (ALE221)	GW						
				0.5l glass bottle (ALE227)	GW	X		X	X		
26456035	WS310		0.00 - 0.00	ZnAc (ALE246)	GW		X				
				Vial (ALE297)	GW						X
				NaOH (ALE245)	GW						
				HNO3 Filtered (ALE204)	GW						
				H2SO4 (ALE244)	GW						
				500ml Plastic (ALE208)	GW						
				250ml Amber Gl. PTFE/PE (ALE219)	GW						
				1lplastic (ALE221)	GW						
				0.5l glass bottle (ALE227)	GW	X		X	X		
26456053	WS306		0.00 - 0.00	ZnAc (ALE246)	GW		X				
				Vial (ALE297)	GW						X
				NaOH (ALE245)	GW						
				HNO3 Filtered (ALE204)	GW						
				H2SO4 (ALE244)	GW						
				500ml Plastic (ALE208)	GW						
				250ml Amber Gl. PTFE/PE (ALE219)	GW						
				1lplastic (ALE221)	GW						

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26455957					
Customer Sample Reference			WS315					
AGS Reference								
Depth (m)			0.00 - 0.00					
Container			H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW	GW	GW	GW
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5			X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 5		X			
GRO by GC-FID (W)	All	NDPs: 0 Tests: 5				X	
Mercury Dissolved	All	NDPs: 0 Tests: 5		X			
Phenols by HPLC (W)	All	NDPs: 0 Tests: 5	X				
Sulphide	All	NDPs: 0 Tests: 5					X
VOC MS (W)	All	NDPs: 0 Tests: 5				X	

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
Alkalinity, Total as CaCO3	<2 mg/l	TM043		1460 #	782 #	856 #	969 #	737 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090		294	32.3	17.5	26.6	14.8
Sulphide	<0.01 mg/l	TM101		0.556 #	1.74 #	5.11 #	3.11 #	0.0735 #
Redox potential	mV	TM110		75	103	73	52	160
Arsenic (diss.filt)	<0.5 µg/l	TM152		25.8 2 #	3.46 2 #	2.53 2 #	2.5 2 #	3.35 2 #
Boron (diss.filt)	<10 µg/l	TM152		11300 2 #	1280 2 #	1760 2 #	3110 2 #	1200 2 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #	<0.08 2 #	<0.08 2 #	<0.08 2 #
Chromium (diss.filt)	<1 µg/l	TM152		9.51 2 #	1.27 2 #	<1 2 #	<1 2 #	<1 2 #
Copper (diss.filt)	<0.3 µg/l	TM152		0.448 2 #	<0.3 2 #	<0.3 2 #	1.26 2 #	<0.3 2 #
Lead (diss.filt)	<0.2 µg/l	TM152		3.56 2 #	<0.2 2 #	<0.2 2 #	2.36 2 #	0.388 2 #
Manganese (diss.filt)	<3 µg/l	TM152		78.3 2 #	482 2 #	417 2 #	397 2 #	1340 2 #
Nickel (diss.filt)	<0.4 µg/l	TM152		10.5 2 #	0.997 2 #	1.33 2 #	3.52 2 #	130 2 #
Selenium (diss.filt)	<1 µg/l	TM152		1.88 2 #	<1 2 #	<1 2 #	<1 2 #	<1 2 #
Zinc (diss.filt)	<1 µg/l	TM152		5.36 2 #	<1 2 #	1.46 2 #	2.85 2 #	6.95 2 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		35.1 2 #	156 2 #	300 2 #	278 2 #	511 2 #
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #	<0.01 2 #	<0.01 2 #	<0.01 2 #
Sulphate	<2 mg/l	TM184		<2 #	<2 #	69 #	39 #	654 #
Cyanide, Total	<0.05 mg/l	TM227		0.17 #	0.1 #	<0.05 #	<0.05 #	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Thiocyanate	<0.05 mg/l	TM227		0.09 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
pH	<1 pH Units	TM256		8.59 #	7.77 #	7.34 #	7.54 #	6.94 #
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #
Cresols	<0.006 mg/l	TM259		<0.006 #	0.01 #	<0.006 #	<0.006 #	<0.006 #
Xylenols	<0.008 mg/l	TM259		0.11 #	<0.008 #	<0.008 #	0.01 #	<0.008 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		0.11 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #
Low Level Hexavalent Chromium	<0.003 mg/l	TM331			<0.006	<0.006	<0.003	<0.006
PFBA (375-22-4)	<2 ng/l	TM337		<45 #	<20 #	<10 #	<10 #	<20 #
PFPA (2706-90-3)	<1 ng/l	TM337		<13 #	<10 #	<6 #	<5 #	<10 #
PFHxA (307-24-4)	<1 ng/l	TM337		<20 #	<10 #	<5 #	<5 #	<10 #
PFBS (375-73-5)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
PFHpA (375-85-9)	<1 ng/l	TM337		<22 #	10.7 #	<7 #	<8 #	<10 #
6:2 FTS (27619-97-2)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
PFOA (335-67-1)	<0.65 ng/l	TM337		126 #	39.4 #	36.4 #	30.3 #	36.1 #

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
PFHxS (355-46-4)	<1 ng/l	TM337		<10 #	<10 #	9.47 #	7.99 #	10.9 #
PFNA (375-95-1)	<1 ng/l	TM337		107 #	<10 #	<5 #	<5 #	<10 #
PFHpS (375-92-8)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
PFDA (335-76-2)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337		62.2 #	22.7 #	48.8 #	40.4 #	59.3 #
Branched PFOS	<0.65 ng/l	TM337		35.5 #	14.1 #	35.2 #	27.8 #	43 #
PFUnA (2058-94-8)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
PFDoA (307-55-1)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
PFOSA (754-91-6)	<2 ng/l	TM337		<20 #	<20 #	<10 #	<10 #	<20 #
PFDS (335-77-3)	<1 ng/l	TM337		<10	<10	<5	<5	<10
PFPeS (2706-91-4)	<1 ng/l	TM337		<10 #	<10 #	<5 #	<5 #	<10 #
Total PFOS	<0.65 ng/l	TM337		97.7 #	36.8 #	84 #	68.2 #	102 #
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405		248	81	12.6	16.2	<20
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405		176	<10	5.92	6.79	<10
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405		273	16	12.2	12.8	<10
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405		162	<10	9.23	8.73	<10
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405		492	41.1	58.8	42.5	42.8
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405		<20	<10	9.32	9.93	13.9
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405		131	<10	<5	<5	<10
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405		<10	<10	<5	<5	<10
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405		80.2	23.8	58.7	47.6	62.3
Branched PFOS (Post Ox.)	<2 ng/l	TM405		49	18.4	50	32	49.7
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405		<20	<20	<10	<10	<20
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405		<10	<10	<5	<5	<10
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405		<10	<10	<5	<5	<10
Total PFOS (Post Ox.)	<2 ng/l	TM405		129	42.2	109	79.6	112

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		0.471 #	0.237 #	0.317 #	0.422 #	<0.01 #
Acenaphthene (aq)	<0.005 µg/l	TM178		1.12 #	1.69 #	2.32 #	3.7 #	0.0462 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.131 #	0.0241 #	<0.005 #	<0.005 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		1.58 #	0.407 #	0.397 #	0.412 #	0.0193 #
Anthracene (aq)	<0.005 µg/l	TM178		0.2 #	0.159 #	0.131 #	0.199 #	0.00507 #
Phenanthrene (aq)	<0.005 µg/l	TM178		1.1 #	0.76 #	0.58 #	0.478 #	0.0113 #
Fluorene (aq)	<0.005 µg/l	TM178		0.632 #	0.696 #	0.222 #	0.769 #	0.00818 #
Chrysene (aq)	<0.005 µg/l	TM178		0.577 #	0.0386 #	0.135 #	0.0623 #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		1.64 #	0.254 #	0.349 #	0.303 #	0.0143 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.395 #	0.0221 #	0.124 #	0.0528 #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.752 #	0.0413 #	0.199 #	0.117 #	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.381 #	0.0163 #	0.0899 #	0.0381 #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.491 #	0.0277 #	0.16 #	0.0802 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.1 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.396 #	0.0126 #	0.066 #	0.067 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.1 #	<0.005 #	0.0825 #	<0.005 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		9.86 #	4.39 #	5.17 #	6.7 #	0.104 #

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Methylphenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
4-Methylphenol (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	4.83 #	<2 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2
Azobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
Acenaphthylene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
Acenaphthene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
Anthracene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<40 #	<8 #	<4 #	<8 #	<4 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022	
			Sample Time	13:00	11:00	15:30	14:30	12:00	
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022	
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8	
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957	
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Carbazole (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Chrysene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Dibenzofuran (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Diethyl phthalate (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Dimethyl phthalate (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<100 #	<20 #	<10 #	<20 #	<10 #	
Fluoranthene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Fluorene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Hexachlorobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Pentachlorophenol (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2	
Phenol (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Hexachloroethane (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Nitrobenzene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Naphthalene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Isophorone (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<20	<4	<2	<4	<2	
Phenanthrene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	
Pyrene (aq)	<1 µg/l	TM176		<20 #	<4 #	<2 #	<4 #	<2 #	

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
GRO Surrogate % recovery**	%	TM245		104	98	87	87	93
GRO >C5-C12	<50 µg/l	TM245		227 #	<50 #	<50 #	<50 #	<50 #
Aliphatics >C5-C6	<10 µg/l	TM245		13	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		30	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		21	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		81	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		20	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		145	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		165	<10	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		23	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		54	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		28	16	<10	20	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	12	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		28	16	<10	32	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		420	16	<10	32	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		165	<10	<10	<10	<10

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
Dibromofluoromethane**	%	TM208		106	114	114	111	113
Toluene-d8**	%	TM208		100	99.3	100	99.6	100
4-Bromofluorobenzene**	%	TM208		97.9	98.2	97.9	99.9	99.2
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<6 #	<6 #	<6 #	<6 #	<6 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		3.57 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		2.83 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.11 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		3.37 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		1.98 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		1.93 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1

Validated

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
			Sample Time	13:00	11:00	15:30	14:30	12:00
			Date Received	19/06/2022	19/06/2022	19/06/2022	19/06/2022	19/06/2022
			SDG Ref	220620-8	220620-8	220620-8	220620-8	220620-8
			Lab Sample No.(s)	26455986	26455932	26456053	26456035	26455957
			AGS Reference					
Sum of detected Xylenes	<2 µg/l	TM208		3.91	<2	<2	<2	<2
Sum of BTEX	<5 µg/l	TM208		13.7	<5	<5	<5	<5

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Notification of NDPs (No determination possible)

Date Received : 20/06/2022 08:58:38

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
26455986	CP109	0.00 - 0.00	Low Level Hexavalent Chromium (w)	Sample too coloured

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS
TM405	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 220620-8 **Report Number:** 652003 **Superseded Report:** 651820
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26455986	26455932	26456053	26456035	26455957
Customer Sample Ref.	CP109	CP201	WS306	WS310	WS315
AGS Ref.					
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Anions by Kone (w)	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Cyanide Comp/Free/Total/Thiocyanate	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Dissolved Metals by ICP-MS	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Dissolved Organic/Inorganic Carbon	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	22-Jun-2022
EPH CWG (Aliphatic) Aqueous GC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
EPH CWG (Aromatic) Aqueous GC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
GRO by GC-FID (W)	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Low Level Hexavalent Chromium (w)		21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Mercury Dissolved	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
PAH Spec MS - Aqueous (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
PFAS (Post Ox.) Liquids	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022
PFAS Liquids	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
pH Value	22-Jun-2022	22-Jun-2022	21-Jun-2022	22-Jun-2022	21-Jun-2022
Phenols by HPLC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Redox Potential	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
Sulphide	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022	21-Jun-2022
SVOC MS (W) - Aqueous	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
TPH CWG (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
VOC MS (W)	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022	20-Jun-2022

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	30 June 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220621-68
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	652587
Order Number:	LD2899

This report has been revised and directly supersedes 651999 in its entirety.

We received 5 samples on Tuesday June 21, 2022 and 5 of these samples were scheduled for analysis which was completed on Thursday June 30, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

1291

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26462773	CP108		0.00 - 0.00	20/06/2022
26462709	CP208		0.00 - 0.00	20/06/2022
26462792	WS305		0.00 - 0.00	20/06/2022
26462756	WS309		0.00 - 0.00	20/06/2022
26462739	WS316		0.00 - 0.00	20/06/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999

Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)										26462773								26462709			26462792
Customer Sample Reference										CP108								CP208			WS305
AGS Reference																					
Depth (m)										0.00 - 0.00								0.00 - 0.00			0.00 - 0.00
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 5				X							X								
Anions by Kone (w)	All	NDPs: 0 Tests: 5				X							X								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 5				X										X					
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 5						X							X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 5	X								X								X		
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5	X								X								X		
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 5	X								X								X		
GRO by GC-FID (W)	All	NDPs: 0 Tests: 5							X								X				
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 5				X							X								
Mercury Dissolved	All	NDPs: 0 Tests: 5						X							X						
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 5			X							X									X
Pr Ag wPbst O1.dViuRns	All	NDPs: 0 Tests: 3		X																X	
Pr Ag ViuRns	All	NDPs: 0 Tests: 3		X																X	
pH Value	All	NDPs: 0 Tests: 5				X							X								
Phenols by HPLC (W)	All	NDPs: 0 Tests: 5					X							X							

10:12:37 30/06/2022

26462739	WS316		0.00 - 0.00	NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW															X
				500ml Plastic (ALE208)	GW	X	X							X					X	
				250ml Amber Gl. PTFE/PE (ALE219)	GW											X				
				1lplastic (ALE221)	GW												X	X		
				0.5l glass bottle (ALE227)	GW					X	X	X								
26462756	WS309		0.00 - 0.00	ZnAc (ALE246)	GW															
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW															X
				500ml Plastic (ALE208)	GW	X	X							X					X	
				250ml Amber Gl. PTFE/PE (ALE219)	GW											X				
				0.5l glass bottle (ALE227)	GW					X	X	X								
26462792	WS305		0.00 - 0.00	ZnAc (ALE246)	GW															
				Vial (ALE297)	GW								X							
				NaOH (ALE245)	GW			X												
				HNO3 Filtered (ALE204)	GW				X						X					
				H2SO4 (ALE244)	GW															X
				500ml Plastic (ALE208)	GW	X	X							X					X	

Validated

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26462773	CP108		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26462709	CP208		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26462792	WS305		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
Redox Potential	All	NDPs: 0 Tests: 5	X																X		
Sulphide	All	NDPs: 0 Tests: 5							X									X			
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 5	X																X		
TPH CWG (W)	All	NDPs: 0 Tests: 5	X																X		
VOC MS (W)	All	NDPs: 0 Tests: 5							X								X				

26462739	WS316		0.00 - 0.00	NaOH (ALE245)	GW										
				HNO3 Filtered (ALE204)	GW										
				H2SO4 (ALE244)	GW										
				500ml Plastic (ALE208)	GW										
				250ml Amber Gl. PTFE/PE (ALE219)	GW										
				1lplastic (ALE221)	GW										
				0.5l glass bottle (ALE227)	GW		x				x		x		
26462756	WS309		0.00 - 0.00	ZnAc (ALE246)	GW				x						
				Vial (ALE297)	GW										x
				NaOH (ALE245)	GW										
				HNO3 Filtered (ALE204)	GW										
				H2SO4 (ALE244)	GW										
				500ml Plastic (ALE208)	GW										
				250ml Amber Gl. PTFE/PE (ALE219)	GW										
				0.5l glass bottle (ALE227)	GW		x				x		x		
26462792	WS305		0.00 - 0.00	ZnAc (ALE246)	GW				x						
				Vial (ALE297)	GW										x
				NaOH (ALE245)	GW										
				HNO3 Filtered (ALE204)	GW										
				H2SO4 (ALE244)	GW										
				500ml Plastic (ALE208)	GW										

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			26462739	
Customer Sample Reference			WS316	
AGS Reference				
Depth (m)			0.00 - 0.00	
Container			Vial (ALE297)	ZnAc (ALE246)
Sample Type			GW	GW
GRO by GC-FID (W)	All	NDPs: 0 Tests: 5	X	
Sulphide	All	NDPs: 0 Tests: 5		X
VOC MS (W)	All	NDPs: 0 Tests: 5	X	

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
			Sample Time	12:30	14:00	09:30	10:00	11:00
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739
			AGS Reference					
Alkalinity, Total as CaCO3	<2 mg/l	TM043		398 #	453 #	909 #	804 #	407 #
Carbon, Organic (diss.filt)	<3 mg/l	TM090		3.55	3.86	10.3	15.4	3.14
Sulphide	<0.01 mg/l	TM101		<0.01 #	<0.01 #	1.05 #	0.0371 #	<0.01 #
Redox potential	mV	TM110		146	157	144	147	154
Arsenic (diss.filt)	<0.5 µg/l	TM152		3.75 2 #	8.9 2 #	2.49 2 #	8.27 2 #	2.04 2 #
Boron (diss.filt)	<10 µg/l	TM152		201 2 #	127 2 #	1370 2 #	1530 2 #	176 2 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #	<0.08 2 #	<0.08 2 #	<0.08 2 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #	<1 2 #	<1 2 #	<1 2 #
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3 2 #	<0.3 2 #	<0.3 2 #	0.502 2 #	<0.3 2 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 2 #	<0.2 2 #	<0.2 2 #	0.3 2 #	<0.2 2 #
Manganese (diss.filt)	<3 µg/l	TM152		207 2 #	299 2 #	132 2 #	365 2 #	997 2 #
Nickel (diss.filt)	<0.4 µg/l	TM152		<0.4 2 #	1.61 2 #	1.62 2 #	1.6 2 #	7.6 2 #
Selenium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #	<1 2 #	<1 2 #	<1 2 #
Zinc (diss.filt)	<1 µg/l	TM152		2.41 2 #	3 2 #	34.4 2 #	45.8 2 #	21.5 2 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		202 2 #	97.2 2 #	291 2 #	202 2 #	226 2 #
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #	<0.01 2 #	<0.01 2 #	<0.01 2 #
Sulphate	<2 mg/l	TM184		178 #	94.5 #	222 #	8.4 #	242 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05 2 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227		<0.05 2 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Thiocyanate	<0.05 mg/l	TM227		<0.05 2 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
pH	<1 pH Units	TM256		7.45 #	7.42 #	7.22 #	7.27 #	7.24 #
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #
Cresols	<0.006 mg/l	TM259		<0.006 #	<0.006 #	<0.006 #	<0.006 #	<0.006 #
Xylenols	<0.008 mg/l	TM259		<0.008 #	<0.008 #	<0.008 #	0.37 #	<0.008 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016 #	<0.016 #	<0.016 #	0.37 #	<0.016 #
Low Level Hexavalent Chromium	<0.003 mg/l	TM331		<0.003	<0.003	<0.003	<0.003	<0.003
PFBA (375-22-4)	<2 ng/l	TM337		<7.3 #		7.59 #		<7.5 #
PFPA (2706-90-3)	<1 ng/l	TM337		<2 #		<2 #		<2 #
PFHxA (307-24-4)	<1 ng/l	TM337		<2 #		3.06 #		<2 #
PFBS (375-73-5)	<1 ng/l	TM337		<2 #		3 #		<2 #
PFHpA (375-85-9)	<1 ng/l	TM337		<2 #		3.11 #		<2 #
6:2 FTS (27619-97-2)	<1 ng/l	TM337		<2 #		<2 #		<2 #
PFOA (335-67-1)	<0.65 ng/l	TM337		<5.8 #		19 #		<4.5 #

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	
			Sample Time	12:30	14:00	09:30	10:00	11:00	
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022	
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68	
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739	
			AGS Reference						
PFHxS (355-46-4)	<1 ng/l	TM337		<2 #		8.71 #		<2 #	
PFNA (375-95-1)	<1 ng/l	TM337		<2 #		<2 #		<2 #	
PFHpS (375-92-8)	<1 ng/l	TM337		<2 #		<2 #		<2 #	
PFDA (335-76-2)	<1 ng/l	TM337		<2 #		<2 #		<2 #	
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337		<1.3 #		12.7 #		<1.3 #	
Branched PFOS	<0.65 ng/l	TM337		<1.3 #		14.9 #		<1.3 #	
PFUnA (2058-94-8)	<1 ng/l	TM337		<2 #		<2 #		<2 #	
PFDoA (307-55-1)	<1 ng/l	TM337		<2 #		<2 #		<2 #	
PFOSA (754-91-6)	<2 ng/l	TM337		<4 #		<4 #		<4 #	
PFDS (335-77-3)	<1 ng/l	TM337		<2		<2		<2	
PFPeS (2706-91-4)	<1 ng/l	TM337		<2 #		3.07 #		<2 #	
Total PFOS	<0.65 ng/l	TM337		<1.3 #		27.6 #		<1.3 #	
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405		<10		8.82		12.2	
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405		<2		<2		<2	
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405		<2		3.84		2.37	
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405		<2		4.25		<2	
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405		2.07		3.9		2.05	
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405		<2		<2		<2	
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405		4.25		16.3		4.5	
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405		<2		8.51		<2	
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405		<2		<2		<2	
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405		<2		<2		<2	
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405		<2		<2		<2	
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405		<2		10.9		<2	
Branched PFOS (Post Ox.)	<2 ng/l	TM405		<2		14.5		<2	
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405		<2		<2		<2	
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405		<2		<2		<2	
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405		<4		<4		<4	
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405		<2		<2		<2	
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405		<2		<2		<2	
Total PFOS (Post Ox.)	<2 ng/l	TM405		<2		25.4		<2	

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
			Sample Time	12:30	14:00	09:30	10:00	11:00
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		<0.01 #	<0.01 #	0.649 #	1.42 #	0.0119 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0348 #	<0.005 #	0.796 #	0.365 #	0.0673 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	1.87 #	0.13 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0341 #	0.0481 #	16.8 #	1.82 #	0.103 #
Anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	5.21 #	1.03 #	0.0246 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0131 #	0.0208 #	15.8 #	3.67 #	0.0489 #
Fluorene (aq)	<0.005 µg/l	TM178		0.0115 #	<0.005 #	2.46 #	0.509 #	0.0201 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	9.1 #	0.253 #	0.0293 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0313 #	0.0453 #	16.1 #	1.5 #	0.151 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	9.35 #	0.281 #	0.0239 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	9.86 #	0.161 #	0.0332 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	5.33 #	0.0704 #	0.0138 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		<0.002 #	<0.002 #	8.83 #	<0.002 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	0.618 #	<0.005 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.0435 #	0.0166 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	5.42 #	<0.005 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.125 #	0.114 #	108 #	11.2 #	0.543 #

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
			Sample Time	12:30	14:00	09:30	10:00	11:00
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739
			AGS Reference					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
Acenaphthylene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
Acenaphthene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
Anthracene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 #	<2 #	<8 #	<4 #	<2 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<1 #	<1 #	6.16 #	<2 #	<1 #

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	
			Sample Time	12:30	14:00	09:30	10:00	11:00	
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022	
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68	
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739	
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<1 #	<1 #	5.28 #	<2 #	<1 #	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<1 #	<1 #	4.4 #	<2 #	<1 #	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Carbazole (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Chrysene (aq)	<1 µg/l	TM176		<1 #	<1 #	5.97 #	<2 #	<1 #	
Dibenzofuran (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 #	<5 #	<20 #	<10 #	<5 #	
Fluoranthene (aq)	<1 µg/l	TM176		<1 #	<1 #	10.8 #	<2 #	<1 #	
Fluorene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1	
Phenol (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Hexachloroethane (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Nitrobenzene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Naphthalene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Isophorone (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<1	<4	<2	<1	
Phenanthrene (aq)	<1 µg/l	TM176		<1 #	<1 #	10.6 #	2.87 #	<1 #	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<1 #	<1 #	<4 #	<2 #	<1 #	
Pyrene (aq)	<1 µg/l	TM176		<1 #	<1 #	9.91 #	<2 #	<1 #	

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316	
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	
			Sample Time	12:30	14:00	09:30	10:00	11:00	
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022	
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68	
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739	
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		102	108	96	98	104	
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #	
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	81	<10	<10	
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	782	<10	<10	
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	863	<10	<10	
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	49	<10	<10	
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	107	<10	<10	
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	362	<10	<10	
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	518	<10	<10	
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	1380	<10	<10	
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	863	<10	<10	

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
			Sample Time	12:30	14:00	09:30	10:00	11:00
			Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
			SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68
			Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739
			AGS Reference					
Dibromofluoromethane**	%	TM208		110	108	112	109	110
Toluene-d8**	%	TM208		99.6	100	101	100	99.7
4-Bromofluorobenzene**	%	TM208		96.1	94.6	96.7	95.6	96.7
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<6 #	<6 #	<6 #	<6 #	<6 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999

Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend		Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316	
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
tot.unfilt	Total / unfiltered sample.	Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:30	14:00	09:30	10:00	11:00	
		Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022	
		SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68	
(F)	Trigger breach confirmed	Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739	
1-4+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Chlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
o-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Isopropylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Propylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
Naphthalene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend		Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316	
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
tot.unfilt	Total / unfiltered sample.	Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
*	Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sample Time	12:30	14:00	09:30	10:00	11:00	
		Date Received	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022	
		SDG Ref	220621-68	220621-68	220621-68	220621-68	220621-68	
(F)	Trigger breach confirmed	Lab Sample No.(s)	26462773	26462709	26462792	26462756	26462739	
1-4+§@	Sample deviation (see appendix)	AGS Reference						
Component		**LOD/Units**	**Method**					
Sum of detected Xylenes		<2 µg/l	TM208	<2	<2	<2	<2	<2	
Sum of BTEX		<5 µg/l	TM208	<5	<5	<5	<5	<5	

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS
TM405	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 220621-68 **Report Number:** 652587 **Superseded Report:** 651999
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26462773	26462709	26462792	26462756	26462739
Customer Sample Ref.	CP108	CP208	WS305	WS309	WS316
AGS Ref.					
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Anions by Kone (w)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Cyanide Comp/Free/Total/Thiocyanate	23-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Dissolved Metals by ICP-MS	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Dissolved Organic/Inorganic Carbon	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
EPH CWG (Aliphatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022
EPH CWG (Aromatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022
GRO by GC-FID (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Low Level Hexavalent Chromium (w)	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
Mercury Dissolved	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
PAH Spec MS - Aqueous (W)	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
PFAS (Post Ox.) Liquids	30-Jun-2022		30-Jun-2022		30-Jun-2022
PFAS Liquids	27-Jun-2022		27-Jun-2022		27-Jun-2022
pH Value	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Phenols by HPLC (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Redox Potential	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
Sulphide	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
SVOC MS (W) - Aqueous	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022	23-Jun-2022
TPH CWG (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022	24-Jun-2022
VOC MS (W)	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	30 June 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220623-96
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	652588
Order Number:	LD2907

This report has been revised and directly supersedes 652101 in its entirety.

We received 2 samples on Thursday June 23, 2022 and 2 of these samples were scheduled for analysis which was completed on Thursday June 30, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

1291

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26477244	CP206		0.00 - 0.00	22/06/2022
26477226	RH201		0.00 - 0.00	22/06/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26477244	CP206		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
			26477226	RH201		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 2						
							X	
							X	
Anions by Kone (w)	All	NDPs: 0 Tests: 2						
							X	
							X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 2						
							X	
								X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 2						
							X	
								X
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 2						
			X					
							X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 2						
				X				
							X	
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 2						
				X				
							X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 2						
							X	
								X
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 2						
				X				
							X	
Mercury Dissolved	All	NDPs: 0 Tests: 2						
							X	
								X
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 2						
				X				
							X	
PFAS (Post Ox.) Liquids	All	NDPs: 0 Tests: 1						
							X	
PFAS Liquids	All	NDPs: 0 Tests: 1						
							X	
pH Value	All	NDPs: 0 Tests: 2						
							X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 2						
								X

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)										26477244										26477226
Customer Sample Reference										CP206										RH201
AGS Reference																				
Depth (m)										0.00 - 0.00										0.00 - 0.00
Container										0.5l glass bottle (ALE227)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)
Sample Type										GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Redox Potential	All	NDPs: 0 Tests: 2								X							X								
Sulphide	All	NDPs: 0 Tests: 2										X													X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 2								X							X								
TPH CWG (W)	All	NDPs: 0 Tests: 2								X							X								
VOC MS (W)	All	NDPs: 0 Tests: 2														X								X	

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		860 #	540 #				
Carbon, Organic (diss.filt)	<3 mg/l	TM090		8.9	<6				
Sulphide	<0.01 mg/l	TM101		<0.01 2 #	<0.01 #				
Redox potential	mV	TM110		-2	-24				
Arsenic (diss.filt)	<0.5 µg/l	TM152		11.9 2 #	1.63 2 #				
Boron (diss.filt)	<10 µg/l	TM152		1250 2 #	103 2 #				
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #				
Chromium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #				
Copper (diss.filt)	<0.3 µg/l	TM152		0.989 2 #	0.914 2 #				
Lead (diss.filt)	<0.2 µg/l	TM152		0.668 2 #	0.588 2 #				
Manganese (diss.filt)	<3 µg/l	TM152		940 2 #	993 2 #				
Nickel (diss.filt)	<0.4 µg/l	TM152		3.24 2 #	6.18 2 #				
Selenium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #				
Zinc (diss.filt)	<1 µg/l	TM152		9.13 2 #	3.85 2 #				
Calcium (Dis.Filt)	<0.2 mg/l	TM152		231 2 #	159 2 #				
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #				
Sulphate	<2 mg/l	TM184		333 #	276 #				
Cyanide, Total	<0.05 mg/l	TM227		<0.05 #	<0.05 #				
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #				
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 #				
pH	<1 pH Units	TM256		7.16 #	7.33 #				
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #				
Cresols	<0.006 mg/l	TM259		<0.006 #	<0.006 #				
Xylenols	<0.008 mg/l	TM259		<0.008 #	<0.008 #				
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016 #	<0.016 #				
Low Level Hexavalent Chromium	<0.003 mg/l	TM331		<0.003	<0.003				
PFBA (375-22-4)	<2 ng/l	TM337			<11 #				
PFPA (2706-90-3)	<1 ng/l	TM337			<5 #				
PFHxA (307-24-4)	<1 ng/l	TM337			<5 #				
PFBS (375-73-5)	<1 ng/l	TM337			<5 #				
PFHpA (375-85-9)	<1 ng/l	TM337			<5 #				
6:2 FTS (27619-97-2)	<1 ng/l	TM337			<5 #				
PFOA (335-67-1)	<0.65 ng/l	TM337			<5.3 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Customer Sample Ref.			CP206	RH201				
Depth (m)			0.00 - 0.00	0.00 - 0.00				
Sample Type			Ground Water (GW)	Ground Water (GW)				
Date Sampled			22/06/2022	22/06/2022				
Sample Time			12:00	14:00				
Date Received			23/06/2022	23/06/2022				
SDG Ref			220623-96	220623-96				
Lab Sample No.(s)			26477244	26477226				
AGS Reference								
Component	**LOD/Units**	**Method**						
PFHxS (355-46-4)	<1 ng/l	TM337		<5 #				
PFNA (375-95-1)	<1 ng/l	TM337		<5 #				
PFHpS (375-92-8)	<1 ng/l	TM337		<5 #				
PFDA (335-76-2)	<1 ng/l	TM337		<5 #				
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337		<3.25 #				
Branched PFOS	<0.65 ng/l	TM337		<3.25 #				
PFUnA (2058-94-8)	<1 ng/l	TM337		<5 #				
PFDoA (307-55-1)	<1 ng/l	TM337		<5 #				
PFOSA (754-91-6)	<2 ng/l	TM337		<10 #				
PFDS (335-77-3)	<1 ng/l	TM337		<5				
PFPeS (2706-91-4)	<1 ng/l	TM337		<5 #				
Total PFOS	<0.65 ng/l	TM337		<3.25 #				
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405		<10				
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405		<5				
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405		<5				
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405		<5				
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405		<5				
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405		<5				
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405		<5				
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405		<5				
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405		<5				
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405		<5				
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405		<5				
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405		<5				
Branched PFOS (Post Ox.)	<2 ng/l	TM405		<5				
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405		<5				
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405		<5				
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405		<10				
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405		<5				
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405		<5				
Total PFOS (Post Ox.)	<2 ng/l	TM405		<5				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.122 #	0.0492 #				
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0643 #	0.0143 #				
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.01 #	0.012 #				
Fluoranthene (aq)	<0.005 µg/l	TM178		0.655 #	0.523 #				
Anthracene (aq)	<0.005 µg/l	TM178		0.0988 #	0.0678 #				
Phenanthrene (aq)	<0.005 µg/l	TM178		0.6 #	0.274 #				
Fluorene (aq)	<0.005 µg/l	TM178		0.0821 #	0.0259 #				
Chrysene (aq)	<0.005 µg/l	TM178		0.546 #	0.425 #				
Pyrene (aq)	<0.005 µg/l	TM178		0.633 #	0.498 #				
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.441 #	0.348 #				
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.832 #	0.861 #				
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.344 #	0.331 #				
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.631 #	0.673 #				
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.12 #	0.128 #				
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.516 #	0.587 #				
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.463 #	0.54 #				
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		6.16 #	5.36 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<10 #				
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Chlorophenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<10 #				
2-Nitrophenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
3-Nitroaniline (aq)	<1 µg/l	TM176		<10	<10				
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<10 #				
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
4-Chloroaniline (aq)	<1 µg/l	TM176		<10	<10				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<10 #	<10 #				
4-Methylphenol (aq)	<1 µg/l	TM176		<10 #	<10 #				
4-Nitroaniline (aq)	<1 µg/l	TM176		<10 #	<10 #				
4-Nitrophenol (aq)	<1 µg/l	TM176		<10	<10				
Azobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Acenaphthylene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Acenaphthene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Anthracene (aq)	<1 µg/l	TM176		<10 #	<10 #				
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<10 #	<10 #				
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<10 #	<10 #				
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<20 #	<20 #				
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<10 #	<10 #				
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<10 #	<10 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Carbazole (aq)	<1 µg/l	TM176		<10 #	<10 #				
Chrysene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Dibenzofuran (aq)	<1 µg/l	TM176		<10 #	<10 #				
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<10 #	<10 #				
Diethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<10 #				
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Dimethyl phthalate (aq)	<1 µg/l	TM176		<10 #	<10 #				
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<50 #	<50 #				
Fluoranthene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Fluorene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Hexachlorobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Pentachlorophenol (aq)	<1 µg/l	TM176		<10	<10				
Phenol (aq)	<1 µg/l	TM176		<10	<10				
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<10 #	<10 #				
Hexachloroethane (aq)	<1 µg/l	TM176		<10 #	<10 #				
Nitrobenzene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Naphthalene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Isophorone (aq)	<1 µg/l	TM176		<10 #	<10 #				
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<10	<10				
Phenanthrene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<10 #	<10 #				
Pyrene (aq)	<1 µg/l	TM176		<10 #	<10 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		100	107				
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #				
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10				
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10				
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10				
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10				
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	165				
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		14	19				
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		77	107				
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		91	291				
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10				
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10				
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10				
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10				
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10				
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10				
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10				
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10				
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		91	291				
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		91	126				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
Dibromofluoromethane**	%	TM208		116	116				
Toluene-d8**	%	TM208		95.1	98.1				
4-Bromofluorobenzene**	%	TM208		84.2	92.6				
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #				
Chloromethane	<1 µg/l	TM208		<1 #	<1 #				
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #				
Bromomethane	<1 µg/l	TM208		<1 #	<1 #				
Chloroethane	<1 µg/l	TM208		<1 #	<1 #				
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #				
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #				
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #				
Dichloromethane	<3 µg/l	TM208		<5 #	<5 #				
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #				
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #				
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #				
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #				
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1				
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #				
Chloroform	<1 µg/l	TM208		<1 #	<1 #				
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #				
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #				
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #				
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #				
Benzene	<1 µg/l	TM208		<1 #	<1 #				
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #				
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #				
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #				
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #				
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #				
Toluene	<1 µg/l	TM208		<1 #	<1 #				
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #				
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #				
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201				
			Depth (m)	0.00 - 0.00	0.00 - 0.00				
			Sample Type	Ground Water (GW)	Ground Water (GW)				
			Date Sampled	22/06/2022	22/06/2022				
			Sample Time	12:00	14:00				
			Date Received	23/06/2022	23/06/2022				
			SDG Ref	220623-96	220623-96				
			Lab Sample No.(s)	26477244	26477226				
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #				
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #				
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #				
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #				
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #				
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #				
o-Xylene	<1 µg/l	TM208		<1 #	<1 #				
Styrene	<1 µg/l	TM208		<1 #	<1 #				
Bromoform	<1 µg/l	TM208		<1 #	<1 #				
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #				
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #				
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #				
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #				
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #				
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #				
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #				
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #				
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #				
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #				
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #				
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #				
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #				
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1				
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #				
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #				
Naphthalene	<1 µg/l	TM208		<1 #	<1 #				
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #				
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1				

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP206	RH201
			Depth (m)	0.00 - 0.00	0.00 - 0.00
			Sample Type	Ground Water (GW)	Ground Water (GW)
			Date Sampled	22/06/2022	22/06/2022
			Sample Time	12:00	14:00
			Date Received	23/06/2022	23/06/2022
			SDG Ref	220623-96	220623-96
			Lab Sample No.(s)	26477244	26477226
			AGS Reference		
Sum of detected Xylenes	<2 µg/l	TM208		<2	<2
Sum of BTEX	<5 µg/l	TM208		<5	<5

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS
TM405	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 220623-96 **Report Number:** 652588 **Superseded Report:** 652101
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26477244	26477226
Customer Sample Ref.	CP206	RH201
AGS Ref.		
Depth	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water
Alkalinity as CaCO3	23-Jun-2022	23-Jun-2022
Anions by Kone (w)	23-Jun-2022	23-Jun-2022
Cyanide Comp/Free/Total/Thiocyanate	24-Jun-2022	24-Jun-2022
Dissolved Metals by ICP-MS	24-Jun-2022	24-Jun-2022
Dissolved Organic/Inorganic Carbon	24-Jun-2022	24-Jun-2022
EPH CWG (Aliphatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022
EPH CWG (Aromatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022
GRO by GC-FID (W)	24-Jun-2022	24-Jun-2022
Low Level Hexavalent Chromium (w)	23-Jun-2022	23-Jun-2022
Mercury Dissolved	24-Jun-2022	24-Jun-2022
PAH Spec MS - Aqueous (W)	24-Jun-2022	24-Jun-2022
PFAS (Post Ox.) Liquids		30-Jun-2022
PFAS Liquids		27-Jun-2022
pH Value	23-Jun-2022	23-Jun-2022
Phenols by HPLC (W)	24-Jun-2022	24-Jun-2022
Redox Potential	23-Jun-2022	23-Jun-2022
Sulphide	24-Jun-2022	24-Jun-2022
SVOC MS (W) - Aqueous	24-Jun-2022	24-Jun-2022
TPH CWG (W)	24-Jun-2022	24-Jun-2022
VOC MS (W)	24-Jun-2022	24-Jun-2022

SDG:	220623-96	**Report Number:**	652588	**Superseded Report:**	652101
Client Ref:	LD10385	**Location:**	Ten Acres Lane		

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Wardell Armstrong LLP
36 Park Row
Leeds
LS1 5JL

Attention: Jonathan Currie

CERTIFICATE OF ANALYSIS

Date of report Generation:	30 June 2022
Customer:	Wardell Armstrong LLP
Sample Delivery Group (SDG):	220623-99
Your Reference:	LD10385
Location:	Ten Acres Lane
Report No:	652591
Order Number:	LD2905

This report has been revised and directly supersedes 652103 in its entirety.

We received 3 samples on Thursday June 23, 2022 and 3 of these samples were scheduled for analysis which was completed on Thursday June 30, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

1291

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
26477450	CP203		0.00 - 0.00	21/06/2022
26477482	WS308		0.00 - 0.00	21/06/2022
26477466	WS312		0.00 - 0.00	21/06/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

- X Test
- N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)											26477450									26477482	26477466
Customer Sample Reference											CP203									WS308	WS312
AGS Reference																					
Depth (m)											0.00 - 0.00									0.00 - 0.00	0.00 - 0.00
Container			0.5l glass bottle (ALE227)	1plastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	1plastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 3				X									X						
Anions by Kone (w)	All	NDPs: 0 Tests: 3				X									X						
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3							X									X			
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 3						X									X				
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 3	X									X									X
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 3			X									X							
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 3			X									X							
GRO by GC-FID (W)	All	NDPs: 0 Tests: 3								X									X		
Low Level Hexavalent Chromium (w)	All	NDPs: 1 Tests: 2				N									X						
Mercury Dissolved	All	NDPs: 0 Tests: 3						X									X				
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 3			X									X							
PFAS (Post Ox.) Liquids	All	NDPs: 0 Tests: 2		X									X								
PFAS Liquids	All	NDPs: 0 Tests: 2		X									X								
pH Value	All	NDPs: 0 Tests: 3				X									X						
Phenols by HPLC (W)	All	NDPs: 0 Tests: 3					X									X					

26477466	WS312		0.00 - 0.00	ZnAc (ALE246)	Vial (ALE297)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml Amber Gl. PTFE/PE (ALE219)
				GW	GW	GW	GW	GW	GW	GW
									X	
									X	
						X				
							X			
										X
										X
					X					
									X	
							X			
										X
									X	
								X		

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			26477450	CP203		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26477482	WS308		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
							1lplastic (ALE221)	GW
							250ml Amber Gl. PTFE/PE (ALE219)	GW
							500ml Plastic (ALE208)	GW
							H2SO4 (ALE244)	GW
							HNO3 Filtered (ALE204)	GW
							NaOH (ALE245)	GW
							Vial (ALE297)	GW
							ZnAc (ALE246)	GW
			26477466	WS312		0.00 - 0.00	0.5l glass bottle (ALE227)	GW
Redox Potential	All	NDPs: 0 Tests: 3						
			X					
							X	
Sulphide	All	NDPs: 0 Tests: 3						
							X	
								X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 3						
			X					
							X	
								X
TPH CWG (W)	All	NDPs: 0 Tests: 3						
			X					
							X	
								X
VOC MS (W)	All	NDPs: 0 Tests: 3						
							X	
								X

							26477466
							WS312
							0.00 - 0.00
ZnAc (ALE246)	Vial (ALE297)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml Amber Gl. PTFE/PE (ALE219)	
GW	GW	GW	GW	GW	GW	GW	
X							
	X						

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		675 #	730 #	635 #			
Carbon, Organic (diss.filt)	<3 mg/l	TM090		10.5	8.43	8.18			
Sulphide	<0.01 mg/l	TM101		0.0359 #	0.0282 #	0.0428 #			
Redox potential	mV	TM110		-16	-38	-22			
Arsenic (diss.filt)	<0.5 µg/l	TM152		15.6 2 #	2.02 2 #	14.4 2 #			
Boron (diss.filt)	<10 µg/l	TM152		1340 2 #	235 2 #	1010 2 #			
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2 #	<0.08 2 #	<0.08 2 #			
Chromium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #	<1 2 #			
Copper (diss.filt)	<0.3 µg/l	TM152		0.537 2 #	<0.3 2 #	<0.3 2 #			
Lead (diss.filt)	<0.2 µg/l	TM152		1.04 2 #	<0.2 2 #	<0.2 2 #			
Manganese (diss.filt)	<3 µg/l	TM152		1060 2 #	665 2 #	3450 2 #			
Nickel (diss.filt)	<0.4 µg/l	TM152		10.9 2 #	1.11 2 #	5.56 2 #			
Selenium (diss.filt)	<1 µg/l	TM152		<1 2 #	<1 2 #	<1 2 #			
Zinc (diss.filt)	<1 µg/l	TM152		11.3 2 #	1.65 2 #	5.09 2 #			
Calcium (Dis.Filt)	<0.2 mg/l	TM152		388 2 #	264 2 #	292 2 #			
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2 #	<0.01 2 #	<0.01 2 #			
Sulphate	<2 mg/l	TM184		497 #	124 #	393 #			
Cyanide, Total	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
Thiocyanate	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #			
pH	<1 pH Units	TM256		6.99 #	6.96 #	6.93 #			
Phenol	<0.002 mg/l	TM259		<0.002 #	<0.002 #	<0.002 #			
Cresols	<0.006 mg/l	TM259		<0.006 #	<0.006 #	<0.006 #			
Xylenols	<0.008 mg/l	TM259		<0.008 #	<0.008 #	<0.008 #			
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016 #	<0.016 #	<0.016 #			
Low Level Hexavalent Chromium	<0.003 mg/l	TM331			<0.003	<0.003			
PFBA (375-22-4)	<2 ng/l	TM337		21.5 #	<11 #				
PFPA (2706-90-3)	<1 ng/l	TM337		8 #	<5 #				
PFHxA (307-24-4)	<1 ng/l	TM337		9.97 #	<5 #				
PFBS (375-73-5)	<1 ng/l	TM337		<5 #	<5 #				
PFHpA (375-85-9)	<1 ng/l	TM337		9.93 #	<5 #				
6:2 FTS (27619-97-2)	<1 ng/l	TM337		<5 #	<5 #				
PFOA (335-67-1)	<0.65 ng/l	TM337		34.9 #	8.97 #				

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
PFHxS (355-46-4)	<1 ng/l	TM337		9.67 #	<5 #				
PFNA (375-95-1)	<1 ng/l	TM337		<5 #	<5 #				
PFHpS (375-92-8)	<1 ng/l	TM337		<5 #	<5 #				
PFDA (335-76-2)	<1 ng/l	TM337		<5 #	<5 #				
Linear PFOS (1763-23-1)	<0.65 ng/l	TM337		24 #	<3.25 #				
Branched PFOS	<0.65 ng/l	TM337		33.7 #	<3.25 #				
PFUnA (2058-94-8)	<1 ng/l	TM337		<5 #	<5 #				
PFDoA (307-55-1)	<1 ng/l	TM337		<5 #	<5 #				
PFOSA (754-91-6)	<2 ng/l	TM337		<10 #	<10 #				
PFDS (335-77-3)	<1 ng/l	TM337		<5	<5				
PFPeS (2706-91-4)	<1 ng/l	TM337		<5 #	<5 #				
Total PFOS	<0.65 ng/l	TM337		57.7 #	<3.25 #				
PFBA (Post Ox.) (375-22-4)	<4 ng/l	TM405		19.1	<10				
PFPA (Post Ox.) (2706-90-3)	<2 ng/l	TM405		8.11	<5				
PFHxA (Post Ox.) (307-24-4)	<2 ng/l	TM405		9.9	<5				
PFBS (Post Ox.) (375-73-5)	<2 ng/l	TM405		<5	<5				
PFHpA (Post Ox.) (375-85-9)	<2 ng/l	TM405		11.8	<5				
6:2 FTS (Post Ox.) (27619-97-2)	<2 ng/l	TM405		<5	<5				
PFOA (Post Ox.) (335-67-1)	<2 ng/l	TM405		34.2	8.33				
PFHxS (Post Ox.) (355-46-4)	<2 ng/l	TM405		8.33	<5				
PFNA (Post Ox.) (375-95-1)	<2 ng/l	TM405		<5	<5				
PFHpS (Post Ox.) (375-92-8)	<2 ng/l	TM405		<5	<5				
PFDA (Post Ox.) (335-76-2)	<2 ng/l	TM405		<5	<5				
Linear PFOS (Post Ox.) (1763-23-1)	<2 ng/l	TM405		17.7	<5				
Branched PFOS (Post Ox.)	<2 ng/l	TM405		28	<5				
PFUnA (Post Ox.) (2058-94-8)	<2 ng/l	TM405		<5	<5				
PFDoA (Post Ox.) (307-55-1)	<2 ng/l	TM405		<5	<5				
PFOSA (Post Ox.) (754-91-6)	<4 ng/l	TM405		<10	<10				
PFDS (Post Ox.) (335-77-3)	<2 ng/l	TM405		<5	<5				
PFPeS (Post Ox.) (2706-91-4)	<2 ng/l	TM405		<5	<5				
Total PFOS (Post Ox.)	<2 ng/l	TM405		45.7	<5				

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103

Client Ref.: LD10385 **Location:** Ten Acres Lane

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0806 #	0.133 #	<0.01 #			
Acenaphthene (aq)	<0.005 µg/l	TM178		0.114 #	1.98 #	<0.005 #			
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.0074 #	<0.005 #	<0.005 #			
Fluoranthene (aq)	<0.005 µg/l	TM178		0.414 #	3.89 #	<0.005 #			
Anthracene (aq)	<0.005 µg/l	TM178		0.0606 #	0.984 #	<0.005 #			
Phenanthrene (aq)	<0.005 µg/l	TM178		0.325 #	1.07 #	<0.005 #			
Fluorene (aq)	<0.005 µg/l	TM178		0.0515 #	0.755 #	<0.005 #			
Chrysene (aq)	<0.005 µg/l	TM178		0.261 #	1.51 #	<0.005 #			
Pyrene (aq)	<0.005 µg/l	TM178		0.378 #	4.46 #	<0.005 #			
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.205 #	1.21 #	<0.005 #			
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.358 #	1.27 #	<0.005 #			
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.137 #	0.434 #	<0.005 #			
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.271 #	0.887 #	<0.002 #			
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #			
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.248 #	0.553 #	<0.005 #			
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.248 #	0.432 #	<0.005 #			
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		3.16 #	19.6 #	<0.082 #			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Customer Sample Ref.	CP203	WS308	WS312			
Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
Date Sampled	21/06/2022	21/06/2022	21/06/2022			
Sample Time	10:00	12:30	11:00			
Date Received	23/06/2022	23/06/2022	23/06/2022			
SDG Ref	220623-99	220623-99	220623-99			
Lab Sample No.(s)	26477450	26477482	26477466			
AGS Reference						

Component	LOD/Units	Method						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Chlorophenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Methylphenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Nitroaniline (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
2-Nitrophenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
3-Nitroaniline (aq)	<1 µg/l	TM176	<8	<8	<1			
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
4-Chloroaniline (aq)	<1 µg/l	TM176	<8	<8	<1			
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
4-Methylphenol (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
4-Nitroaniline (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
4-Nitrophenol (aq)	<1 µg/l	TM176	<8	<8	<1			
Azobenzene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
Acenaphthylene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
Acenaphthene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
Anthracene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<16 #	<16 #	<2 #			
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<8 #	<8 #	<1 #			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

SVOC MS (W) - Aqueous

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Carbazole (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Chrysene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Dibenzofuran (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Diethyl phthalate (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Dimethyl phthalate (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<40 #	<40 #	<5 #			
Fluoranthene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Fluorene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Hexachlorobenzene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Pentachlorophenol (aq)	<1 µg/l	TM176		<8	<8	<1			
Phenol (aq)	<1 µg/l	TM176		<8	<8	<1			
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Hexachloroethane (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Nitrobenzene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Naphthalene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Isophorone (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<8	<8	<1			
Phenanthrene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			
Pyrene (aq)	<1 µg/l	TM176		<8 #	<8 #	<1 #			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

TPH CWG (W)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		105	105	116			
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #			
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10			
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	185	<10			
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	1130	<10			
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		20	3720	<10			
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		20	5030	<10			
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10			
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	31	<10			
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	257	<10			
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	1280	<10			
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	1570	<10			
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		20	6590	<10			
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		20	4840	<10			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Dibromofluoromethane**	%	TM208		117	116	115			
Toluene-d8**	%	TM208		99.3	98.8	99			
4-Bromofluorobenzene**	%	TM208		98.3	94.9	96.7			
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dichloromethane	<3 µg/l	TM208		<5 #	<5 #	<5 #			
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #			
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1			
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4+§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1			
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #			
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #			
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1			

Validated

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	CP203	WS308	WS312			
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
			Date Sampled	21/06/2022	21/06/2022	21/06/2022			
			Sample Time	10:00	12:30	11:00			
			Date Received	23/06/2022	23/06/2022	23/06/2022			
			SDG Ref	220623-99	220623-99	220623-99			
			Lab Sample No.(s)	26477450	26477482	26477466			
			AGS Reference						
Sum of detected Xylenes	<2 µg/l	TM208		<2	<2	<2			
Sum of BTEX	<5 µg/l	TM208		<5	<5	<5			

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Notification of NDPs (No determination possible)

Date Received : 23/06/2022 11:19:32

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
26477450	CP203	0.00 - 0.00	Low Level Hexavalent Chromium (w)	Unsuitable for Analysis

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM110	BS 1377: Part 3 1990	Redox Potential
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM331		Low Level Hexavalent Chromium
TM337	PFAS in Environmental Water Matrices	Analysis of PFAS
TM405	PFAS (TOP Assay)	Analysis of perfluoroalkylsulfonates and perfluorocarboxylic acids - Total Oxidizable Precursor Assay

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 220623-99 **Report Number:** 652591 **Superseded Report:** 652103
Client Ref.: LD10385 **Location:** Ten Acres Lane

Test Completion Dates

Lab Sample No(s)	26477450	26477482	26477466
Customer Sample Ref.	CP203	WS308	WS312
AGS Ref.			
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	23-Jun-2022	23-Jun-2022	23-Jun-2022
Anions by Kone (w)	23-Jun-2022	23-Jun-2022	23-Jun-2022
Cyanide Comp/Free/Total/Thiocyanate	24-Jun-2022	24-Jun-2022	24-Jun-2022
Dissolved Metals by ICP-MS	24-Jun-2022	24-Jun-2022	24-Jun-2022
Dissolved Organic/Inorganic Carbon	24-Jun-2022	24-Jun-2022	24-Jun-2022
EPH CWG (Aliphatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
EPH CWG (Aromatic) Aqueous GC (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
GRO by GC-FID (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
Low Level Hexavalent Chromium (w)		23-Jun-2022	23-Jun-2022
Mercury Dissolved	24-Jun-2022	24-Jun-2022	24-Jun-2022
PAH Spec MS - Aqueous (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
PFAS (Post Ox.) Liquids	30-Jun-2022	30-Jun-2022	
PFAS Liquids	27-Jun-2022	27-Jun-2022	
pH Value	23-Jun-2022	23-Jun-2022	23-Jun-2022
Phenols by HPLC (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
Redox Potential	23-Jun-2022	23-Jun-2022	23-Jun-2022
Sulphide	24-Jun-2022	24-Jun-2022	24-Jun-2022
SVOC MS (W) - Aqueous	24-Jun-2022	24-Jun-2022	24-Jun-2022
TPH CWG (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022
VOC MS (W)	24-Jun-2022	24-Jun-2022	24-Jun-2022

SDG:	220623-99	**Report Number:**	652591	**Superseded Report:**	652103
Client Ref:	LD10385	**Location:**	Ten Acres Lane		

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

APPENDIX I

Contaminant Exceedence Tables

Summary of Metal Exceedances in Made Ground (2020 & 2022)							
Metal	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Chromium IV	<0.6 – 26	21[1]	1	CP106	1.8	26	MG-CW
Arsenic	2.16 – 1,930	37[1]	19	TP126	0.50-0.50	**1930**	MG-CW
				TP139	2.40-2.40	**332**	MG-CW
				TP128	3.60-3.60	**309**	MG-CW
				TP108	2.30-2.30	**199**	MGC
				TP149	0.50-0.50	99.7	MG-CW
				TP231	0.60-0.60	95.9	MGC
				TP123	1.90-1.90	80.9	MG-CW
				TP145	3.80-3.80	72.5	MG-CDW
				TP256	0.35-0.35	65.5	MG-CW
				TP230	1.60-1.60	64.5	MG-CW
				CP108	0.50-0.50	62.9	MG-CW
				WS111	0.35-0.35	60	MG-CW
				TP114	3.40-3.40	45.4	MG-CDW
				WS107	1.40-1.40	44.7	MGC
				TP139	1.50-1.50	43.3	MGC
				TP206	1.00-1.00	41.9	MG-CDW
				WS112	0.90-0.90	40.9	MG-CW
				TP234	3.50-3.50	40	MG-CW
				TP230	1.50-1.50	37.5	MG-CW
Beryllium	0.213 – 4.87	1.7	10	TP237	2.00-2.00	4.87	MG-CW
				WS314	0.50-0.50	4.71	MGG
				TP245	2.00-2.00	3.46	MG-CDW
				TP247	1.60-1.60	3	MG-CW
				TP230	1.50-1.50	2.88	MG-CW
				TP256	0.35-0.35	2.43	MG-CW
				TP231	0.60-0.60	2.05	MGC
				TP206	1.00-1.00	1.79	MG-CDW
				TP248	4.50-4.50	1.77	MG-CW
				TP234	3.50-3.50	1.72	MG-CW
Cadmium	<0.02 – 37.4	22	1	TP231	0.60	37.4	MGC
Copper	6.90 – 9990	2400	3	TP102	1.60-1.60	9990	MG-CDW
				TP247	1.60-1.60	4440	MG-CW
				TP229	3.00-3.00	3600	MG-CDW

Summary of Metal Exceedances in Made Ground (2020 & 2022)							
Metal	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Lead	4.98 – 28700	200[1]	53	TP114	3.40-3.40	**28700**	MG-CDW
				TP242	2.50-2.50	**10400**	MGG
				TP139	1.50-1.50	**3220**	MGC
				TP229	3.00-3.00	**2520**	MG-CDW
				TP216	0.60-0.60	**1410**	MG-CW
				CP106	1.80-1.80	**1220**	MG-CW
				TP206	1.00-1.00	**1170**	MG-CDW
				TP108	2.30-2.30	**1130**	MGC
				TP245	2.00-2.00	**1120**	MG-CDW
				TP141	0.50-0.50	931	MG-CW
				TP247	1.60-1.60	923	MG-CW
				TP204	0.90-0.90	901	MGC
				TP126	0.50-0.50	879	MG-CW
				TP240	2.00-2.00	850	MG-HW
				TP226	1.50-1.50	753	MG-CDW
				TP203	1.00-1.00	695	MGC
				TP244	0.70-1.00	670	MGC
				TP144	0.40-0.40	622	MG-CW
				TP215	1.00-1.00	611	MG-HW
				CP207	10.00-11.00	601	MGG
				CP107	4.50-4.50	589	MGG
				CP202	8.00-9.00	576	MGG
				TP149	0.50-0.50	510	MG-CW
				TP138	1.60-1.60	471	MG-CDW
				TP102	1.60-1.60	470	MG-CDW
				TP211	1.80-1.80	379	MGC
				TP253	3.80-3.80	373	MGG
				TP119	1.70-1.70	352	MG-CDW
				TP248	4.50-4.50	350	MG-CW
				TP231	0.60-0.60	342	MGC
				TP128	3.60-3.60	341	MG-CW
				TP224	1.40-1.40	340	MG-CDW
				TP127	1.20-1.20	322	MGC
				TP255	0.20-1.00	317	MG-CDW

Summary of Metal Exceedances in Made Ground (2020 & 2022)							
Metal	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP139	2.40-2.40	284	MG-CW
				TP117	4.20-4.20	283	MG-CDW
				TP248	1.00-1.00	277	MG-CW
				TP207	3.00-3.00	272	MG-HW
				TP101	0.50-0.50	270	MG-CDW
				CP103	2.00-3.00	250	MGC
				TP219	1.50-1.50	246	MGG
				CP205	5.00-6.00	245	MGC
				TP115	0.40-0.40	245	MGG
				TP208	2.50-2.50	237	MG-CDW
				TP111	1.50-1.50	236	MG-CDW
				RH108	0.00-1.00	233	TF
				TP239	1.40-1.40	231	MGC
				WS112	0.90-0.90	229	MG-CW
				TP145	3.80-3.80	227	MG-CDW
				CP108	0.50-0.50	226	MG-CW
				TP230	1.60-1.60	223	MG-CW
				TP123	1.90-1.90	208	MG-CW
				TP134	0.20-0.20	204	MG-CDW
Nickel	2.00 – 535	130	10	CP109	7.50-7.50	535	MG-CDW
				TP240	2.00-2.00	309	MG-HW
				TP245	2.00-2.00	189	MG-CDW
				TP231	0.60-0.60	183	MGC
				TP229	3.00-3.00	180	MG-CDW
				TP141	0.50-0.50	175	MG-CW
				TP149	0.50-0.50	160	MG-CW
				CP201	4.00-6.00	153	MG-CW
				CP104	7.30-7.30	145	MG-CDW
				WS105	2.50-2.50	131	MGG
Zinc	15.7 – 7290	3700	1	TP102	1.60-1.60	7290	MG-CDW
				TP229	3.00-3.00	5610	MG-CDW
				TP216	0.60-0.60	3950	MG-CW
Notes: MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste,							

Summary of Metal Exceedances in Made Ground (2020 & 2022)							
Metal	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014).							

Summary of Metal Exceedances in Made Ground (Celtic 2007)							
Metal	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
Arsenic	<3– 190	37[1]	21	WS6	1.5	**190**	MGC
				R3	0.4	**130**	MGG
				TP5	2.4	**120**	MGC
				TP12	1.7	**120**	MGC
				WS12	1.5	**110**	MG-CW
				TP23	0.4	89	MGG
				BH3	5.3-6.0	78	MG-CW
				TP39	0.2-0.7	75	MGC
				TP21	1.2	74	MG-CW
				WS2	0.5	73	MGC
				TP27	1.4-2.0	49	MG-CW
				TP9	1.4	48	MGC
				TP20	0.9	47	MG-CW
				TP40	1.9	47	MGC
				TP21	1.2	46	MG-CDW
				TP35	0.6-1.2	40	MG-CS
				TP43	2.9	38	MGG
				TP10	2.4	37	MG-CW
				TP18A	0.9	37	MGC
				BH4	1.2-2.1	37	MG
				TP24	0.0-0.45	37	TF
Lead	5 – 4300	200[1]	24	BH3	5.3-6.0	**4300**	MG-CW
				TP21	1.2	**2600**	MG-CDW
				TP21	1.2	**1900**	MG-CW
				TP27	1.4-2.0	**1500**	MG-CW

Summary of Metal Exceedances in Made Ground (Celtic 2007)							
Metal	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
				TP20	0.9	**1300**	MG-CW
				TP5	2.4	910	MGC
				TP11A	1.3-2.0	830	MGG
				TP12	1.7	770	MGC
				TP9	1.4	510	MGC
				TP8	2.8	410	MGC
				TP11	0.7	380	MGG
				WS12	1.5	350	MG-CW
				WS17	1.2	330	MGC
				WS4	0.4	330	MGG
				TP4	2.4	300	MGC
				TP27	3.1	290	MG-CW
				BH4	1.2-2.1	280	MG
				TP18A	0.9	260	MGC
				TP19	1	250	MGC
				WS6	1.5	240	MGC
				R3	0.4	240	MGG
				TP23	0.4	230	MGG
				TP46	1.5	220	MGC
				TP24	0-0.45	210	MGG
Nickel	6 – 360	130	2	WS19	2.6	360	MG-CDW
				TP21	1.2	310	MG-CW

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014).

Summary of Metal Exceedances in Natural Ground (2020 & 2022)							
Metal	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Arsenic	3.75 – 55.9	37[1]	1	WS102	2.8	55.9	CGT
Lead	4.98 – 291	200[1]	1	WS102	2.8	291	CGT
Notes: CGT = Cohesive Glacial Till, GGT = Granular Glacial Till Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014).							

Summary of Metal Exceedances in Natural Ground (Celtic 2007)							
Metal	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Arsenic	<3 – 45	37[1]	2	TP47	4.8-5.0	45	GGT
				TP66	3.3	42	GGT
Lead	5 – 540	200[1]	2	TP47	4.8-5.0	540	GGT
				TP66	3.3	290	GGT
Notes: CGT = Cohesive Glacial Till, GGT = Granular Glacial Till [1] Category 4 Screening Levels (March 2014).							

Summary of Cyanide Exceedances in Made Ground (2020 & 2022)							
Type	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Total Cyanide	<1 – 499	20[1]	10	TP108	2.30-2.30	**499**	MGC
				TP139	2.40-2.40	**162**	MG-CW
				TP114	3.40-3.40	79.5	MG-CDW
				TP123	1.90-1.90	68.8	MG-CW
				TP253	3.80-3.80	53.4	MGG
				TP139	1.50-1.50	51.9	MGC
				TP123	2.40-2.40	45.1	MG-CW

Summary of Cyanide Exceedances in Made Ground (2020 & 2022)							
Type	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
				TP226	4.00-4.00	40.6	MGC
				TP230	1.50-1.50	38	MG-CW
				TP231	0.60-0.60	20.1	MGC

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
[1] Value for thiocyanate

Summary of Cyanide Exceedances in Made Ground (Celtic 2007)							
Type	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
Total Cyanide	<1 – 920	20[1]	4	TP12	1.7	**920**	MGC
				TP10	2.4	**180**	MG-CW
				TP5	2.4	69	MGC
				TP62	2.4	50	MG-CS

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
[1] Value for thiocyanate

Summary of Cyanide Exceedances in Natural Ground (Celtic 2007)							
Type	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Total Cyanide	<1 – 50	20[1]	1	TP67	2.8	50	CGT
Notes: CGT = Cohesive Glacial Till, GGT = Granular Glacial Till [1] Value for thiocyanate							

Summary of TPH Exceedances in Made Ground (2020 & 2022)							
TPH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Aliphatics >C8-C10	<0.01 – 703	27	1	TP139	2.4	703	MG-CW
Aromatics >EC8-EC10	<0.01 – 469	34	1	TP139	2.4	469	MG-CW
Aromatics > EC10-EC12	<1 – 6110	74	3	TP139	2.4	**6110**	MG-CW
				TP117	4.2	**459**	MG-CDW
				WS309	3.2	81.1	MGC
Aromatics > EC12-EC16	<1 – 5210	140	6	TP139	2.4	**5210**	MG-CW
				TP117	4.20	**2610**	MG-CDW
				WS309	3.20	994	MGC
				TP223	1.00	661	MGC
				TP126	0.50	325	MG-CW
				WS109	3.65-3.75	157	MGG
Aromatics > EC16-EC21	<1 – 10900	260	9	WS309	3.2	**10900**	MGC
				TP117	4.	**8780**	MG-CDW
				TP139	2.4	**2160**	MG-CW
				TP126	0.5	**1380**	MG-CW
				TP223	1.0	671	MGC
				WS306	1.3	550	MGC
				WS109	3.65-3.75	513	MGG
				WS112 ES1	0.9	449	MG-CW
				TP108	2.3	382	MGC

Summary of TPH Exceedances in Made Ground (2020 & 2022)							
TPH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Aromatics > EC21-EC35	<1 – 17800	1100	6	WS309	3.2	**17800**	MGC
				TP117	4.2	**10200**	MG-CDW
				TP139	2.4	2220	MG-CW
				TP126	0.5	2210	MG-CW
				TP145	3.8	1980	MG-CDW
				WS306	1.3	1140	MGC
Aromatics > EC35-EC44	<1 – 1680	1100	1	WS309	3.2	1680	MGC

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.

Summary of TPH Exceedances in Made Ground (Celtic 2007)							
TPH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Aromatics > EC16-EC21	0.29 – 890	260	4	TP43	2.9	890	MGG
				TP112	1.7	460	MGC
				WS16	4.5	280	MGG
				TP46	1.5	260	MGC
Aromatics > EC21-EC35	4.1 – 8300	1100	3	TP43	2.9	8300	MGG
				TP12	1.7	2700	MGC
				TP46	1.5	1200	MGC

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Naphthalene	<0.009 – 13100	2.3	27	TP139	2.40-2.40	13100	MG-CW
				TP117	4.20-4.20	279	MG-CDW
				TP117	4.20-4.20	144	MG-CDW
				WS109	3.65-3.75	102	MGG
				TP117	4.20-4.20	**83.4**	MG-CDW
				WS109	3.65-3.75	**22.4**	MGG
				TP126	0.50-0.50	**17.5**	MG-CW
				TP223	1.00-1.00	**16.5**	MGC
				WS109	3.65-3.75	**15**	MGG
				WS309	3.20-3.20	**12.3**	MGC
				WS309	3.20-3.20	**12**	MGC
				TP242	2.50-2.50	8.58	MGG
				TP226	1.50-1.50	6.84	MG-CDW
				WS112	0.90-0.90	6.04	MG-CW
				TP130	0.30-0.30	5.47	MG-CDW
				TP126	0.50-0.50	5.1	MG-CW
				WS306	1.30-1.30	5.06	MGC
				TP223	1.00-1.00	4.73	MGC
				TP223	1.00-1.00	3.77	MGC
				CP201	4.00-6.00	3.76	MG-CW
				TP104	1.80-1.80	3.14	MG-CDW
				CP201	4.00-6.00	2.91	MG-CW
				CP203	3.00-3.00	2.6	MGC
				TP206	1.00-1.00	2.46	MG-CDW
				TP224	1.40-1.40	2.44	MG-CDW
				TP227	1.10-1.10	2.36	MG-CS
				CP207	10.00-11.00	2.35	MGG
Acenaphthylene	<0.012 – 315	170	1	TP139	2.4	315	MG-CW
Acenaphthene	<0.008 – 341	210	1	TP117	4.2	341	MG-CDW
Fluorene	<0.01 – 656	170	2	TP139	2.4	656	MG-CW
				TP117	4.2	322	MG-CDW
Phenanthrene	<0.015 – 1550	95	6	TP117	4.2	1550	MG-CDW
				TP139	2.4	1320	MG-CW
				TP117	4.2	**725**	MG-CDW
				WS309	3.65-3.75	**518**	MGC

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP126	0.5	**365**	MG-CW
				WS109	3.65-3.75	98.3	MGG
Fluoranthene	<0.017 – 1290	280	5	TP117	4.2	**1290**	MG-CDW
				TP117	4.2	621	MG-CDW
				WS309	3.2	572	MGC
				TP139	2.4	450	MG-CW
				TP126	0.5	400	MG-CW
Pyrene	<0.015 – 1120	620	1	TP117	4.2	**1120**	MG-CDW
Benz(a)anthracene	<0.014 – 432	7.2	31	TP117	4.20-4.20	**432**	MG-CDW
				WS309	3.20-3.20	**311**	MGC
				TP139	2.40-2.40	**237**	MG-CW
				TP117	4.20-4.20	**196**	MG-CDW
				TP126	0.50-0.50	**134**	MG-CW
				WS112	0.90-0.90	**46.8**	MG-CW
				TP224	1.40-1.40	**37.7**	MG-CDW
				TP123	2.40-2.40	**35**	MG-CW
				WS109	3.65-3.75	**25.8**	MGG
				WS109	3.65-3.75	**25.3**	MGG
				TP126	0.50-0.50	**24**	MG-CW
				TP108	2.30-2.30	**22.2**	MGC
				TP253	3.80-3.80	**21.6**	MGG
				TP104	1.80-1.80	**18.7**	MG-CDW
				WS306	1.30-1.30	**16.6**	MGC
				TP204	0.90-0.90	**13.8**	MGC
				TP149	0.50-0.50	**13**	MG-CW
				TP224	1.40-1.40	**12.9**	MG-CDW
				CP103	2.00-3.00	**12.4**	MGC
				TP258	2.50-2.50	**11**	MGG
				TP226	1.50-1.50	**10.3**	MG-CDW
				WS111	0.35-0.35	9.65	MG-CW
				CP202	6.70-6.70	9.59	MGG
				TP145	3.80-3.80	9.51	MG-CDW
				TP149	0.50-0.50	9.02	MG-CW
				TP144	0.40-0.40	8.91	MG-CW
				TP206	1.00-1.00	8.3	MG-CDW
				TP242	2.50-2.50	7.71	MGG

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				WS105	2.50-2.50	7.7	MGG
				TP145	2.30-2.30	7.42	MG-CDW
				TP212	1.50-1.50	7.32	MG-CW
Chrysene	<0.01 – 432	15	15	TP117	4.20-4.20	**432**	MG-CDW
				WS309	3.20-3.20	**237**	MGC
				TP117	4.20-4.20	**196**	MG-CDW
				TP139	2.40-2.40	**187**	MG-CW
				TP126	0.50-0.50	**144**	MG-CW
				WS112	0.90-0.90	45.2	MG-CW
				TP224	1.40-1.40	37.2	MG-CDW
				TP123	2.40-2.40	30.6	MG-CW
				WS109	3.65-3.75	26.3	MGG
				TP108	2.30-2.30	22.7	MGC
				WS109	3.65-3.75	22.2	MGG
				TP126	0.50-0.50	21.9	MG-CW
				TP253	3.80-3.80	19.2	MGG
				TP104	1.80-1.80	18.4	MG-CDW
				WS306	1.30-1.30	16.9	MGC
Benzo(b)fluoranthene	<0.015 – 461	2.6	56	TP117	4.20-4.20	**461**	MG-CDW
				TP117	4.20-4.20	**197**	MG-CDW
				TP126	0.50-0.50	**159**	MG-CW
				WS309	3.20-3.20	**117**	MGC
				TP139	2.40-2.40	**113**	MG-CW
				WS112	0.90-0.90	**52.8**	MG-CW
				TP123	2.40-2.40	**26.7**	MG-CW
				TP224	1.40-1.40	**24.9**	MG-CDW
				WS109	3.65-3.75	**23**	MGG
				TP104	1.80-1.80	**22.1**	MG-CDW
				TP253	3.80-3.80	**21.9**	MGG
				TP108	2.30-2.30	**21.2**	MGC
				TP126	0.50-0.50	**18.9**	MG-CW
				WS109	3.65-3.75	**18.5**	MGG
				CP103	2.00-3.00	**15.7**	MGC
				TP224	1.40-1.40	**15.2**	MG-CDW
				TP149	0.50-0.50	**12.3**	MG-CW
				TP149	0.50-0.50	**11.8**	MG-CW

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP144	0.40-0.40	**11.3**	MG-CW
				TP145	3.80-3.80	**10.9**	MG-CDW
				WS111	0.35-0.35	**10.4**	MG-CW
				TP102	1.60-1.60	9.73	MG-CDW
				WS306	1.30-1.30	9.7	MGC
				TP141	0.50-0.50	9.08	MG-CW
				TP226	1.50-1.50	8.86	MG-CDW
				TP258	2.50-2.50	8.64	MGG
				CP202	6.70-6.70	8.42	MGG
				TP145	2.30-2.30	7.74	MG-CDW
				TP145	3.80-3.80	7.52	MG-CDW
				TP144	0.40-0.40	7.2	MG-CW
				TP248	1.00-1.00	7.01	MG-CW
				WS105	2.50-2.50	6.76	MGG
				CP201	4.00-6.00	6.43	MG-CW
				TP242	2.50-2.50	5.83	MGG
				TP242	2.50-2.50	5.83	MGG
				TP226	1.50-1.50	5.77	MG-CDW
				TP206	1.00-1.00	5.58	MG-CDW
				TP123	0.80-0.80	5.34	MG-CW
				TP134	0.20-0.20	4.99	MG-CDW
				TP119	1.70-1.70	4.84	MG-CDW
				TP256	0.35-0.35	4.83	MG-CW
				CP207	10.00-11.00	4.03	MGG
				TP223	1.00-1.00	3.97	MGC
				TP130	0.30-0.30	3.8	MG-CDW
				TP212	1.50-1.50	3.69	MG-CW
				TP258	2.50-2.50	3.61	MGG
				CP201	4.00-6.00	3.43	MG-CW
				TP119	1.70-1.70	3.3	MG-CDW
				CP108	0.50-0.50	3.28	MG-CW
				TP115	0.40-0.40	3.25	MGG
				CP107	4.50-4.50	3.13	MGG
				TP212	1.50-1.50	3.13	MG-CW
				TP203	1.00-1.00	3.03	MGC

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP101	0.50-0.50	2.92	MG-CDW
				TP210	0.90-0.90	2.86	MG-CDW
				CP108	0.50-0.50	2.71	MG-CW
Benzo(k)fluoranthene	<0.014 – 173	77	3	TP117	4.2	**173**	MG-CDW
				TP117	4.2	**155**	MG-CDW
				WS309	3.2	**149**	MGC
Benzo(a)pyrene	<0.015 – 376	2.2	67	TP117	4.20-4.20	**376**	MG-CDW
				WS309	3.20-3.20	**194**	MGC
				TP117	4.20-4.20	**192**	MG-CDW
				TP139	2.40-2.40	**154**	MG-CW
				TP126	0.50-0.50	**123**	MG-CW
				WS112	0.90-0.90	**39.2**	MG-CW
				TP224	1.40-1.40	**36.8**	MG-CDW
				TP123	2.40-2.40	**35**	MG-CW
				WS109	3.65-3.75	**29.1**	MGG
				TP126	0.50-0.50	**21.9**	MG-CW
				WS109	3.65-3.75	**21.8**	MGG
				TP253	3.80-3.80	**17.1**	MGG
				TP108	2.30-2.30	**16.4**	MGC
				TP104	1.80-1.80	**16.3**	MG-CDW
				TP224	1.40-1.40	**12.6**	MG-CDW
				TP204	0.90-0.90	**12.2**	MGC
				WS306	1.30-1.30	**12.1**	MGC
				CP103	2.00-3.00	**11.3**	MGC
				TP149	0.50-0.50	**10.7**	MG-CW
				TP258	2.50-2.50	9.3	MGG
				TP145	3.80-3.80	9.07	MG-CDW
				TP149	0.50-0.50	8.57	MG-CW
				TP226	1.50-1.50	8.56	MG-CDW
				TP144	0.40-0.40	8.15	MG-CW
				CP202	6.70-6.70	7.55	MGG
				WS111	0.35-0.35	7.44	MG-CW
				TP141	0.50-0.50	7.04	MG-CW
				TP145	2.30-2.30	6.98	MG-CDW
				TP102	1.60-1.60	6.92	MG-CDW
				TP242	2.50-2.50	6.88	MGG

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				WS105	2.50-2.50	6.22	MGG
				TP123	0.80-0.80	6.05	MG-CW
				TP212	1.50-1.50	6.02	MG-CW
				TP206	1.00-1.00	5.8	MG-CDW
				TP144	0.40-0.40	5.7	MG-CW
				TP248	1.00-1.00	5.52	MG-CW
				TP242	2.50-2.50	5.37	MGG
				CP201	4.00-6.00	5.12	MG-CW
				TP226	1.50-1.50	5.04	MG-CDW
				TP134	0.20-0.20	4.29	MG-CDW
				TP256	0.35-0.35	4.08	MG-CW
				TP258	2.50-2.50	3.95	MGG
				CP207	10.00-11.00	3.84	MGG
				CP108	0.50-0.50	3.65	MG-CW
				TP145	3.80-3.80	3.57	MG-CDW
				CP202	8.00-9.00	3.26	MGG
				TP119	1.70-1.70	3.06	MG-CDW
				WS301	2.80-3.00	3.01	MGG
				TP130	0.30-0.30	2.99	MG-CDW
				CP103	2.00-3.00	2.98	MGC
				TP119	1.70-1.70	2.98	MG-CDW
				TP256	0.35-0.35	2.98	MG-CW
				TP208	2.50-2.50	2.92	MG-CDW
				TP248	1.00-1.00	2.92	MG-CW
				CP201	4.00-6.00	2.68	MG-CW
				TP115	0.40-0.40	2.57	MGG
				TP212	1.50-1.50	2.56	MG-CW
				TP254	1.30-1.30	2.54	MG-CDW
				TP229	3.00-3.00	2.5	MG-CDW
				CP107	4.50-4.50	2.44	MGG
				TP223	1.00-1.00	2.36	MGC
				CP108	1.80-1.80	2.3	MG-CW
				WS317	2.50-2.50	2.29	MG-CW
				TP210	0.90-0.90	2.28	MG-CDW
				TP215	1.00-1.00	2.24	MG-HW

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP203	1.00-1.00	2.23	MGC
				TP101	0.50-0.50	2.22	MG-CDW
Indeno(1,2,3-cd)pyrene	<0.018 – 255	27	7	TP117	4.20-4.20	**255**	MG-CDW
				TP117	4.20-4.20	**133**	MG-CDW
				WS309	3.20-3.20	**114**	MGC
				TP126	0.50-0.50	79.6	MG-CW
				TP139	2.40-2.40	61.7	MG-CW
				TP224	1.40-1.40	34	MG-CDW
				WS112	0.90-0.90	28.1	MG-CW
Dibenzo(a,h)anthracene	<0.023 – 51.6	0.24	60	TP117	4.20-4.20	**51.6**	MG-CDW
				TP126	0.50-0.50	**16.4**	MG-CW
				TP139	2.40-2.40	**15.4**	MG-CW
				WS309	3.20-3.20	**14.4**	MGC
				TP117	4.20-4.20	**11.3**	MG-CDW
				TP123	2.40-2.40	**4.83**	MG-CW
				WS112	0.90-0.90	**3.99**	MG-CW
				TP224	1.40-1.40	**3.11**	MG-CDW
				WS109	3.65-3.75	**2.94**	MGG
				TP104	1.80-1.80	**1.92**	MG-CDW
				TP253	3.80-3.80	**1.77**	MGG
				TP108	2.30-2.30	**1.66**	MGC
				WS109	3.65-3.75	**1.63**	MGG
				TP149	0.50-0.50	**1.5**	MG-CW
				TP224	1.40-1.40	**1.46**	MG-CDW
				CP103	2.00-3.00	**1.45**	MGC
				TP204	0.90-0.90	**1.32**	MGC
				TP149	0.50-0.50	0.995	MG-CW
				TP145	3.80-3.80	0.973	MG-CDW
				TP102	1.60-1.60	0.963	MG-CDW
				TP144	0.40-0.40	0.924	MG-CW
				TP141	0.50-0.50	0.911	MG-CW
				CP202	6.70-6.70	0.848	MGG
				TP145	2.30-2.30	0.826	MG-CDW
				TP123	0.80-0.80	0.815	MG-CW
				WS111	0.35-0.35	0.749	MG-CW
				TP144	0.40-0.40	0.73	MG-CW

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				WS105	2.50-2.50	0.712	MGG
				TP242	2.50-2.50	0.668	MGG
				TP248	1.00-1.00	0.635	MG-CW
				TP226	1.50-1.50	0.596	MG-CDW
				TP134	0.20-0.20	0.541	MG-CDW
				CP201	4.00-6.00	0.51	MG-CW
				TP256	0.35-0.35	0.509	MG-CW
				TP258	2.50-2.50	0.494	MGG
				CP207	10.00-11.00	0.435	MGG
				TP145	3.80-3.80	0.422	MG-CDW
				CP201	4.00-6.00	0.422	MG-CW
				CP108	0.50-0.50	0.391	MG-CW
				TP130	0.30-0.30	0.362	MG-CDW
				TP208	2.50-2.50	0.351	MG-CDW
				TP119	1.70-1.70	0.33	MG-CDW
				TP256	0.35-0.35	0.327	MG-CW
				TP216	0.60-0.60	0.326	MG-CW
				TP119	1.70-1.70	0.326	MG-CDW
				TP212	1.50-1.50	0.304	MG-CW
				CP108	0.50-0.50	0.297	MG-CW
				CP103	2.00-3.00	0.293	MGC
				TP207	3.00-3.00	0.283	MG-HW
				CP202	8.00-9.00	0.283	MGG
				TP210	0.90-0.90	0.277	MG-CDW
				TP127	1.20-1.20	0.275	MGC
				CP108	1.80-1.80	0.272	MG-CW
				TP115	0.40-0.40	0.266	MGG
				TP203	1.00-1.00	0.265	MGC
				TP229	3.00-3.00	0.257	MG-CDW
				TP101	0.50-0.50	0.256	MG-CDW
				TP206	1.00-1.00	0.254	MG-CDW
				TP244	0.70-1.00	0.245	MGC
				TP245	2.00-2.00	0.24	MG-CDW

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-

Summary of PAH Exceedances in Made Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.							

Summary of PAH Exceedances in Made Ground (2007)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Naphthalene	<0.013 – 18	2.3	6	TP8	2.2-2.4	**18**	MGC
				TP20	0.9	7.6	MG-CW
				TP12	1.7	3.6	MGC
				BH13	0.6-1.1	3.6	MG-CS
				TP11	0.7	3.6	MGG
				TP11A	1.3-2.0	2.4	MGG
Benz(a)anthracene	0.039 – 31	7.2	6	TP12	1.7	**31**	MGC
				TP10	2.4	**22**	MG-CW
				TP20	0.9	**19**	MG-CW
				TP11A	1.3-2.0	**18**	MGG
				WS16	4.5	**11**	MGG
				TP1	0.2	7.9	MGG
Chrysene	<0.1 – 33	15	4	TP12	1.7	33	MGC
				TP10	2.4	24	MG-CW
				TP20	0.9	20	MG-CW
				TP11A	1.3-2.0	19	MGG
Benzo(b)fluoranthene	0.076 – 24	2.6	11	TP12	1.7	**24**	MGC
				TP20	0.9	**18**	MG-CW
				TP11A	1.3-2.0	**18**	MGG
				TP10	2.4	**17**	MG-CW
				TP1	0.2	**11**	MGG
				WS16	4.5	9.9	MGG
				TP16	2.5	9.0	MG-CDW
				WS22	0.5	5.7	MGC
				WS6	1.5	3.7	MGC

Summary of PAH Exceedances in Made Ground (2007)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP8	2.2-2.4	3.5	MGC
				WS9	0.2	2.9	MGG
Benzo(a)pyrene	0.024 – 22	2.2	11	TP10	2.4	**22**	MG-CW
				TP12	1.7	**22**	MGC
				TP11A	1.3-2.0	**20**	MGG
				TP20	0.9	**17**	MG-CW
				WS16	4.5	**10**	MGG
				TP1	0.2	9.1	MGG
				TP16	2.5	6.4	MG-CDW
				WS22	0.5	5.3	MGC
				TP8	2.2-2.4	5.2	MGC
				WS6	1.5	4.5	MGC
				WS9	0.2	3.2	MGG
Dibenzo(a,h)anthracene	<0.008 – 3.5	0.24	13	TP12	1.7	**3.5**	MGC
				TP11A	1.3-2.0	**3.4**	MGG
				TP10	2.4	**2.9**	MG-CW
				TP20	0.9	**1.8**	MG-CW
				WS16	4.5	**1.2**	MGG
				TP1	0.2	**1.1**	MGG
				TP8	2.2-2.4	**1.0**	MGC
				TP16	2.5	0.69	MG-CDW
				WS6	1.5	0.51	MGC
				WS22	0.5	0.48	MGC
				TP31	3.0-3.3	0.44	MG-CW
				WS9	0.2	0.36	MGG
				TP7	2.8	0.29	MGC

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.

Summary of PAH Exceedances in Natural Ground (2020 & 2022)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Naphthalene	<0.009 – 3.6	2.3	1	WS102	2.8	3.6	CGT
Benz(a)anthracene	<0.014 – 10	7.2	2	WS102	2.8	**10**	CGT
				WS102	2.8	8.58	CGT
Benzo(b)fluoranthene	<0.015 – 11.8	3.3	2	WS102	2.8	**11.8**	CGT
				WS102	2.8	8.3	CGT
Benzo(a)pyrene	<0.015 – 9.13	2.7	2	WS102	2.8	9.13	CGT
				WS102	2.8	7.44	CGT
Dibenzo(a,h)anthracene	<0.023 – 0.776	0.28	2	WS102	2.8	0.776	CGT
				WS102	2.8	0.521	CGT
Notes: MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.							

Summary of PAH Exceedances in Natural Ground (Celtic 2007)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Naphthalene	0.005 – 30	2.3	3	TP38	1.2	**30**	CGT
				TP38	1.2	**13**	CGT
				TP26	1.6	5.3	CGT
Acenaphthene	<0.014 – 230	210	1	TP38	1.2	230	CGT
Fluorene	0.015 – 200	170	1	TP38	1.2	200	CGT
Phenanthrene	0.049 – 590	95	1	TP38	1.2	**590**	CGT
Benz(a)anthracene	0.017 – 14	7.2	1	TP38	1.2	14	CGT
Benzo(b)fluoranthene	<0.016 – 5.2	2.6	3	TP26	1.6	5.2	CGT
				TP66	3.3	4.4	GGT
				WS11	2.0	2.8	CGT
Benzo(a)pyrene	<0.012 – 4.3	2.2	2	TP26	1.6	4.3	CGT
				TP66	3.3	2.5	GGT
	<0.008 – 0.75	0.24	2	TP26	1.6	0.75	CGT

Summary of PAH Exceedances in Natural Ground (Celtic 2007)							
PAH Fraction	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Dibenzo(a,h)anthracene				TP66	3.3	0.34	GGT

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.

Summary of BTEX Exceedances in Made Ground (2020 & 2022)							
BTEX	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Benzene	<0.009 – 2.74	0.0087	1	TP139	2.4	**2.74**	MG-CW
p/m-Xylene	<0.01 – 219	56	1	TP139	2.4	**219**	MG-CW
o-Xylene	<0.01 – 114	60	1	TP139	2.4	**114**	MG-CW

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated.

Summary of SVOC and VOC Exceedances in Made Ground (2020 & 2022)							
SVOC / VOC	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
Pentachlorophenol	<0.1 – <5	0.22	1	TP207	3.0	**3.35**	MG-HW
Dibenzofuran	<0.1 – 114	4.8[4]	3	TP117	4.2	**114**	MG-CDW
				WS109	3.65-3.75	**13.2**	MGG
				TP223	1.0	5.83	MGC
Carbazole	<0.1 – 64.8	6.7[4]	2	WS309	3.2	**64.8**	MGC
				TP117	4.2	**47.3**	MG-CDW
2-Methylnaphthalene	<0.1 – 97.4	10[4]	1	TP117	4.2	**97.4**	MG-CDW
1,2,4-Trimethylbenzene	<0.009 – 1.8	0.35[3]	2	TP117	4.2	0.653	MG-CDW
				WS109	3.65-3.75	0.619	MGG
Trichloroethene	<0.009 – 1.8	0.0093[1]	1	TP226	1.5	**0.41**	MG-CDW

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014). [3] EIC/AGS/CL:AIRE Soil GAC for Human Health Assessment (January 2010). [4] Wardell Armstrong derived GAC.

Summary of SVOC and VOC Exceedances in Made Ground (Celtic 2007)							
SVOC / VOC	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
2-Methylnaphthalene	<0.1 – 180	10[4]	2	TP8	2.2-2.4	**180**	MGC
				WS18	2.3	12	MG-CW
2,4-Dinitrotoluene	<0.1 – 13	1.5[3]	1	TP8	2.2-2.4	**13**	MGC
Carbazole	<0.1 – 70	6.7[4]	1	TP8	2.2-2.4	**70**	MGC
Dibenzofuran	<0.1 – 80	4.8[4]	3	TP8	2.2-2.4	**80**	MGC
				WS18	2.3	**15**	MG-CW
				WS16	4.5	6.2	MGG
Chloromethane	<0.007 – 0.013	0.0083[3]	1	WS10	0.2	**0.013**	TF
Trichloroethene	<0.009 – 0.06	0.0093[1]	1	BH13	0.6-1.1	**0.06**	MG-CS
2,4-Dimethylphenol	<0.1 – 27	19	1	TP8	2.2-2.4	27	MGC

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [1] Category 4 Screening Levels (March 2014). [3] EIC/AGS/CL:AIRE Soil GAC for Human Health Assessment (January 2010). [4] Wardell Armstrong derived GAC.

Summary of SVOC and VOC Exceedances in Natural Ground (Celtic 2007)							
SVOC / VOC	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
2-Methylnaphthalene	<0.1 – 19	10[4]	1	TP38	1.2	19	CGT
Carbazole	<0.1 – 7.1	6.7[4]	1	TP38	1.2	7.1	CGT
Dibenzofuran	<0.1 – 81	4.8[4]	1	TP38	1.2	**81**	CGT

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill

Summary of SVOC and VOC Exceedances in Natural Ground (Celtic 2007)							
SVOC / VOC	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [4] Wardell Armstrong derived GAC.							

Summary of PCB Exceedances in Made Ground (2020 & 2022)							
PCB Congener	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
PCB congener 28	<0.003 – 0.388	0.008[5]	6	TP229	3.00-3.00	**0.388**	MG-CDW
				CP202	8.00-9.00	**0.143**	MGG
				CP104	7.30-7.30	**0.0834**	MG-CDW
				TP119	1.70-1.70	**0.0648**	MG-CDW
				CP201	4.00-6.00	**0.0471**	MG-CW
				TP253	3.80-3.80	**0.0296**	MGG
PCB congener 52	<0.003 – 0.492	0.008[5]	7	TP229	3.00-3.00	**0.492**	MG-CDW
				CP104	7.30-7.30	**0.0924**	MG-CDW
				CP202	8.00-9.00	**0.0443**	MGG
				TP119	1.70-1.70	**0.0247**	MG-CDW
				TP253	3.80-3.80	**0.0172**	MGG
				TP216	0.60-0.60	**0.016**	MG-CW
				TP150	2.20-2.20	**0.0117**	MGG
PCB congener 101	<0.003 – 0.523	0.008[5]	6	TP229	3.00-3.00	**0.523**	MG-CDW
				CP104	7.30-7.30	**0.17**	MG-CDW
				CP202	8.00-9.00	**0.0328**	MGG
				TP119	1.70-1.70	**0.0265**	MG-CDW
				TP112	1.80-1.80	**0.0237**	MG-CDW
				TP150	2.20-2.20	**0.0197**	MGG
PCB congener 118	<0.003 – 0.275	0.008[5]	6	TP229	3.00-3.00	**0.275**	MG-CDW
				CP104	7.30-7.30	**0.109**	MG-CDW
				CP202	8.00-9.00	**0.0219**	MGG
				TP119	1.70-1.70	**0.0168**	MG-CDW
				TP112	1.80-1.80	**0.0127**	MG-CDW
				TP150	2.20-2.20	**0.0103**	MGG
PCB congener 138	<0.003 – 0.298	0.008[5]	6	TP229	3.00-3.00	**0.298**	MG-CDW
				CP104	7.30-7.30	**0.0887**	MG-CDW

Summary of PCB Exceedances in Made Ground (2020 & 2022)							
PCB Congener	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
				TP119	1.70-1.70	**0.0171**	MG-CDW
				CP202	8.00-9.00	**0.017**	MGG
				TP150	2.20-2.20	**0.0148**	MGG
				TP112	1.80-1.80	**0.0101**	MG-CDW
PCB congener 153	<0.003 – 0.224	0.008[5]	5	TP229	3.00-3.00	**0.224**	MG-CDW
				CP104	7.30-7.30	**0.0582**	MG-CDW
				CP202	8.00-9.00	**0.0153**	MGG
				TP150	2.20-2.20	0.00946	MGG
				TP112	1.80-1.80	0.00859	MG-CDW
PCB congener 180	<0.003 - <0.15	0.008[5]	4	TP229	3.00-3.00	**0.0739**	MG-CDW
				TP242	2.50-2.50	**0.0426**	MGG
				CP104	7.30-7.30	**0.0142**	MG-CDW

Notes:
MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill
Generic Assessment Criteria Used: LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015), unless otherwise stated. [5] Environment Agency Soil Guideline Values for dioxins, furans and dioxin-like PCBs in soil.

Summary of Asbestos Exceedences in Made Ground (2020 & 2022)							
Asbestos	Range of All Results (mg/kg)	GAC (mg/kg)	No.	Exceedance Details			
				Location	Depth	Result (mg/kg)	Geology Code
Asbestos	<0.001 – 5.11%	0.001%	11	CP109	7.50-7.50	**5.11**	MG-CDW
				TP102	1.60-1.60	**0.279**	MG-CDW
				WS112	0.90-0.90	**0.109**	MG-CW
				TP245	2.00-2.00	**0.0647**	MG-CDW
				TP203	1.00-1.00	**0.0607**	MGC
				TP229	3.00-3.00	**0.0489**	MG-CDW
				WS311	1.40-1.40	**0.0199**	MGC
				TP207	3.00-3.00	**0.0173**	MG-HW
				TP224	1.40-1.40	0.0053	MG-CDW
				CP103	2.00-3.00	0.0046	MGC

Summary of Asbestos Exceedences in Made Ground (2020 & 2022)							
Asbestos	**Range of All Results (mg/kg)**	**GAC (mg/kg)**	**No.**	**Exceedance Details**			
				Location	**Depth**	**Result (mg/kg)**	**Geology Code**
				TP212	1.50-1.50	0.0031	MG-CW
				TP249	1.50-1.50	0.0019	MG-HW
Notes: MGC = Predominantly Cohesive Made Ground, MGG = Predominantly Granular Made Ground, MG-CW = Suspected Combustion Waste, MG-CDW = Suspected Construction and Demolition Waste, MG-CS = Suspected Colliery Spoil Waste, MG-HW = Suspected Household Waste, TF = Topsoil Fill							

Summary of Contaminants in Perched Groundwater with Made Ground Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Boron	198 – 15700	1,000[1]	11	Seepage Sample	GL	**15700**
				CP109	9.0 - 13.0	**11300**
				CP109	9.0 - 13.0	**11100**
				WS310	1.5 - 4.5	3110
				CP107	5.0 - 9.0	2260
				WS306	1.0 - 5.0	1760
				WS309	2.5 - 4.5	1530
				WS305	2.5 - 4.5	1370
				CP201	2.0 - 7.0	1280
				WS315	1.5 - 4.5	1200
				WS312	2.5 - 5.5	1010
Cadmium	<0.008 – 11	0.25	1	CP110	1.0 – 4.0	11
Chromium	<1 – 10.7	4.7	5	CP109	9.0 - 13.0	**10.7**
				CP109	9.0 - 13.0	9.51
				Seepage Sample	GL	7.22
				CP103 (2)	2.0 - 6.0	6.98
				CP107	5.0 - 9.0	5.11
Copper	<0.3 – 140	37.5[2]	1	CP110	1.0 – 4.0	**140**

Summary of Contaminants in Perched Groundwater with Made Ground Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Manganese to Canal	73 – 3450	207.1[2]	13	WS312	2.5 - 5.5	**3450**
				WS315	1.5 - 4.5	**1340**
				WS308	1.0 - 4.0	665
				Seepage Sample	GL	533
				CP110	1.0 - 4.0	485
				CP201	2.0 - 7.0	482
				WS306	1.0 - 5.0	417
				WS310	1.5 - 4.5	397
				WS309	2.5 - 4.5	365
				CP108	2.2 - 5.0	360
				CP103 (2)	2.0 - 6.0	257
				CP107	5.0 - 9.0	230
				CP108	2.2 – 5.0	207
Manganese to River		173.54[2]	13	WS312	2.5 - 5.5	**3450**
				WS315	1.5 - 4.5	**1340**
				WS308	1.0 - 4.0	665
				Seepage Sample	GL	533
				CP110	1.0 - 4.0	485
				CP201	2.0 - 7.0	482
				WS306	1.0 - 5.0	417
				WS310	1.5 - 4.5	397
				WS309	2.5 - 4.5	365
				CP108	2.2 - 5.0	360
				CP103 (2)	2.0 - 6.0	257
				CP107	5.0 - 9.0	230
				CP108	2.2 – 5.0	207
Nickel to Canal	<0.4 – 130	9.73[2]	5	WS315	1.5 - 4.5	**130**
				CP110	1.0 - 4.0	**36.5**
				CP109	9.0 - 13.0	**11.7**
				CP109	9.0 - 13.0	**10.5**
Nickel to River		12.16	2	WS315	1.5 - 4.5	**130**
				CP110	1.0 - 4.0	**36.5**

Summary of Contaminants in Perched Groundwater with Made Ground Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Zinc	<1 – 45.8	25.5[2]	2	WS309	2.5 - 4.5	45.8
				WS305	2.5 - 4.5	34.4
Iron	116 – 11000	1000	2	CP108	2.2 - 5.0	**11000**
				Seepage Sample	GL	1890
TPH						
Total Aliphatics & Aromatics >C5-35	<10 – 6590	10^4	8	WS308	1.0 - 4.0	**6590**
				WS305	2.5 - 4.5	**1380**
				CP109	9.0 - 13.0	**669**
				CP109	9.0 - 13.0	**420**
				CP110	1.0 - 4.0	**400**
				CP107	5.0 - 9.0	**101**
				WS310	1.5 - 4.5	32
				CP201	2.0 - 7.0	16
PAH						
Naphthalene	<0.01 – 4.3	2	2	CP109	9.0 - 13.0	4.3
				CP109	9.0 - 13.0	2.25
Fluoranthene	<0.005 – 16.8	0.0063	16	WS305	2.5 - 4.5	**16.8**
				WS305	2.5 - 4.5	**10.8**
				WS308	1.0 - 4.0	**3.89**
				CP109	9.0 - 13.0	**2.37**
				CP110	1.0 - 4.0	**2.37**
				CP103 (2)	2.0 - 6.0	**2.09**
				WS309	2.5 - 4.5	**1.82**
				CP109	9.0 - 13.0	**1.58**
				CP107	5.0 - 9.0	**1.49**
				WS310	1.5 - 4.5	**0.412**
				CP201	2.0 - 7.0	**0.407**
				WS306	1.0 - 5.0	**0.397**
				Seepage Sample	GL	**0.268**
				CP108	2.2 - 5.0	**0.18**
				CP108	2.2 - 5.0	**0.0341**
				WS315	1.5 - 4.5	**0.0193**

Summary of Contaminants in Perched Groundwater with Made Ground Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Benzo(a)pyrene	<0.002 – 8.83	0.00017	12	WS305	2.5 - 4.5	**8.83**
				WS305	2.5 - 4.5	**4.4**
				CP110	1.0 - 4.0	**1.84**
				CP103 (2)	2.0 - 6.0	**1.18**
				WS308	1.0 - 4.0	**0.887**
				CP109	9.0 - 13.0	**0.688**
				CP109	9.0 - 13.0	**0.491**
				CP107	5.0 - 9.0	**0.425**
				WS306	1.0 - 5.0	**0.16**
				WS310	1.5 - 4.5	**0.0802**
				CP201	2.0 - 7.0	**0.0277**
				CP108	2.2 - 5.0	**0.012**
SVOC / VOC						
Phenol	<0.002 – 0.37	7.7	2	WS309	2.5 - 4.5	**370**
				CP109	9.0 - 13.0	**110**
PFAS						
Total PFOS	<1.3 – 102ng/l	0.65ng/l	6	WS315	1.5 - 4.5	**102**
				CP109	9.0 - 13.0	**97.7**
				WS306	1.0 - 5.0	**84**
				WS310	1.5 - 4.5	**68.2**
				CP201	2.0 - 7.0	**36.8**
				WS305	2.5 - 4.5	**27.6**
Total PFOS (Post Ox.)	<2 – 129ng/l	0.65ng/l	7	CP109	9.0 - 13.0	**129**
				WS315	1.5 - 4.5	**112**
				WS306	1.0 - 5.0	**109**
				WS310	1.5 - 4.5	**79.6**
				CP201	2.0 - 7.0	**42.2**
				WS305	2.5 - 4.5	**25.4**
				WS318	2.5 - 5.0	**5.06**
Other						
Sulphate	<2000 – 654000	250000[1]	5	WS315	1.5 - 4.5	654000
				WS312	2.5 - 5.5	393000
				Seepage Sample	GL	236000
				CP103 (2)	2.0 - 6.0	228000

Summary of Contaminants in Perched Groundwater with Made Ground Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Total Cyanide	<50 – 180	1	1	CP109	9.0 - 13.0	**180**
				CP109	9.0 - 13.0	**170**
				CP107	5.0 - 9.0	**130**
				CP201	2.0 - 7.0	**100**
Complex Cyanide	<50 – 180	1	1	CP109	9.0 - 13.0	**180**
				CP107	5.0 - 9.0	**130**
Thiocyanate	<50 – 120	1	1	CP109	9.0 - 13.0	**120**
				CP109	9.0 - 13.0	**90**
Notes: Environmental Quality Standards (EQS) used unless noted. [1] UK Drinking Water Standard (2016) values. [2] Lowest PNEC calculated for Rochdale canal from M-BAT tool for those samples that exceeded bioavailable EQS.[3] Lowest PNEC calculated for River Medlock from M-BAT tool for those samples that exceeded bioavailable EQS. [4] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.						

Summary of Contaminants in Perched Groundwater within Made Ground / Glacial Till Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Boron	176 – 11100	1000[1]	2	RH102	12.0 - 13.5	**11100**
				CP203	4.5 - 7.5	1340
Chromium	<1 – 7.75	4.7	1	CP103	8.0 - 10.0	7.75
Manganese to Canal	238 – 1060	132.8[2]	5	CP203	4.5 - 7.5	**1060**
				WS316	2.5 - 4.5	997
				CP103	8.0 – 10.0	277
				WS318	2.5 – 5.5	264
				RH102	12.0 – 13.5	238
Manganese to River		173.54[2]	5	CP203	4.5 - 7.5	**1060**
				WS316	2.5 - 4.5	997
				CP103	8.0 – 10.0	277
				WS318	2.5 – 5.5	264

Summary of Contaminants in Perched Groundwater within Made Ground / Glacial Till Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
				RH102	12.0 – 13.5	238
Zinc	11.3 – 54.5	31[2]	1	WS318	2.5 - 4.5	54.5
Iron	240 – 2220	1000	1	RH102	12.0 - 13.5	2220
Nickel	0.771 – 10.9	9.73[2]	2	CP203	4.5 – 7.5	**10.9**
				RH102	12.0 – 13.5	**10.4**
TPH						
Total Aliphatics & Aromatics >C5-35	<10 - 88	10[4]	3	RH102	12.0 - 13.5	**88**
				CP103 (1)	8.0 - 10.0	**33**
				CP203	4.5 - 7.5	**20**
PAH						
Fluoranthene	<0.0733 – 2.1	0.0063	6	WS318	2.5 - 5.5	**2.1**
				CP103 (1)	8.0 - 10.0	**1.87**
				WS318	2.5 - 5.5	**0.544**
				CP203	4.5 - 7.5	**0.414**
				WS316	2.5 - 4.5	**0.103**
				RH102	12.0 - 13.5	**0.0733**
Anthracene	0.0246 – 0.146	0.1	2	CP103	8.0 - 10.0	0.146
				WS318	2.5 - 5.5	0.105
Benzo(a)pyrene	<0.002 – 0.271	0.00017	4	CP203	4.5 - 7.5	**0.271**
				CP103 (1)	8.0 - 10.0	**0.249**
				WS318	2.5 - 5.5	**0.22**
				RH102	12.0 - 13.5	**0.0173**
SVOC / VOC						
Phenol	<1 – 16.3	7.7	1	RH102	12.0 - 13.5	**16.3**
PFAS						
Total PFOS	<1.3 – 57.7ng/l	0.65ng/l	1	CP203	4.5 - 7.5	**57.7**
Total PFOS (Post Ox.)	<2 – 45.7ng/l	0.65ng/l	1	CP203	4.5 - 7.5	**45.7**
Other						
Sulphate	23600 - 497000	250000[1]	1	CP203	4.5 - 7.5	497000

Notes:
Environmental Quality Standards (EQS) used unless noted. [1] UK Drinking Water Standard (2016) values. [2] Lowest PNEC calculated for Rochdale canal from M-BAT tool for those samples that exceeded bioavailable

Summary of Contaminants in Perched Groundwater within Made Ground / Glacial Till Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
EQS.[3] Lowest PNEC calculated for River Medlock from M-BAT tool for those samples that exceeded bioavailable EQS. [4] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.						

Summary of Contaminants in Perched Groundwater within Glacial Till Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Boron	127 – 54800	1000[1]	2	CP112/RH103	27.0 - 30.0	**54800**
				CP202	13.0 - 15.0	**17500**
				CP207	17.5 - 19.0	8520
				CP206	6.0 - 15.0	1250
Cadmium	<0.08 – 0.304	0.25	1	RH108	26.0 - 28.0	0.304
Manganese to Canal	265 – 3880	132.8[3]	9	RH108	26.0 - 28.0	**3880**
				RH108	26.0 - 28.0	**1230**
				CP206	6.0 - 15.0	940
				CP209	5.0 - 7.0	936
				CP112/RH103	27.0 - 30.0	544
				CP207	17.5 - 19.0	487
				CP202	13.0 - 15.0	408
				CP208	9.0 - 12.0	299
				RH101	17.0 - 20.0	265
Iron	<19 – 1790	1000	1	CP112/RH103	27.0 - 30.0	1790
Lead to Canal	<0.2 – 13.9	6.55[2]	2	CP202	13.0 - 15.0	**13.9**
				CP209	5.0 - 7.0	6.95
Lead to River		6.78[2]		CP202	13.0 - 15.0	**13.9**
				CP209	5.0 - 7.0	6.95
TPH						
Total Aliphatics & Aromatics >C5-35	<10 – 4700	10[4]	3	RH108	26.0 - 28.0	**4700**
				CP202	13.0 - 15.0	**788**
				CP206	6.0 - 15.0	91

Summary of Contaminants in Perched Groundwater within Glacial Till Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
PAH						
Fluoranthene	0.0101 – 19.7	0.0063	9	RH108	26.0 - 28.0	**19.7**
				CP202	13.0 - 15.0	**9.51**
				CP112/RH103	27.0 - 30.0	**1.25**
				CP207	17.5 - 19.0	**1.22**
				CP206	6.0 - 15.0	**0.655**
				RH108	26.0 - 28.0	**0.31**
				RH101	17.0 - 20.0	**0.264**
				CP208	9.0 - 12.0	**0.0481**
				CP209	5.0 - 7.0	**0.0101**
Anthracene	<0.005 – 2.9	0.1	4	RH108	26.0 - 28.0	**2.9**
				CP202	13.0 - 15.0	**2.46**
				CP207	17.5 - 19.0	0.293
				CP112/RH103	27.0 - 30.0	0.135
Benzo(a)pyrene	<0.002 – 23	0.00017	7	RH108	26.0 - 28.0	**23**
				CP202	13.0 - 15.0	**3.58**
				CP112/RH103	27.0 - 30.0	**0.9**
				CP206	6.0 - 15.0	**0.631**
				CP207	17.5 - 19.0	**0.432**
				RH108	26.0 - 28.0	**0.278**
				RH101	17.0 - 20.0	**0.127**
SVOC / VOC						
Phenol	<1 – 200	7.7	1	CP202	13.0 - 15.0	**200**
Other						
Sulphate	53300 – 807000	250000[1]	4	CP209	5.0 - 7.0	807000
				RH108	26.0 - 28.0	588000
				RH108	26.0 - 28.0	348000
				CP206	6.0 - 15.0	333000
Total Cyanide	<50 – 60	1	1	CP202	13.0 - 15.0	**60**

Notes:
Environmental Quality Standards (EQS) used unless noted. [1] UK Drinking Water Standard (2016) values. [2] Lowest PNEC calculated for Rochdale canal from M-BAT tool for those samples that exceeded bioavailable EQS.[3] Lowest PNEC calculated for River Medlock from M-BAT tool for those samples that exceeded bioavailable EQS. [4] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.

Summary of Contaminants in Groundwater within Bedrock Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Arsenic	1.13 – 12.5	10[1]	1	RH204	45.0 - 46.0	12.5
Manganese	37.2 – 993	50[1]	8	RH201	39.5 - 41.5	**993**
				RH203	47.0 - 50.0	**807**
				RH106	44.5 - 45.00	**471**
				CP101/RH109	40.0 - 42.5	**408**
				RH206	45.0 - 48.0	**360**
				RH205	48.0 - 50.0	**332**
				RH204	45.0 - 46.0	**318**
				RH202	46.0 - 50.0	**253**
Selenium	<1 – 11.8	10[1]	1	RH106	44.5 - 45.0	11.8
TPH						
Total Aliphatics & Aromatics >C5-35	<10 – 1410	10[2]	4	RH203	47.0 - 50.0	**1410**
				RH201	39.5 - 41.5	**291**
				CP101/RH109	40.0 - 42.5	**172**
				RH106	44.5 - 45.00	**128**
PAH						
Benzo(b)fluoranthene	<0.005 – 5.7	0.1[1]	5	RH203	47.0 - 50.0	**5.7**
				RH201	39.5 - 41.5	0.861
				RH106	44.5 - 45.00	0.637
				RH206	45.0 - 48.0	0.195
				CP101/RH109	40.0 - 42.5	0.144
Benzo(k)fluoranthene	<0.005 – 2.07	0.1[1]	3	RH203	47.0 - 50.0	**2.07**
				RH201	39.5 - 41.5	0.331
				RH106	44.5 - 45.00	0.23
Benzo(a)pyrene	<0.002 – 0.0916	0.01[1]	6	RH203	47.0 - 50.0	**4.02**
				RH201	39.5 - 41.5	**0.673**
				RH106	44.5 - 45.00	**0.399**
				CP101/RH109	40.0 - 42.5	0.0916
				RH106	44.5 - 45.00	0.0564
				RH202	46.0 - 50.0	0.0386

Summary of Contaminants in Groundwater within Bedrock Exceeding Screening Criteria (WA 2020 & 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Benzo(g,h,i)perylene	<0.005 – 3.56	0.1[1]	3	RH203	47.0 - 50.0	**3.56**
				RH201	39.5 - 41.5	0.587
				RH106	44.5 - 45.00	0.296
Indeno(1,2,3-cd)pyrene	<0.005 – 3.26	0.1[1]	3	RH206	45.0 - 48.0	**3.26**
				RH203	47.0 - 50.0	0.54
				RH106	44.5 - 45.00	0.285
SVOC / VOC						
Chloroform	<1 – 2.96	0.4[3]	4	RH204	45.0 - 46.0	**2.96**
				RH202	46.0 - 50.0	**2.47**
				RH205	48.0 - 50.0	**1.32**
				RH106	44.5 - 45.00	**1.27**
Bis(2-Ethylhexyl) phthalate	<4 – 104	8[4]	1	RH204	45.0 – 46.0	**104**
Other						
Sulphate	30200 – 364000	250000[1]	3	CP101/RH109	40.0 - 42.5	364000
				RH203	47.0 - 50.0m	344000
				RH201	39.5 - 41.5m	276000

Notes:
Environmental Quality Standards (EQS) used unless noted. [1] UK Drinking Water Standard (2016) values. [2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted. [3] The Water Supply (Water Quality) Regulations 2000. [4] World Health Organization Guidelines for Drinking Water Quality

Summary of Contaminants in Perched Groundwaters within Made Ground Exceeding Screening Criteria (Celtic 2007)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Arsenic	<1 – 11	10[1]	1	BH3	3.0 – 5.9	11
Boron	180 – 6100	1000[1]	2	BH11	3.0 – 8.4	6100

Summary of Contaminants in Perched Groundwaters within Made Ground Exceeding Screening Criteria (Celtic 2007)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
				BH10	3.0 – 10.1	2100
Manganese	400 – 3100	50[1]	4	BH6	3.0 – 6.0	**3100**
				BH3	3.0 – 5.9	**2100**
				BH11	3.0 – 8.4	**700**
				BH10	3.0 – 10.1	**400**
Iron	100 – 250	200[1]	2	BH3	3.0 – 5.9	250
				BH10	3.0 – 10.1	210
TPH						
Total Aliphatics & Aromatics >C5-35	<10 – 97	10[2]	1	BH11	3.0 – 8.4	97
Phenol						
Phenol Monohydric	<10 – 20	0.5[1]	2	BH3	3.0 – 5.9	20
				BH6	3.0 – 6.0	20
Other						
Total Ammonium as NH_3 and NH_4	1800 – 18100	50[1]	4	BH10	3.0 – 10.1	**18100**
				BH11	3.0 – 8.4	**12000**
				BH3	3.0 – 5.9	**1800**
				BH6	3.0 – 6.0	**1200**

Notes:
[1] UK Drinking Water Standard (2016) values. [2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.

Summary of Contaminants in Perched Groundwaters within Glacial Till / Bedrock* Exceeding Screening Criteria (Celtic 2007)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
Metals						
Boron	86 – 1600	10[1]	4	R2	19.0 – 22.0	**1700**
				BH1	1.0 - 5.0	**1600**
				R1	23.0 - 26.0	**1200**
				BH2	6.0 - 10.0	**1100**
Manganese	<1 – 3100	50[1]	7	BH1	1.0 - 5.0	**3100**

Summary of Contaminants in Perched Groundwaters within Glacial Till / Bedrock* Exceeding Screening Criteria (Celtic 2007)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Response Zone (m)**	**Result (µg/l)**
				BH2	6.0 - 10.0	**1700**
				R1	23.0 - 26.0	**660**
				BH8	5.0 - 8.0	**640**
				R3	22.0 – 25.0	**530**
				R2	19.0 – 22.0	**230**
				BH9	1.5- 10.5	**110**
Iron	<50 – 1200	200[1]	3	BH9	1.5- 10.5	**1200**
				BH1	1.0 - 5.0	570
				BH2	6.0 - 10.0	280
Phenol						
Phenol Monohydric	<10 – 50	0.5[1]	2	R1	23.0 - 26.0	**50**
				BH9	1.5- 10.5	**20**
Phenol	<1 – 3	0.5[1]	1	R5	24.0 – 27.00	**3**
Other						
Sulphate	140000 – 520000	250000[1]	4	BH2	6.0 - 10.0	520000
				R5	24.0 – 27.00	460000
				BH9	1.5- 10.5	320000
				BH8	5.0 - 8.0	300000
Total Ammonium as NH_3 and NH_4	400 – 1200	50[1]	5	R3	22.0 – 25.0	**1200**
				R1	23.0 - 26.0	**1000**
				R2	19.0 – 22.0	**800**
				R5	24.0 – 27.00	**400**
				BH9	1.5- 10.5	**400**

Notes:

* It should be noted that what Celtic interpreted as "bedrock" groundwaters has since been proven to be perched groundwater from Glacial Till. [1] UK Drinking Water Standard (2016) values. [2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.

Summary of Leachate EQS Exceedences in Soil (WA 2020)							
Contaminant	**Units**	**GAC[1]**	**No. Tests**	**No. > GAC**	**Max. Conc.**	**Mean Conc.**	**Location of >WQS (Conc.)**
Arsenic	µg/l	50	10	1	73.4	9.66	TP145 (**73.4**) in MG-CDW
Total Cyanide	µg/l	1	10	1	70	52	TP123 (**70**) in MG-CW
Chromium IV	µg/l	3.4	10	4	53.4	9.56	CP108 (**53.4**) in MG-CW CP107 (**15**) in MG-HW TP123 (**4.96**) in MG-CW WS104 (**4.24**) in MGC
Cadmium	µg/l	0.08	10	2	0.349	0.11	TP148 (**0.349**) in MG-CW TP120 (**0.11**) in MG-CDW
Chromium	µg/l	4.7	10	4	1500	159.32	TP148 (**1500**) in MG-CW CP108 (**50.3**) in MG-CW CP107 (**17.9**) in MG-HW TP120 (**4.82**) in MG-CDW
Copper	µg/l	18.62[3]	10	1	35.8	7.45	CP108 (**35.8**) in MG-CW
Lead	µg/l	6.55[3]	10	5	108	15.02	TP148 (**108**) in MG-CW CP107 (**33.2**) in MG-HW
Total Aliphatics & Aromatics >C5-35	µg/l	10[2]	10	2	65	28.8	TP146 (**65**) in MG-CDW CP107 (**49**) in MG-HW
Anthracene	µg/l	0.1	10	1	1.18	0.13	CP107 (**1.18**) in MG-HW
Fluoranthene	µg/l	0.0063	10	10	1.63	0.20	CP107 (**1.63**) in MG-HW TP145 (**0.15**) in MG-CDW TP112 (**0.05**) in MG-CDW TP120 (**0.04**) in MG-CDW CP108 (**0.024**) in MG-CW TP146 (**0.023**) in MG-CDW TP148 (**0.022**) in MG-CW CP101 (**0.014**) in MG-CS WS104 (**0.0134**) in MGC TP123 (**0.011**) in MG-CW
Benzo(a)pyrene	µg/l	0.00017	10	4	0.040	0.012	TP112 (**0.040**) in MG-CDW CP107 (**0.030**) in MG-HW TP148 (**0.018**) in MG-CW CP108 (**0.016**) in MG-CW

Notes:
Detection limit values used to calculate arithmetic mean. [1] Environmental Quality Standards (2015) values unless noted. [2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted. [3] Lowest PNEC calculated for River Medlock from M-BAT tool for those samples that exceeded bioavailable EQS.

Summary of Leachate EQS Exceedences in Soil (Celtic 2007)							
Contaminant	**Units**	**WQS[1]**	**No. Tests**	**No. > GAC**	**Max. Conc.**	**Mean Conc.**	**Location of >WQS (Conc.)**
Chromium	µg/l	4.7	10	2	13	3	TP51 (**13**) in MG-CW BH5 (**7**) in MGC
Copper	µg/l	1	10	9	<1	7	BH9 (7) in MGG TP51 (5) in MG-CW BH2 (3) in MG BH7 (3) in MGG WS20 (2) in MG-CW TP11 (2) in MG-CW BH13 (2) in MG-CS BH5 (2) in MGC TP47 (2) in MG-CW
Lead	µg/l	1.2[2]	10	2	3	1	TP51 (**3**) in MG-CW BH9 (**2**) in MGG
Nickel	µg/l	4[2]	10	2	56	7	WS20 (**56**) in MG-CW BH9 (4) in MGG
Zinc	µg/l	10.9[2]	10	2	110	16	WS20 (**110**) in MG-CW BH7 (27) in MGG
Phenols Monohydric	µg/l	7.7	10	1	20	12	BH5 (**20**) in MGC
Anthracene	µg/l	0.1	10	6	0.14	0.04	TP47 (**0.14**) in MG-CW TP11 (**0.12**) in MG-CW
Fluoranthene	µg/l	0.0063	10	10	0.26	0.08	TP11 (**0.26**) in MG-CW TP47 (**0.16**) in MG-CW BH01 (**0.08**) in GT BH9 (**0.062**) in MGG BH2 (**0.047**) in MG BH5 (**0.047**) in MGC WS20 (**0.044**) in MG-CW BH13 (**0.025**) in MG-CS TP51 (**0.023**) in MG-CW BH7 (**0.017**) in MGG
Benzo(a)pyrene	µg/l	0.00017	10	4	0.15	0.03	TP47 (**0.15**) in MG-CW BH5 (**0.044**) in MGC BH9 (**0.036**) in MGG TP11 (**0.013**) in MG-CW

Notes:
Detection limit values used to calculate arithmetic mean. [1] Environmental Quality Standards (2015) values unless noted. [2] Parameters not obtained at the time to allow for an MBAT calculation to be undertaken so bioavailable screening criteria used.

Summary of Contaminants in Surface Water from Rochdale Canal Exceeding Screening Criteria (WA 2020 and 2022)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Position**	**Result (µg/l)**
Metals						
Chromium	<1 – 6.25	4.7[1]	1	SW01	Midstream	6.25
Total Aliphatics & Aromatics >C5-35	<10 – 83	10[2]	3	Midstream	Midstream	83
				Downstream	Downstream	25
				SW01	Midstream	23
Fluoranthene	0.024 – 0.485	0.0063[1]	6	SW01 (mid)	Midstream	**0.485**
				Upstream	Upstream	**0.123**
				Downstream	Downstream	**0.0918**
				SW02 (up)	Upstream	**0.0809**
				Midstream	Midstream	**0.0413**
				SW03 (down)	Downstream	**0.024**
Benzo(a)anthracene	0.0109 – 0.182	0.01[1]	6	SW01 (mid)	Midstream	**0.182**
				Upstream	Upstream	0.0567
				SW02 (up)	Upstream	0.0458
				Downstream	Downstream	0.0351
				Midstream	Midstream	0.0249
				SW03 (down)	Downstream	0.0109
Benzo(a)pyrene	<0.002 – 0.186	0.00017[1]	5	SW01 (mid)	Midstream	**0.186**
				SW02 (up)	Upstream	**0.0464**
				Downstream	Downstream	**0.0307**
				Midstream	Midstream	**0.0127**
				SW03 (down)	Downstream	**0.0107**

Notes:
[1] Environmental Quality Standards (2015) values unless noted.[2] Environment Agency (2009), 'Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment' values used unless noted.

Summary of Contaminants in Surface Water from Rochdale Canal Exceeding Screening Criteria (Celtic 2007)						
Contaminant	**Range of Results (µg/l)**	**GAC (µg/l)**	**No.**	**Exceedance Details**		
				Location	**Position**	**Result (µg/l)**
Metals						
Copper	6 – 9	1[1,2]	2	Canal B	-	9
				Canal A	-	6
Lead	3 – 4	1.2[1,2]	2	Canal B	-	4
				Canal A	-	3
Nickel	<1 – 4	4[1,2]	1	Canal A	-	4

Notes:

[1] Environmental Quality Standards (2015) values unless noted.[2] Parameters not obtained to allow for MBAT calculation to be undertaken. Screening value used as therefore highly conservative.

Canal A and Canal B taken upstream and downstream respectively.

A P P E N D I X J

Ground Gas and Groundwater Monitoring Results

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 30/11/20

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m bToC)	Depth to Base (m bToC)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
CP103a	1.1	0.9	1.3	1.2	9.4	10.2	-1.3	-1.0		1011	-8 to -7	5.14	8.68
CP103b	1.1	1.1	3	3	-0.1	-0.1	-1.8	-1.5		1012	-8 to -7	5.13	6.25
CP107	-2.0	0	-0.5	0	18.7	20.2	-2	-1.6		1011	-12	3.58	8.9
CP108	0	0	1.7	1.7	18.5	18.5	-1.0	-0.9		1013	-5	1.34	5.21
CP109	0.5	0.5	0.1	0.1	20	20	-1.7	-1.2		1012	-11	2.37	12.9
CP110	0	0	5.0	5.0	12.2	12.2	1.5	1.5		1012	-9	2.59	3.85

CP112	0	0	1.5	0	18.9	20.3	-2.0	-1.9		1011	-12 to -11	13.91	27.35
CP113	0	0	2.6	2.6	14.7	14.7	-1.7	-1.3		1012	-11	2.04	3.61
RH101	0	0	0.4	0.3	20	20.2	-0.7	1.1		1015	-5	2.19	20.11
RH102	-	-	-	-	-	-	-	-		-	-	2.59	13.50
RH106	0	0	0	0	17.9	19	-1.7	-1.6		1012	-12 to -10	25.46	30+
RH108	0	0	0.8	0.5	16.8	18.4	0	0		1010	0	8.74	12.29
RH109a	0	0	0	0	20.3	20.3	-1.8	-1.7		1010	-12 to -11	-	-
RH109b	0	0	0.4	0.4	16.3	16.3	-2	-1.7		1010	-11 to -10	11.36	15.22
RH110	0	0	0.8	0.5	9.4	16.8	-1.2	-0.9		1012	-6	21.3	22.13
WS101	0	0	1	1	19.8	19.8	-1.3	-0.9		1013	-6	0	1.68

WS102	0	0	10.7	10.7	3.2	3.2	-2	-1.6		1010	-12 to -12	1.34	1.78
WS103	0	0	4.7	4.7	10.1	10.1	-0.5	-0.3		1015	-3	1.2	1.89
WS104	0	0	1.6	1.6	18.9	18.9	-1.8	-1.5		1011	-11 to -9	1.52	1.83
WS105	0	0	0	0	19	19	-1.6	-1.5		1013	-9	0.86	1.86
WS106	0	0	1.5	1.3	19.2	19.3	57.4	-0.7		1012	768 to -5	0.79	1.8
							1 min						
WS107	0	0	1.2	1.2	19	19	119.8	0		1010	>>> to 0	0.28	1.72
							2 mins						
WS108	0	0	4.2	4.2	18.8	18.8	108.7	2.3		1010	843 to 15	-	-
WS109	0	0	7	6.4	1.7	3.5	-1	-0.9		1013	-6	Dry	1.83
WS111	0	0	0.5	0.1	19.9	20.2	64.6	0		1012	1111 to 0	0.35	1.51
							3 mins						
WS112	0	0	5.6	5.6	9.7	9.7	-0.9	-0.9		1013	-6 to -5	Dry	1.81

WS113	0	0	16.8	16.7	9.3	9.3	27.2	-1.3		1010	163 to -8	1.32	1.82
WS119	0	0	2	2	17.2	17.8	-1.8	-1.6		1010	-12 to -11	Dry	1.82
WS120	0	0	0	0	19.7	19.9	-2	-1.8		1011	-13 to -12	1.65	1.71
BH04	-	-	-	-	-	-	-	-		-	-	3.53	4.69
BH06	-	-	-	-	-	-	-	-		-	-	Dry	4.15

Atmospheric Pressure: As indicated

Pressure Trend: Falling

Weather: Raining

Instrument Used: GFM 436

Sample Type: As indicated

Operator: ZH & NA

Notes:	CP103a	LEL=24.6, HEX=0.093, PID=1.4
	CP103b	LEL=26.1, HEX=0.099, PID=1.5, eggy odour.
	CP108	LEL=<<<, PID=1.0, probe silty.
	CP109	LEL=17.9, HEX=0.077, PID=1.0
	WS112	LEL=<<<, PID=1.5
	RH101	LEL=<<<, PID=1.0, probe silty.
	RH110	LEL=<<<, PID=1.0, CO=10, probe silty.
	WS101	LEL=<<<, PID=1.0
	WS109	LEL=<<<, PID=1.0
	WS103	LEL=<<<, PID=1.0
	BH04	No bung.
	WS105	HEX=0.012, PID=1.0
	CP113	CO=-10, HEX=0.08, PID=1.0.
	WS106	HEX=0.08, PID=1.0
	RH106	HEX=-0.011, PID=1.0
	WS111	HEX=-0.011, PID=1.0
	CP110	BUNG OPEN. HEX=0.009, PID=1.0, CO=-10. After 4 mins O2 and CO2 still fluctuating.
	RH102	No bung.
	CP107	HEX=0.008, PID=1.0, CO=-10, probe silty.
	WS120	HEX=0.014, PID=1.0
	CP112	CO=-10, HEX=0.012, PID=1.0
	WS104	HEX=0.012, PID=1.0
	RH109a	Tubing dropped down hole. HEX=0.012, PID=1.0.
	RH109b	BUNG OPEN. HEX=0.011.
	BH06	No bung. Gravel on probe.
	WS108	Bung stuck as pipe not cemented in. HEX=0.010, PID=1.0. Hissed on removal.
	WS107	Hissed when valve opened. HEX=0.011, PID=1.0
	RH108	HEX=0.010, PID=1.0
	WS113	Hissed on removal. HEX=0.007, PID=1.0
	WS102	HEX=0.010, PID=1.0
	WS119	HEX=0.009, PID=1.0

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 14/12/20

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m bToC)	Depth to Base (m bToC)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
CP103a	0	0	1.0	1.0	18.5	18.5	-1.2	-1.2		984	-8	5.01	8.66
CP103b	0	0	1.0	1.0	18.7	18.7	-2.2	-1 to -2 Fluct.		984	-11 to -14 Fluct.	4.98	6.12
CP107	0	0	0.5	1.2	19.8	20.0	-1.5	-1.3		985	-9	3.35	8.92
CP108	0	0	0.1	0	19.6	20.5	-0.9	-0.6		985	-5	5.05	5.14
CP109	1.3	1.2	0	0	19.9	19.9	-1.5	-1.5		986	-10	2.18	10.5
CP110	0	0	0.1	0	19.8	20.1	-1.5	-1.5		986	-10	2.53	3.91

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m bToC)	Depth to Base (m bToC)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
CP112	3.1	3.1	3.8	3.8	17.9	17.9	16.0	-1.0 to -1.2 Fluct.		986	468 to -1.6	7.82	27.39
CP113	0	0	1.2	0.6	17.6	19.0	-1.5	-1.5		986	-8	Dry	3.50
RH101	-0.1	-0.1	0.1	0.1	20.6	20.6	-0.5	-0.3		986	-3	1.73	19.75
RH102	0	0	0.6	0.2	19.7	20.0	-1.5	-1.5		986	-10 to -9	2.5	13.68
RH106	0	0	0.6	0.6	17.6	17.6	28.9	-1.0 to -1.3 Fluct.		987	155 to -6	25.25	42.02
RH108	0	0	0.1	0	20.1	20.4	-1.6	-1.6		986	-9	-	-
RH109a	0	0	0	0	19.8	19.8	23	0.5		985	237 to -3	9.3	17.68
RH109b	0	0	0.1	0	19.9	19.8	12.4	-1.0		984	124 to -7.0	12.59	15.40
RH110	0	0	1.0	1.0	18.1	18.1	-1.2	-1.0		984	-1.7	-	-

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m bToC)	Depth to Base (m bToC)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
WS101	0	0	-	-	19.6	19.6	-1.0	-0.6		984	-6	0	1.68
WS102	0	0	8.2	8.2	2.8	2.8	-1.6	-1.3		986	-10 to -5	0.98	1.80
WS103	0	0	5.0	5.0	7.8	7.8	-1.7	-1.5		988	-10	1.09	1.85
WS104	0	0	1.6	1.6	19.1	19.1	-1.5	-1.3		986	-9	1.23	1.86
WS105	0	0	0	0	20.2	20.2	-1.5	-1.0		986	-9	0.78	1.87
WS106	0	0	1.4	1.4	19.3	19.3	119.8	-1.0		986	>>> to -5 (2mins)	0.40	1.91
							2mins						
WS107	0	0	-	-	-	-	66.9	-0.7		985	1069 to -5 (2mins)	0	1.80
							2 mins						
WS108	0	0	4.9	4.9	17.0	17.0	74.8	2.5		984	126 to 14 (2mins)	-	-
WS109	0	0	5.8	5.8	0.4	0.5	0.9	0.7		985	-4	Dry	1.80

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m bToC)	Depth to Base (m bToC)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
WS111	0.1	0.1	2.4	2.4	18.6	18.6	25.2 1.50min	3.3		987	273 to 23	0	1.63
WS112	0	0	5.8	5.8	8.2	8.2	-0.7	0		984	-2	Dry	1.81
WS113	0	0	15.9	15.9	8.4	8.3	41.8	-1.2		986	434 to -7 (1min)	1.03	1.87
WS119	0	0	2.4	2.4	17.4	17.4	-1.6	-1.3		986	-5 to -12	Dry	1.86
WS120	0	0	1.4	0.3	0.5	1.4	29.7	-1.0 to -1.2		986	339 to -6	1.49	1.74
BH04	0	0	13.7	11.8	0	0	-2.1	-1.6		985	-10	3.49	3.49
BH06	0	0	0.1	0.1	20	20	-0.9	-0.7		984	-4	Dry	4.17

Atmospheric Pressure: As indicated

Pressure Trend: Fluctuating (falling, then rose midday, then falling again)

Weather: Overcast, windy, with occasional clear spells.

Instrument Used: GFM 436

Sample Type: As indicated

Operator: ZH & NA

Notes:	CP103a	**Filter Water Clogged**. Hex=0.009, PID=1.0
	CP103b	**Filter Water Clogged**. Hex=0.009, PID=1.0
	CP107	Hex=0.024, PID=1.0
	CP108	PID=1.0, LEL=<<<
	CP109	Hex=0.111, PID=1.6, CO=-10, LEL=51.1
	CP110	Hex=0.013, PID=1.0
	CP112	Probe silty. LEL=72.5, Hex=0.194, PID=3.5.
	CP113	PID=1.0, Hex=0.006
	RH101	LEL=<<<, PID=0.9
	RH102	Hex=0.011, PID=1.0, eggy odour.
	RH106	Hex=0.009, PID=1.0
	RH108	Hex=0.007, PID=1.0
	RH109a	**Filter Water Clogged.** Hex=0.007, PID=1.0
	RH109b	**Filter Water Clogged**. Hex=0.008, PID=1.0
	RH110	**Filter Water Clogged.** Hex=0.006, PID=1.0
	WS101	**Water came up GM pipe.** Hex=0.003, PID=1.0
	WS102	Hex=0.005, PID=1.0
	WS103	CO=-10, PID=1.0, Hex=0.009
	WS104	Hex=0.009, PID=1.0
	WS105	Hex=0.014, PID=1.0
	WS106	Hex=0.006, PID=1.0. Hissed when bung tap opened.
	WS107	**Water came up GM pipe.**
	WS108	Hex=0.006, PID=1.0. Hissed on removal.
	WS109	Hex=0.035, PID=1.0
	WS111	Hex=0.065, PID=1.0, LEL=2.4
	WS112	LEL=<<<, PID=1.0
	WS113	Hex=0.004, PID=1.0
	WS119	Hex=0.006, PID=1.0.
	WS120	Hex=0.008, PID =1.0. Hissed on removal.
	BH04	Hex=0.014, CO=-10, PID=1.0
	BH06	**Filter Water Clogged**. Hex=0.006, PID=1.0

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 06/01/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
CP103a	1.2	1.0	1.2	1.2	10.8	13	-1.7	-1.8		1014	-12	4.67	8.57
CP103b	1.5	1.5	3.0	3.0	0.6	0.6	-1.3	-2		1014	-12	4.66	6.11
CP107	0.0	0.0	0.4	0.1	20.0	20.0	0.1	-0.1		1013	-1.0	3.10	9.10
CP108	0.0	0.0	0.2	0.1	20.1	20.1	0.1	-0.1		1015	-1.0	1.69	5.09
CP109	0.4	0.4	0.0	0.0	19.9	20.0	-0.7	-2.0		1015	-14	1.99	12.89
CP110	0.0	0.0	0.4	0.2	19.8	19.8	0.3	0.1		1015	0.2	2.47	3.87

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
CP112	4.1	4.1	5.0	5.0	15.1	15.1	-1.8	-2.1		1015	-255 to -13	3.38	16.58
CP113	0.0	0.0	2.0	1.9	17.1	17.1	-2.0	-2.2		1016	-13	1.71	3.48
RH101	-	-	-	-	-	-	-	-		-	-	1.91	19.58
RH102	0.0	0.0	1.5	0.1	20.0	20.0	0.2	0.1		1015	1.0	2.32	13.53
RH106	0.0	0.0	1.1	1.1	17.9	17.9	0.4	1.1		1016	1.0	-	-
RH108	0.0	0.0	2.6	2.6	12.8	12.8	6.7	0		1012	69 to 0	8.53	12.22
RH109a	0.0	0.0	4.2	4.2	13.7	13.7	-1.2	-1.3		1013	-11 to -9	11.30	15.08
RH109b	0.0	0.0	3.1	3.1	11.0	11.0	-1.7	-2.1		1013	-250 to -12	-	-
RH110	0.0	0.0	0.4	0.4	14.7	14.7	-2.1	-2.5		1015	-15	-	-

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (m BGL)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
WS101	0.0	0.0	2.4	2.4	11.7	11.7	0.1	-1.2		1015	-13	0.00	1.71
WS102	0.0	0.0	8.1	8.1	6.2	6.2	-1.6	-1.3		1013	-11	1.21	1.71
WS103	0.0	0.0	4.7	4.7	9.0	9.0	0.2	0.0		1015	1.0 to 0.0	1.04	1.82
WS104	0.0	0.0	0.8	0.8	19.3	19.3	0.1	0.0		1016	0.0 to 2.0	1.18	1.80
WS105	0.0	0.0	0.2	0.1	20.0	20.0	-1.8	-2.0		1015	-13	0.53	1.81
WS106	0.0	0.0	0.6	0.6	19.1	19.0	-3.7	-0.8		1015	-1196 to -6	0.68	1.77
WS107	0.0	0.0	0.7	0.7	17.6	17.6	-30.1	-0.7		1014	-658 to -4	0.31	1.71
WS108	0.0	0.0	1.1	1.1	19.2	19.2	0.2	0.2		1013	2	0.29	1.68
WS109	0.0	0.0	6.2	6.2	4.1	4.1	0.4	0.1		1015	1.0	Dry	1.26

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (m b BGL)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady					
WS111	3.8	3.6	14.8	14.8	4.9	4.9	0.4	1.3		1016	1.0 to 0.0	0.00	1.50
WS112	0.0	0.0	5.9	5.9	9.9	9.9	-0.5	-0.4		1015	-2	Dry	1.76
WS113	0.0	0.0	17.4	17.4	9.3	9.3	64.9	-0.7		1012	1200 to -5	0.89	1.81
WS119	0.0	0.0	2.2	2.2	18.2	18.2	-0.6	-0.6		1012	-10 to -9	1.78	1.79
WS120	0.0	0.0	0.0	0.0	0.9	0.9	-2.1	-2.4		1015	-15	1.66	1.74
BH04	-	-	-	-	-	-	-	-	-	-	-	3.50	4.67
BH06	0.0	0.0	11.8	11.8	0.8	0.7	-1.5	-1.7		1013	-12 to -11	Dry	4.11

Atmospheric Pressure: As indicated

Pressure Trend: Rising

Weather: Cold and sunny

Instrument Used: GFM 436

Sample Type: -

Operator: LT & NA

Notes:	CP103a	Hex=0.124, PID 1.8, LEL 27
	CP103b	Hex=0.081, PID=1.8, LEL 35.8
	CP107	Hex=0.025, PID=1.0
	CP108	PID=1.0, Hex 0.02
	CP109	Hex=0.051, PID=1.0, LEL=9.1
	CP110	**Loose bung, unrepresentative.** Hex=0.018, PID=1.0
	CP112	LEL=95.4, Hex=0.220, PID=3.7.
	CP113	PID=1.0, Hex=0.019
	RH101	**No bung. Dip only.**
	RH102	**Loose bung.** Hex=0.02, PID=1.0.
	RH106	**Loose tap**. Hex=0.021, PID=1.0
	RH108	Hex=0.03, PID=1.0
	RH109a	Hex=0.014, PID=1.0
	RH109b	Hex=0.014, PID=1.0
	RH110	Hex=0.021, PID=1.0
	WS101	Hex=0.018, PID=1.0
	WS102	Hex=0.0011, PID=1.0
	WS103	PID=1.0, Hex=0.0017
	WS104	Hex=0.02, PID=1.0
	WS105	Hex=0.021, PID=1.0
	WS106	**Hissed when opening tap**. Hex=0.006, PID=1.0.
	WS107	**Water came up GM pipe.**
	WS108	**Water came up GM pipe.**
	WS109	Hex=0.016, PID=1.0
	WS111	Hex=0.206, PID=3.6, LEL=85
	WS112	Hex 0.016, PID=1.0
	WS113	**Hissed when opening tap.** Hex=0.005, PID=1.0
	WS119	Hex=0.01, PID=1.0.
	WS120	Hex=0.022, PID =1.0.
	BH04	**Loose bung – dip only**
	BH06	Hex=0.014, PID=1.0

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 21/01/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0.5	0.0	0.6	0.6	15.9	15.9	-1.7	-2.4	n/a	969	-14	4.35	8.55	HEX: 0.055 PID: 1.0 LEL: 0.0
CP103b (~6m)	0.0	0.0	2.3	2.3	4.5	4.5	-1.0	-1.5	n/a	969	-12	4.31	6.10	HEX: 0.055 PID: 1.0 LEL: 0.0
CP107	0.1	0.0	1.1	0.7	18.0	18.8	-2.4	-2.4	n/a	971	-16	2.67	8.90	HEX: 0.063 PID: 1.0 LEL:2.1
CP108	0.0	0.0	0.5	0.3	19.7	19.9	-1.8	-2.8	n/a	971	-18	1.31	5.14	HEX: 0.017 PID: 1.0 LEL:0.0
CP109	1.5	1.3	0.0	0.0	19.7	19.7	-2.1	2.5	n/a	970	-16	1.63	12.80	HEX: 0.017 PID: 1.7 LEL: 39.4
CP110	0.0	0.0	0.0	0.0	18.9	20.0	0.0	-3.0	n/a	971	-19	2.38	3.91	HEX: 0.019 PID:1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP112	5.8	5.7	4.7	4.7	15.0	15.0	-2.2	-2.4	n/a	969	-15	2.91	16.53	HEX: 0.0271 PID: 1.0 LEL: >>
CP113	0.0	0.0	0.1	0.0	20.0	20.0	-2.4	-3.0	n/a	971	-19	1.17	3.37	HEX: 0.018 PID: 1.0 LEL: 0.0
RH101	0.0	0.0	0.7	0.4	19.8	19.9	-2.4	-2.5	n/a	971	-16	1.39	19.53	HEX: 0.016 PID: 1.0 LEL: 0.0
RH102	0.0	0.0	1.7	0.7	18.5	19.4	-2.4	-2.8	n/a	971	-18	1.82	13.54	HEX: 0.018 PID: 1.0 LEL: 0.0
RH106	0.0	0.0	1.6	1.6	9.2	9.2	120	0.0	n/a	970	>2000 // 0.0	Unable to dip – tubing stuck in borehole		HEX: 0.02 PID: 1.0 LEL:.0.0
RH108	0.0	0.0	1.7	1.7	15.5	15.5	52.5	20.9	n/a	966	979 // 259	Unable to dip – tubing stuck in borehole		HEX: 0.001 PID: 1.0 LEL: 0.0
RH109a (~15m)	0.0	0.0	4.9	4.9	11.8	11.8	-1.7	-2.0	n/a	967	-10	10.49	14.98	HEX: 0.012 PID: 1.0 LEL: 0.0
RH109b	0.0	0.0	3.1	2.8	10.3	10.9	39.2	0.0	n/a	968	624 // 0	Unable to dip – tubing stuck in borehole		HEX: 0.014 PID: 1.0 LEL: 0.0
RH110	0.0	0.0	0.1	0.0	19.6	19.7	-1.6	-2.2	n/a	969	-14	Unable to dip – tubing stuck in borehole		HEX: 0.019 PID: 1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS101	Well flooded – not sampled								n/a	972	-11	0.00	1.69	n/a
WS102	0.0	0.0	4.5	4.5	5.9	5.9	12.1	-2.0	n/a	966	135 // -12	0.84	1.76	HEX: 0.01 PID: 1.0 LEL: 0.0
WS103	0.0	0.0	5.1	5.1	5.7	5.7	77.5	-1.7	n/a	971	1836 // -13	0.78	1.76	HEX: 0.016 PID: 1.0 LEL: 0.0
WS104	0.0	0.0	1.4	1.4	19.0	19.0	101.4	-2.5	n/a	971	2000 // -16	0.86	1.80	HEX: 0.016 PID: 1.0 LEL: 0.0
WS105	0.0	0.0	0.0	0.0	20.0	20.0	-1.7	-2.5	n/a	970	-15	0.15	1.79	HEX: 0.022 PID: 1.0 LEL: 0.0
WS106	0.0	0.0	0.7	0.7	18.8	18.8	119	-1.0	n/a	971	2000 // -7	0.08	1.84	HEX: 0.018 PID: 1.0 LEL: 0.0
WS107	0.0	0.0	0.6	0.6	19.0	19.0	55.2	0	n/a	967	991 // 0	0.00	1.69	Well flooded before sampling
WS108	Well flooded – not sampled								n/a	967	0	0.24	1.65	n/a
WS109	0.0	0.0	4.5	4.5	2.6	2.6	3.3	-2.0	n/a	971	0 // -20	0.89	1.23	HEX: 0.045 PID: 1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS111	Well flooded – not sampled								n/a	971	n/a	0.00	1.65	n/a
WS112	0.0	0.0	3.6	3.6	10.2	10.2	-0.7	-3.0	n/a	972	-12 to -8	1.4	1.746	HEX: 0.016 PID: 1.0 LEL: 0.0
WS113	0.0	0.0	16.3	16.3	11.1	11.1	106.8	-0.6	n/a	966	1100 // -6	0.91	1.83	HEX: 0.005 PID: 1.0 LEL: 0.0
WS119	0.0	0.0	1.8	1.8	18.3	18.3	-1.5	-1.7	n/a	966	-12	1.61	1.80	HEX:0.008 PID: 1.0 LEL: 0.0
WS120	0.0	0.0	0.5	0.5	0.0	0.0	31.1	-2.1	n/a	971	360 // -6	1.27	1.67	HEX: 0.017 PID: 1.0 LEL: 0.0
BH04	Tap not secure – not sampled								n/a	971	n/a	4.16	4.69	n/a
BH06	Tap not secure – not sampled								n/a	971	n/a	Dry	4.11	n/a

Atmospheric Pressure: As indicated

Pressure Trend: Low, Rising

Weather: Overcast, occasional showers

Instrument Used: GFM 436

Sample Type: -

Operator: LT & NA

Notes:	CP103a – Flow fluctuating for 4 minutes. CP110 – Bung not fully secure RH106 – Hissed when opening tap. Flow settled after 5 minutes. WS103 – Flow fluctuating WS106 – Water close to bung. Flow fluctuating for 2 minutes. WS111 – Flow settled after 4 minutes WS113 – Hissed when opening tap WS120 – Hissed when opening tap

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 01/02/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0.3	0.0	0.8	0.8	16.0	16.0	0.1	0.0	n/a	988	0	4.37	8.51	HEX: 0.052 PID: 1.0 LEL: 0.0
CP103b (~6m)	0.0	0.0	0.2	0.2	19.4	19.4	-0.6	-0.6	n/a	988	-4	4.44	6.12	HEX: 0.019 PID: 1.0 LEL: 0.0
CP107	0.0	0.0	0.8	0.8	19.0	19.0	0.2	0.0	n/a	991	2//0	2.89	8.93	HEX: 0.062 PID: 1.0 LEL:1.0
CP108	0.0	0.0	0.4	0.4	19.9	19.9	0.3	0.0	n/a	992	2//0	1.51	5.09	HEX: 0.011 PID: 1.0 LEL:0.0
CP109	2.2	0.8	0.0	0.0	19.8	19.9	0.3	-0.1	n/a	990	-1.0	1.87	12.81	HEX: 0.114 PID: 1.7 LEL: 48
CP110	0.0	0.0	6.3	6.3	6.0	6.0	0.3	0.0	n/a	991	0.0	2.47	3.88	HEX: 0.009 PID:1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP112	3.4	3.4	5.8	5.8	11.8	11.7	-0.4	-0.1	n/a	990	-2	3.15	16.45	HEX: 0.2 PID: 3.5 LEL: 77.3
CP113	0.0	0.0	0.2	0.0	20.2	20.2	-0.3	-0.1	n/a	990	0	1.36	3.42	HEX: 0.011 PID: 1.0 LEL: 0.0
RH101	0.0	0.0	0.8	0.4	20.1	20.1	0.3	0.1	n/a	991	-3//0	1.49	19.63	HEX: 0.011 PID: 1.0 LEL: 0.0
RH102	0.0	0.0	0.1	0.0	20.1	20.1	0.1	0.0	n/a	991	0	2.11	13.53	HEX: 0.018 PID: 1.0 LEL: 0.0
RH106	0.0	0.0	1.2	1.2	6.8	6.8	4.4	0.1	n/a	991	-2	Unable to dip, tube blocking borehole		HEX: 0.02 PID: 1.0 LEL:.0.0
RH108	0.0	0.0	2.4	2.4	13.3	13.3	104	2.9	n/a	987	56//18	Unable to dip, tube blocking borehole		HEX: 0.003 PID: 1.0 LEL: 0.0
RH109a (~15m)	0.0	0.0	6.0	6.0	10.5	10.5	2.8	-2.5	n/a	988	17//-15	9.43	14.90	HEX: 0.011 PID: 1.0 LEL: 0.0
RH109b	0.0	0.0	3.0	2.4	11.6	12.4	0.4	0.3	n/a	988	1.0	Unable to dip, tube blocking borehole		HEX: 0.013 PID: 1.0 LEL: 0.0
RH110	0.0	0.0	0.1	0.0	19.8	19.8	-0.2	0.0	n/a	989	1//0	Unable to dip, tube blocking borehole		HEX: 0.017 PID: 1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS101	Not monitored – water near ground level								n/a	990	-4	0.00	1.6	n/a
WS102	0.0	0.0	6.5	6.5	8.2	8.2	-0.4	-0.3	n/a	987	-3	1.05	1.7	HEX: 0.011 PID: 1.0 LEL: 0.0
WS103	0.0	0.0	3.2	3.2	12.9	12.9	-65.7	-2	n/a	991	>>//-12	0.92	1.75	HEX: 0.009 PID: 1.0 LEL: 0.0
WS104	0.0	0.0	0.8	0.8	19.8	19.8	-69	0.2	n/a	993	>>//2	0.88	1.72	HEX: 0.011 PID: 1.0 LEL: 0.0
WS105	0.0	0.0	0.4	0.4	19.6	19.6	0.6	-0.3	n/a	990	-3	0.34	1.77	HEX: 0.022 PID: 1.0 LEL: 0.0
WS106	0.0	0.0	0.3	0.3	19.8	19.8	-79	-0.6	n/a	991	>>//-4	0.37	1.78	HEX: 0.018 PID: 1.0 LEL: 0.0
WS107	Not monitored – water near ground level								n/a	988	-250//-5	0.16	1.67	Well flooded before sampling
WS108	Not monitored – water near ground level								n/a			0.28	1.65	n/a
WS109	0.0	0.0	5.4	5.4	4.3	4.3	0.9	0.4	n/a	990	1.0	1.51	1.72	HEX: 0.013 PID: 1.0 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS111	Not monitored – water near ground level								n/a			0.00	1.47	n/a
WS112	0.0	0.0	4.5	4.5	10.7	10.7	0.1	0.0	n/a	990	0.0	1.66	1.70	HEX: 0.015 PID: 1.0 LEL: 0.0
WS113	0.0	0.0	16.1	16.1	12.3	12.3	75.5	1.1	n/a	986	>-1300/1	0.88	1.79	HEX: 0.005 PID: 1.0 LEL: 0.0
WS119	0.0	0.0	1.8	1.8	18.4	18.4	-0.3	-0.1	n/a	987	-2//-1	1.7	1.73	HEX:0.01 PID: 1.0 LEL: 0.0
WS120	0.0	0.0	0.0	0.0	6.2	6.2	0.3	0.1	n/a	992	2//1	1.48	1.59	HEX: 0.013 PID: 1.0 LEL: 0.0
BH04	0.0	0.0	9.9	9.9	0.0	0.0	-0.5	-0.4	n/a	990	-3	3.36	4.53	HEX: 0.007 PID: 1.0 LEL: 0.0
BH06	0.0	0.0	9.1	9.0	5.0	5.0	-0.5	-0.2	n/a	988	-2	DRY	4.05	HEX: 0.012 PID: 1.0 LEL: 0.0

Atmospheric Pressure: As indicated

Pressure Trend: Low, Rising

Weather: Sunny, cold

Instrument Used: GFM 436

Sample Type: -

Operator: LT & NA

Notes:	CP103a – Flow fluctuating for 4 minutes. CP110 – Bung not fully secure RH106 – Hissed when opening tap. Flow settled after 5 minutes. WS103 – Flow fluctuating WS106 – Water close to bung. Flow fluctuating for 2 minutes. WS111 – Flow settled after 4 minutes WS113 – Hissed when opening tap WS120 – Hissed when opening tap

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 16/02/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0	0	1.1	0.7	15.0	15.5	-1.6	-1.9	-	992	-14	4.52	8.58	HEX: 0.028 PID: 1.0 LEL: 0.0
CP103b (~6m)	0.9	0.9	2.3	2.3	0.5	0.5	-0.8	-0.9	-	992	-16	4.5	6.17	HEX: 0.084 PID: 1.3 LEL: 16.6
CP107	0	0	0.8	0.7	19.2	19.4	-1.2	-1.6	-	992	-12	2.94	8.87	HEX: 0.005 PID: 1.0 LEL: 0.0
CP108	0	0	0.3	0.1	20.3	20.3	-1.5	-1.8	-	993	-14	1.7	5.16	HEX: 0.0 PID: 0.9 LEL: 8
CP109	GAS TAP OPEN								-	-	-	1.9	12.85	HEX: PID: LEL:
CP110	0	0	0.3	0.3	20.4	20.4	0	-1.8	-	993	-12	2.48	3.90	HEX: 0.000 PID: 0.9 LEL: 0.0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP112	2.1	2.1	5.4	5.4	10.8	10.7	-1.8	-2.2	-	992	-16	3.31	16.42	HEX: 0.152 PID: 2 LEL: 47.9
CP113	0	0	0.3	0.1	20.3	20.4	-1.1	-1.6	-	992	-12	1.62	3.5	HEX: 0.0 PID: 0.9 LEL: <<<
RH101	0	0	0.6	0.3	20.3	20.3	-1.5	-1.9	-	992	-14	1.62	19.58	HEX: 0.0 PID: 0.9 LEL: <<<
RH102	0	0	0.3	0.3	20.2	20.2	0	-1.8	-	992	-13	2.14	13.58	HEX: 0.0 PID: 0.9 LEL: <<<
RH106	0	0	2.3	2.3	0.5	0.5	120	1.2	-	992	> // 6 (over 4 mins)	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 1.0 LEL: <<<
RH108	0	0	2.6	2.6	12.9	12.9	29.8	11.0	-	992	394 // 129	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH109a (~15m)	0	0	6.9	6.9	9.3	9.3	-1.3	-1.9	-	991	-14	9.21	15.02	HEX: 0.0 PID: 0.9 LEL: <<<
RH109b	0	0	1.3	0.5	17.4	19.6	-1.9	-2.2	-	991	-16	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH110	0	0	0	0	20.3	20.3	-1.5	-1.9	-	992	-14	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS101	0	0	2.2	2.2	18.8	18.8	15.7	-1.3	-	993	-11	1.63	1.63	HEX: 0.0 PID: 0.9 LEL: <<<
WS102	0	0	5.7	5.7	11.6	11.6	-1.5	-2.2	-	992	-16	1.32	1.79	HEX: 0.0 PID: 1.0 LEL: <<<
WS103	0	0	4.7	4.7	11.8	11.8	-1.5	-1.8	-	993	-12	1.40	1.82	HEX: 0.0 PID: 0.9 LEL: <<<
WS104	0	0	0.4	0.4	20.2	20.2	-1.3	-1.5	-	992	-10	1.05	1.80	HEX: 0.0 PID: 0.9 LEL: <<<
WS105	0	0	0	0	20.4	20.4	-1.1	-1.3	-	992	-10	-.34	1.84	HEX: 0.0 PID: 0.9 LEL: <<<
WS106	0	0	0.4	0.4	19.9	19.9	-1.6	-1.6	-	992	<//-11 (fluctuating)	0.58	1.80	HEX: 0.0 PID: 0.9 LEL: <<<
WS107	0	0	0.4	0.4	20.1	20.1	-1.3	-1.6	-	993	>//-12	0.3	1.77	HEX: 0.0 PID: 0.9 LEL: <<<
WS108	0	0	0.5	0.5	19.2	19.2	-1.3	-1.8	-	992	-13	0.3	1.70	HEX: 0.0 PID: 0.9 LEL: <<<
WS109	0	0	4.9	4.9	4.9	4.9	-1.6	-2.2	-	992	-16	1.7	1.79	HEX: 0.0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS111	0.8	0.8	2.4	2.4	18.2	18.2	-1.6	-3.7	-	992	-36 // -11 (fluctuating)	0	1.58	HEX: 0.095 PID: 1.5 LEL: 3 Hissed on removal of GFM
WS112	0	0	4.2	4.1	14.2	14.2	-1.6	-1.9	-	992	-13	1.8	1.8	HEX: 0.0 PID: 0.9 LEL: <<<
WS113	0	0	16.1	16.1	13	13	0	-1.5	-	992	-11	0.94	1.82	HEX: 0.0 PID: 0.9 LEL: <<<
WS119	0	0	1.6	1.6	19.1	19.1	-1.8	-2.1	-	992	-14	1.82	1.87	HEX: 0.0 PID: 0.9 LEL: <<<
WS120	GAS TAP OPEN								-	-	-	1.65	1.70	HEX: PID: LEL:
BH04	0	0	10.1	10.1	1.4	1.4	-0.4	-1.6	-	992	-12	3.44	4.60	HEX: 0.0 PID: 0.9 LEL: <<<
BH06	0	0	11.4	11.4	0.9	0.9	-1.1	-1.1/-2.9 (fluctuating)	-	992	-14	Dry	4.12	HEX: 0.0 PID: 0.9 LEL: <<<

Atmospheric Pressure: As indicated

Pressure Trend: Low, steady.

Weather: light cloud cover and a light breeze, occasional sun.

Instrument Used: GFM 436

Sample Type: -

Operator: NA & EG

Notes:	CP109 – tap open, need another bolt to secure cover. CP110 – Bung not fully secure RH101 - Brown silt on probe RH106 – Could hear flowing. WS108 - Hissed on removal of GFM WS111 – Hissed when opening tap WS113 – Hissed when opening tap WS120 – Tap open – cover cannot be secured down.

RECORD OF FIELD PARAMETER MEASUREMENTS

Client Name: Your Housing Group Ltd. **Job Number: LD10162**

Site Name: Ten Acres Lane – Newton Heath

Borehole Ref.	Waterbody	Date & Time	Temp (C)	Baro (mb)	pH	pHmV	ORP (REDOX)	DO (% Sat)	DO (mg/L)	EC (uS/cm @25C)	RES (Ohms.cm)	TDS (mg/L)	SAL (PSU)	SSG
SW01	Canal (downstream)	02/12/2020 15:56	5.75	1003	8.86	-99.4	-59.4	100.4	12.41	229	6896	148	0.07	0
SW02	Canal (Middle)	01/12/2020 15:12	5.4	1017	6.81	14.6	13.8	98.4	12.47	230	6944	149	0.07	0
SW03	Canal (Upstream)	01/12/2020 15:35	5.5	1017	7.26	-11	11.1	96.4	12.19	208	7633	135	0.07	0
CP101 / RH109	GT	10/12/2020 15:16	10.43	986	7.45	-59.1	25	4.8	0.52	1572	881	1021	0.78	0.2
CP103a	MG/GT	02/12/2020 14:05	9.9	1003	7.75	-38.8	-208.2	5.3	0.59	1797	781	1168	0.89	0.3
CP103b	MG	02/12/2020 14:35	10.5	1003	7.64	-32.4	-233.8	18.1	1.99	1575	877	1023	0.78	0.2
CP107	MG	02/12/2020 15:16	10.6	1003	8.03	-54.5	-176.8	23.9	2.61	1573	876	1022	0.78	0.2

Borehole Ref.	Waterbody	Date & Time	Temp (C)	Baro (mb)	pH	pHmV	ORP (REDOX)	DO (% Sat)	DO (mg/L)	EC (uS/cm @25C)	RES (Ohms.cm)	TDS (mg/L)	SAL (PSU)	SSG
CP108	MG	02/12/2020 10:21	10.4	1008	7	3.3	-152	2.6	0.29	1155	1200	750	0.55	0
CP109	MG	02/12/2020 13:24	10.6	1004	8.88	-102.6	-294.3	1.8	0.2	4262	323	2770	2.25	1.3
CP110	MG	02/12/2020 10:53	10.7	1008	6.96	5.9	68.7	20.4	2.24	1377	999	895	0.65	0.1
RH101	MST	02/12/2020 09:20	10.1	1009	6.67	22.7	20.1	10.2	1.14	1197	1166	778	0.57	0.1
RH102	MG/GT	02/12/2020 11:23	11.1	1006	7.34	-15.7	-214.9	1.1	0.12	4010	339	2606	2.12	1.2
RH103	GT	07/01/2021 11:58	10.5	1008	7.72	-32.9	54.1	11.5	1.26	2015	686	1309	1.02	0.4
RH106	GT/SST	10/12/2020 10:58	10.28	989	7.62	-68.9	-113.8	68.6	7.46	1505	925	978	0.74	0.2
RH106	GT/SST	07/01/2021 10:06	9.4	1010	7.5	-20.6	65	94.3	10.74	2	500000	1	0	0
RH108	SST	04/12/2020 15:09	9.5	963	8.03	-54.2	13.1	89	9.64	0		0	0	0
RH108	SST	07/01/2021 13:03	7.6	1007	7.7	-31.5	42.3	65.1	7.69	2053	729	1334	1.04	0.6

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 25/02/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0	0	0.3	0.1	19.5	20.0	-0.9	-0.9	-	1012	-10	4.58	8.5	HEX: 0.0 PID: 1.0 LEL: <<<
CP103b (~6m)	0	0	0	0	20.5	20.5	-1.2	-1.5	-	1013	-13	4.58	6.13	HEX: 0.0 PID: 0.0 LEL: <<<
CP107	0	0	1.3	1.3	18.2	18.2	-0.9	-1.1	-	1015	-9	2.94	8.84	HEX: 0.029 PID: 1.0 LEL: <<<
CP108	0	0	0.4	0.4	20.2	20.2	-0.8	-1.1	-	1014	-9	1.74	5.14	HEX: 0.0 PID: 0.9 LEL: <<<
CP109	0	0	0.3	0	20.4	20.4	-1.1	-1.1	-	1016	-10	1.91	12.85	HEX: 0.062 PID: 1.0 LEL: 0.0
CP110	0	0	0.5	0.5	19.9	19.9	-0.8	-1.1	-	1014	-8	2.45	3.86	HEX: 0.0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP112	1.6	1.5	3.9	3.9	13.0	13.0	-0.9	-1.1	-	1012	-8	3.4	16.41	HEX: 0.123 PID: 1.7 LEL: 36.5
CP113	0	0	0.2	0.1	20.5	20.5	-1.3	-1.6	-	1016	-12	1.42	3.48	HEX: 0.0 PID: 0.9 LEL: <<<
RH101	0	0	0.7	0.5	18.8	18.8	-1.5	-1.8	-	1014	-10	1.8	19.53	HEX: 0.0 PID: 0.9 LEL: <<<
RH102	0	0	0.6	0.6	19.6	19.6	-1.1	-1.2	-	1014	-9	2.18	13.54	HEX: 0.0 PID: 0.9 LEL: <<<
RH106	0	0	2.9	2.9	0.2	0.2	119.9	0	-	1014	>/0	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 1.0 LEL: <<<
RH108	0	0	1.3	1.3	16.9	16.9	-1.6	-13.9	-	1012	-340/-235	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH109a (~15m)	0	0	7.3	7.3	8.2	8.2	-1.5	-1.8	-	1013	-13	9.15	11.3	HEX: 0.0 PID: 0.9 LEL: <<<
RH109b	0	0	0.5	0.3	19.9	20.2	-1.1	0	-	1013	0	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH110	0	0	0.1	0	20.3	20.3	-1.1	-1.3	-	1013	-10	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS101	0	0	2.9	2.9	18.8	18.8	-1.2	-1.6	-	1014	-12	0	1.62	HEX: 0.0 PID: 0.9 LEL: <<<
WS102	0	0	4.5	4.5	10.2	10.2	-1.3	-1.5	-	1013	-10	1.32	1.74	HEX: 0.0 PID: 0.9 LEL: <<<
WS103	0	0	0.4	0.4	19.7	19.7	0	0	-	1014	-5	1.17	1.85	HEX: 0.0 PID: 0.9 LEL: <<<
WS104	0	0	0.4	0.4	20.0	20.0	-0.5	-1.1	-	1014	-7	1.17	1.79	HEX: 0.0 PID: 0.9 LEL: <<<
WS105	0	0	0	0	20.6	20.6	-0.5	-0.6	-	1015	-7	0.43	1.83	HEX: 0.0 PID: 0.9 LEL: <<<
WS106	0	0	0.3	0.3	20.0	20.0	47.2	0.0	-	1017	262 / 0	0.44	1.85	HEX: 0.0 PID: 0.9 LEL: <<<
WS107	0	0	0.4	0.4	20.3	20.3	18.9	0.0	-	1013	0.0	0.22	1.78	HEX: 0.0 PID: 0.9 LEL: <<<
WS108	0	0	0.6	0.6	19.8	19.8	3.0	-1.6	-	1013	-11	0.29	1.69	HEX: 0.0 PID: 0.9 LEL: <<<
WS109	0	0	0.2	0.2	20.3	20.3	-0.6	-1.1	-	1014	-8	1.71	1.76	HEX: 0.0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS111	0	0	1.3	1.3	19.3	19.3	0.9	0.0	-	1014	0.0	0	1.55	HEX: 0.0 PID: 1.0 LEL: <<<
WS112	0	0	0.1	0.1	20.3	20.3	-1.1	-1.1	-	1014	-10	Dry	1.78	HEX: 0.0 PID: 0.9 LEL: <<<
WS113	0	0	14.5	14.5	14.3	14.3	56.3	0.0	-	1012	0.0	0.88	1.81	HEX: 0.0 PID: 0.9 LEL: <<<
WS119	0	0	1.5	1.5	19.1	19.1	-1.2	-1.5	-	1013	-9	1.79	1.84	HEX: 0.84 PID: 0.9 LEL: <<<
WS120	0	0	0	0	11.2	11.2	-	-	-	-	-	1.72	1.72	HEX: 0.0 PID: 0.9 LEL: <<<
BH04	0	0	9.5	9.5	2.9	2.9	-0.1	-1.3	-	1012	-10	3.47	4.59	HEX: 0.0 PID: 0.9 LEL: <<<
BH06	0	0	10.9	10.2	1.9	3.4	-1.8	-1.8	-	1012	-15	Dry	4.06	HEX: 0.0 PID: 0.9 LEL: <<<

Atmospheric Pressure: As indicated

Pressure Trend: Rising slightly and fluctuating (1012 → 1013 ←→ 1017)

Weather: Sunny, slightly breezy with breeze strengthening in the afternoon.

Instrument Used: GFM 436

Sample Type: -

Operator: NA & EG

Notes:	RH106 – relative pressure settled in 1.5 minutes. Could hear gas pushing out of bung when opened to measure flow. RH108 – Hissed when tap opened. WS101 – water drawn up in tube after 30 seconds. WS106 – relative pressure settled after 45 seconds. WS108 – Hissed when tap opened. WS113 – Hissed when tap opened. WS120 – tap open, borehole cover unable to be bolted shut. Despite tap being open, tap hissed when gas tubing was removed. BH06 – gas level fluctuating, especially CO2 and O2, and struggling to stabilise after 3 mins. Groundwater ponding in the south of the beginning to retreat and dry out, extent of flooded area has reduced. Less obvious discolouration.

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group Ltd.

Site Name: Ten Acres Lane – Newton Heath

Date of Sampling: 08/03/21

Job Number: LD10162

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0.5	0.0	0.9	0.8	11.5	15.1	-1.9	-2.1	-	1010	-16	4.69	8.57	HEX: 0.086 PID: 1.3 LEL: 15
CP103b (~6m)	1.2	1.2	2.2	2.2	2.4	2.4	-2.1	-2.4	-	1010	-18	4.71	6.18	HEX: 0.103 PID: 1.5 LEL: 28.2
CP107	0.0	0.0	1.2	1.0	18.3	18.4	-1.8	-2.2	-	1011	-16	3.0	8.81	HEX: 0.054 PID: 1.0 LEL: 0.0
CP108	0.0	0.0	0.5	0.2	20	20.1	-2.1	-2.1	-	1012	-15	1.78	5.16	HEX: 0.0 PID: 1.0 LEL: <<<
CP109	3.1	3.0	0.0	0.0	19.6	19.5	-1.8	-2.5	-	1011	-16	1.96	12.90	HEX: 0.193 PID: 3.5 LEL: 83
CP110	0.0	0.0	4.7	4.7	10.3	10.3	-2.1	-2.4	-	1012	-16	2.49	3.87	HEX: 0.0 PID: 1.0 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP112	1.9	1.9	4.4	4.4	12.3	12.3	-1.9	-2.1	-	1010	-15	3.42	16.36	HEX: 0.136 PID: 0.9 LEL: 42.6
CP113	0.0	0.0	1.2	1.1	17.6	17.6	-1.9	-2.4	-	1011	-16	1.85	3.5	HEX: 0.0 PID: 1.0 LEL: <<<
RH101	0.0	0.0	0.4	0.2	20.0	20.1	-2.4	-2.5	-	1012	-19	1.87	19.71	HEX: 0.0 PID: 1.0 LEL: <<<
RH102	0.0	0.0	0.2	0.2	20.1	20.1	-1.9	-2.4	-	1011	-17	2.33	13.60	HEX: 0.0 PID: 1.0 LEL: <<<
RH106	0.0	0.0	4.4	4.4	1.7	1.7	-1.8	-2.1	-	1011	-16	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 1.0 LEL: <<<
RH108	-0.1	-0.1	2.8	2.8	12.7	12.7	10.5	2.7	-	1010	15	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH109a (~15m)	-0.1	-0.1	6.7	6.7	9.6	9.6	-16	-1.8	-	1010	-14	9.1	14.81	HEX: 0.0 PID: 0.9 LEL: <<<
RH109b	-0.1	-0.1	6.7	6.5	18.9	19.3	-1.9	-2.3	-	1010	-11	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 0.9 LEL: <<<
RH110	0.0	0.0	0.1	0.0	19.9	20.1	-2.1	-2.5	-	1011	-16	Unable to dip – tubing stuck in borehole		HEX: 0.0 PID: 1.0 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS101	0.0	0.0	3.1	3.1	17.8	17.8	-2.2	-2.4	-	1011	-17	0.0	1.63	HEX: 0.0 PID: 1.0 LEL: <<<
WS102	-0.1	-0.1	7.1	7.1	6.0	6.0	-1.9	-2.1	-	1010	-15	1.37	1.77	HEX: 0.0 PID: 0.9 LEL: <<<
WS103	0.0	0.0	4.6	4.6	11.3	11.3	-2.4	-2.7	-	1013	-18	1.19	1.89	HEX: 0.0 PID: 1.0 LEL: <<<
WS104	0.0	0.0	0.9	0.9	19.2	19.2	-2.2	-2.4	-	1011	-18	1.30	1.84	HEX: 0.0 PID: 1.0 LEL: <<<
WS105	0.0	0.0	0.0	0.0	20.1	20.1	-2.2	-2.5	-	1011	-17	0.45	1.79	HEX: 0.0 PID: 1.0 LEL: 0.0
WS106	0.0	0.0	0.1	0.1	20.1	20.1	-1.8	-2.7	-	1011	</-20	0.97	1.82	HEX: 0.0 PID: 1.0 LEL: <<<
WS107	-0.1	-0.1	0.45	0.45	20.1	20.1	-2.4	-3	-	1012	</-21	0.46	1.78	HEX: 0.0 PID: 0.9 LEL: <<<
WS108	-0.1	-0.1	0.7	0.7	19.2	19.2	-2.5	-3.7	-	1011	-36	0.42	1.70	HEX: 0.0 PID: 0.9 LEL: <<<
WS109	0.0	0.0	5.5	5.5	4.4	4.4	-1.8	-1.9	-	1011	-14	1.74	1.76	HEX: 0.0 PID: 1.0 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS111	0.0	0.0	2.0	2.0	19.1	19.1	-1.9	-2.1	-	1011	-16	0.22	1.55	HEX: 0.026 PID: 1.0 LEL: 0.0
WS112	0.0	0.0	4.5	4.5	13.9	13.9	-1.9	-2.1	-	1011	-15	Dry	1.75	HEX: 0.0 PID: 1.0 LEL: <<<
WS113	-0.1	-0.1	13.8	13.8	15.1	15.1	35.4	-1.5	-	1010	-13	0.9	1.85	HEX: 0.0 PID: 0.9 LEL: <<<
WS119	-0.1	-0.1	1.8	1.8	18.6	18.6	-2.1	-2.4	-	1010	-17	1.81	1.87	HEX: 0.0 PID: 0.9 LEL: <<<
WS120	0.0	0.0	0.0	0.0	10.4	10.4	-	-	-	-	-	1.71	1.72	HEX: - PID: - LEL: -
BH04	0.0	0.0	0.0	0.0	20.2	20.3	-1.9	-2.1	-	1011	-16	3.5	4.63	HEX: 0.0 PID: 0.9 LEL: <<<
BH06	-0.1	-0.1	11.4	11.4	2.2	2.2	-2.1	-2.4	-	1010	-17	Dry	4.10	HEX: 0.0 PID: 1.0 LEL: <<<

Atmospheric Pressure: As indicated

Pressure Trend: Steady

Weather: Overcast

Instrument Used: GFM 436

Sample Type: -

Operator: NA & EG

Notes:	WS107 – still settling after 2 mins. WS108 – hissed when bung was removed. WS113 – hissed when bung was removed. WS120 – tap open, unable to monitor flow. CP103a – Oxygen still rising steadily after 2.5 mins.

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name: Your Housing Group
Site Name: Ten Acres Lane, Newton Heath
Weather: Overcast and dry. Temp 8°C. Wind 11mph SSW. Gust 20 SW.
Ground Conditions: Slightly wet.
Operator: JC

Date of Sampling:
Job Number: LD10162
Pressure Trend: Falling slightly
Instrument Type: GFM 436

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP103a (~8m)	0	0	0.4	0.3	16.6	16.6	0	0		1004	0	4.92	8.95	H2S: 0 CO: 0 HEX: 0.002 PID: 1.0 LEL: 0
CP103b (~6m)	0.9	0.9	2.1	2.1	1.1	1.1	0	0		1004	0	4.93	6.53	H2S: 0 CO: 0 HEX: 0.045 PID: 1.3 LEL: 20.3
CP107	0	0	0.7	0.7	19.3	19.4	0	0		1004	0	-	-	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: 0
CP108	0	0	0.4	0	20.4	20.4	0	0		1005	0	1.96	5.47	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
CP109	1.4	0	0	0	20.4	20.4	0	0		1003	0	-	13.6	H2S: 0 CO: 0 HEX: 0.032 PID: 1.0 LEL: 4.6

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
CP110	0	0	5.9	5.9	7.6	7.6	0	0		1004	0	-	-	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
CP112	2.2	2.2	3.8	3.8	7.9	7.9	0	0		1004	0	3.49	27.16	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: 50.4
CP113	0	0	0	0	20.7	20.7	0	0		1004	0	-	3.83	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH101	0	0	0.6	0	20.5	20.5	0	0		1006	0	2.13	20.02	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH102	0	0	0.2	0	20.5	20.5	0	0		1004	0	-	-	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH106	0	0	2.3	2.3	1.6	1.6	0	0		1004	0	-	-	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH108	0	0	2.6	2.6	12.6	12.6	7.2	2.7		1004	13	8.67	12.52	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH109a (~15m)	0	0	6.9	6.8	7.6	7.6	0	0		1004	0	9.06	15.0	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
RH109b	0	0	2.3	1.4	18.5	18.5	-0.4	-0.4		1004	-2	8.95	17.44	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
RH110	0	0	0	0	20.4	20.4	0	0		1005	0	17.44	22.25	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS101	-	-	-	-	-	-	-	-		-	-	-	-	H2S: CO: HEX: PID: LEL:
WS102	0	0	6.5	6.5	6.9	6.9	0	0		1003	0	1.65	2.13	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS103	-	-	-	-	-	-	-	-		-	-	-	-	H2S: CO: HEX: PID: LEL:
WS104	0	0	0.5	0.5	20	20	0	0		1003	0	1.45	2.15	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS105	0	0	0	0	20.6	20.6	0	0		1004	0	0.88	2.2	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS106	0	0	0	0	20.6	20.6	0	0		1004	0	1.36	2.15	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
WS107	0	0	20.2	20.2	0.4	0.4	21.4	0.1		1004	0	0.76	2.17	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS108	0	0	0.5	0.5	19.6	19.6	-23.5	0		1003	0	0.80	2.06	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS109	0	0	1.6	1.4	17.5	17.5	0	0		1006	0	Dry	2.25	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS111	0	0	1.0	1.0	19.8	19.8	0.5	0		1004	0	0.64	1.93	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS112	0	0	4.3	4.3	12.6	12.6	0	0		1005	0	Dry	2.12	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS113	-	-	-	-	-	-	-	-		-	-	-	-	H2S: CO: HEX: PID: LEL:
WS119	0	0	1.4	1.4	18.9	18.9	0	0		1004	0	2.1	2.1	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<
WS120	-	-	-	-	-	-	-	-		-	-	1.98	2.03	H2S: CO: HEX: PID: LEL:

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BGL)	Depth to Base (mBGL)	Notes
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
BH04	-	-	-	-	-	-	-	-		-	-	-	-	H2S: CO: HEX: PID: LEL:
BH06	0	0	10	10	2.5	2.5	0	0		1004	0	Dry	4.46	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<

Notes:	**CP103A:** Flow measured for 1 minute. Gas measured for 3 minutes. Silty water noted on probe. **CP103B:** Flow measured for 1 minute. Gas measured for 3 minutes. Clear water noted on probe. **CP107:** Flow measured for 1 minute. Gas measured for 1 minutes. Interface probe had stopped working so could not determine water level. **CP108:** Flow measured for 1 minute. Gas measured for 3 minutes. CO2 fell from 0.4 to 0 over 2 minutes and then was steady at 0 for 1 minute. 1.96 fast beep from interface probe that become a slow beep from 3.85. Clear water noted on probe. **CP109:** Flow measured for 1 minute. Gas measured for 3 minutes. CH4 fell from 1.4 to 0 over 2 minutes and then steady at 0 for 1 minute. Interface probe had stopped working so could determine water level. Black sludge on probe with slightly hydrocarbon / organic odour. **CP110:** Flow measured for 1 minute. Gas measured for 1:30 minutes. Bung stuck. **CP112:** Flow measured for 1 minute. Gas measured for 2 minutes. 3.49 fast beep from interface probe that become a slow beep from 5.36. **CP113:** Flow measured for 1 minute. Gas measured for 2 minutes. Interface probe had stopped working so could not determine water level. Clear water noted on probe. **RH101:** Flow measured for 1 minute. Gas measured for 2 minutes. CO2 fell steadily from 0.6 to 0 over 1 minute and then was steady at 0 for 1 minute. Silt water on probe. **RH102:** Flow measured for 1 minute. Gas measured for 2 minutes. Interface probe had stopped working so could not determine water level. **RH106:** Flow measured for 1 minute. Gas measured for 2 minutes. Interface probe had stopped working so could not determine water level. **RH108:** Flow measured for 3 minutes. Gas measured for 1 minute. Flow fell from 7.2 to 2.7 over 1 minute. Fluctuated between 2.7 – 3.0 over 2 minutes. Mostly steady at 2.7. **RH109A:** Flow measured for 1 minutes. Gas measured for 3 minute. Silty water on probe. **RH109B:** Flow measured for 2 minutes. Gas measured for 3:30 minutes. Negative flow that fluctuated between -0.2 and -0.4 but mostly steady at -0.4. CO2 peak at 2.3 fluctuated between 0.9 – 1.5 over 2 minutes and settled at 0.9. **RH110:** Flow measured for 1 minutes. Gas measured for 2 minutes. **WS101:** Unable to remove bolt from raised cover. **WS102:** Flow measured for 1 minutes. Gas measured for 1:30 minute. Clear water on probe. **WS103:** Unable to remove bolt from raised cover. **WS104:** Flow measured for 1 minutes. Gas measured for 1 minute. Clear water on probe. **WS105:** Flow measured for 1 minutes. Gas measured for 1:30 minute. Clear water on probe. **WS106:** Flow measured for 1 minutes. Gas measured for 2 minute. **WS107:** Flow measured for 5 minutes. Gas measured for 1 minute. Flow fell steadily from 21.4 to to 3.3 over 2 minutes and then fell from 3.3 to 0 over a further 2 minutes. Fluctuated between 0.1 and over 1 minute. Black sludge on probe. **WS108:** Flow measured for 1 minutes. Gas measured for 2 minutes. Hiss when removing tubing from valve. Clear water on probe. **WS109:** Flow measured for 1 minutes. Gas measured for 2 minutes. Headworks could be pulled out the ground. **WS111:** Flow measured for 1 minutes. Gas measured for 1 minutes. Clear water on probe. **WS112:** Flow measured for 1 minutes. Gas measured for 2 minutes. **WS113:** Unable to remove bolt from raised cover. **WS119:** Flow measured for 1 minutes. Gas measured for 1 minutes. Clear water on probe. **WS120:** Gas valve left open. Unable to monitor gas. **BH04:** Unable to remove bolt from raised cover. **BH06:** Flow measured for 1 minutes. Gas measured for 2 minutes.

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name:
Site Name: Ten Acres Lane
Weather: Overcast and Dry
Ground Conditions: Dry
Operator: JC & AM

Date of Sampling: 19/05/2022
Job Number: LD10385
Pressure Trend:
Instrument Type: GFM 436

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
RH206	0.0	0.0	0.2	0.2	20.2	20.2	1.2	1.2		1009	19	21.96	43.52	H2S: 0 CO: 0 HEX: 0 PID: 0.9 LEL: <<<<
CP209	-0.1	-0.1	0.0	0.0	20.6	20.6	0.1	0.0		1011	0.0	0.86	6.95	H2S: 0 CO: 0 HEX: 0.000 PID: 0.9 LEL:<<<<
RH204	-0.1	-0.1	0.7	0.7	18.6	18.6	1.5	1.5		1010	22	24.59	47.19	H2S: 0 CO: 0 HEX: 0.000 PID: 0.9 LEL:<<<<
RH202	0.0	0.0	0.3	0.3	20.6	20.6	0.0	0.0		1009	0.0	30.23	51.00	H2S: 0 CO: 0 HEX: 0.000 PID: 1.0 LEL:<<<<
WS318	-0.1	-0.1	3.3	3.3	17.8	17.8	0.0	0.0		1010	0.0	2.75	5.00	H2S: 0 CO: 0 HEX: 0.000 PID: 0.9 LEL:<<<<

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						Steady or Peak / Steady
CP201	11.2	8.6	2.0	0.9	17.5	17.5	0.0	0.0		1009	0	2.60	7.90	H2S: 0 CO: 0 HEX: 0.377 PID: 9.5 LEL:<<<<

Notes:	CP201	CH4 fluctuating from 9.4-9.8 and after 2 mins from 8.2-8.8.
	RH206	Valve left open

Water Sampling Pro Forma

Client Name: YHG
Site Name: Ten Acres
Weather: Overcast and dry
Ground Conditions: Dry
Operator: JC & JP

Date of Sampling: 19.05.22
Job Number: LD10385
Pressure Trend:
Instrument Type: Waterra pump, peristaltic pump

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
RH206	200	50	N/A	21.96	43.52	42.26	147	23.50	Very thick brown silty water. Did not use Aquaread as too silty.
CP209	200	50	N/A	0.95	6.95	11.76	24	-	Aquaread used and stabilised after 24l
WS318	-	50	N/A	2.75	5.00	4.41	11	-	Aquaread used and stabilised after 11l
CP201	200	50	N/A	2.60	7.90	10.38	-	-	Peristaltic pump broke down.

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Water Sampling Pro Forma

mbgl– metres below ground level

Monitoring Location	Total Dissolved Solids	pH	Temp	Oxidation Reduction Potential	Electrical Conductivity	Dissolved Oxygen		Notes
	(mg/l)	(Units)	(°C)	(mV)	(µs/cm)	(mg/l)	(% saturation)	
CP209	1290	7.13	10.30	-0.055	1986	0.0	0.0	Salinity: 0.97 SSG: 0.4 Slightly cloudy water. No odour.
WS318	0731	7.39	10.90	7.38	1127	0.0	0.0	Salinity: 0.53 SSG: 0.53 Slightly cloudy water. No odour.

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Water Sampling Pro Forma

Client Name: YHG
Site Name: Ten Acres
Weather: Sunny and dry
Ground Conditions: Dry
Operator: JC, JP, EH, AK

Date of Sampling: 15.06.22 – 22.06.22
Job Number: LD10385
Pressure Trend:
Instrument Type: Waterra pump, peristaltic pump

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
15.06.22									
CP201	200	50	-	2.6	7.8	10.19	30.63	-	
CP202	200	50	-	2.2	15.05	25.18	91	-	
CP207	200	50	-	7.3	19	22.93	107.1	-	
RH205	200	50	-	26.6	50.8	47.4	126	-	
16.06.22									
CP102/RH110	200	50	-	21.78	22.45	-	-	-	Dry possibly silted up
RH203	200	50	-	31.61	50	36.04	108	-	Reddish brown sandy water
CP114/RH108	200	50	-		4	Dry	-	-	Silted up
RH201	200	50	-	29.38	41.9	24.53	-	-	Waterra pump broke

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Water Sampling Pro Forma

Monitoring Location	Total Dissolved Solids	pH	Temp	Oxidation Reduction Potential	Electrical Conductivity	Dissolved Oxygen		Notes
	(mg/l)	(Units)	(°C)	(mV)	(µs/cm)	(mg/l)	(% saturation)	
15.06.22								
CP202	2789	6.74	11.28	-0144.9	4291	0.5	4.6	Grey foamy water with putrid odour. SSG:1.3 SAL:1.27
CP207	1144	7.64	10.8	-0092.6	1761	0.51	4.6	Brown silty water SAL:0.87 SSG:0.2
RH205	542	7.4	11.1	-0008.5	0835	4.63	42.4	Brown sandy water SSG: 0
16.06.22								
Rh203	1161	7.52	14.78	+84.4	1787	6.32	62.7	SAL:0.88 SSG:0
Downstream canal	196	8.55	24.2	+28	302	8.88	106.2	SAL:0.1 SSG:0
Upstream canal	178	8.24	22.7	+45.5	274	8.95	104.3	SAL:0.09 SSG:0
Mid-stream canal	166	7.93	21.9	+78.5	256	9.4	106.4	Sal:0.08 Ssg:0

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Water Sampling Pro Forma

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
17.06.22									
Cp201		50		2.7	7.85	10.094	30.33		
Ws315		50		3.45	3.95	0.98	2.95		
Cp109		50		2.38	3	20.81	62.55		Stable after 14 litres purged
Ws310		50		1.75	4.05	4.51	13.55		Stable after 7l
Ws306		50		1.3	5.05	7.35	22.1		

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Water Sampling Pro Forma

Monitoring Location	Total Dissolved Solids	pH	Temp	Oxidation Reduction Potential	Electrical Conductivity	Dissolved Oxygen		Notes
	(mg/l)	(Units)	(°C)	(mV)	(µs/cm)	(mg/l)	(% saturation)	
17.06.22								
Cp201	1125	7.17	12.3	-190.9	1729	0	0	Sal: 0.86 Ssg:0.2 101l until stable. Grey putid odour
Ws315	1517	6.99	14.98	-134.8	2427	0	0	Sal:1.23 Ssg:0.1
Cp109	2644	8.14	12.5	-298.8	4069	0	0	Sal:2.14 Ssg:1
Ws310	1204	7.39	11.3	-143.4	1853	0	0	Sal:1.92 Ssg:0.2 Grey putrid odour
Ws306	1088	7.32	11.3	-224.0	1665	0	0	Sal:0.83 Ssg:0.1 Grey putrid odour. 14l purged

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Water Sampling Pro Forma

Client Name: YHG
Site Name: Ten Acres
Weather: Sunny and dry
Ground Conditions: Dry
Operator: JC, JP, EH, AK

Date of Sampling: 15.06.22 – 22.06.22
Job Number: LD10385
Pressure Trend:
Instrument Type: Waterra pump, peristaltic pump

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
20.06.22									
Ws305		50		2.95	4.15	2.35	7.1		Taken from high up in water column
Ws316		50		2.85	4.02	2.3	7		Grey slightly cloudy*?
Ws309		50		2.45	4.07	3.2	10		
Cp108		50		2.1	5.15	5.98	17.96		
Cp208		50		3.6	12.2	16.85	12		
Ws304		50		DRY					
Ws314		50		DRY					
CP204		50		8.55	17	16.56	49.89		
CP203		50		2.75	7.2	8.7	26.2		

mbgl– metres below ground level

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Water Sampling Pro Forma

Monitoring Location	Total Dissolved Solids	pH	Temp	Oxidation Reduction Potential	Electrical Conductivity	Dissolved Oxygen		Notes
	(mg/l)	(Units)	(°C)	(mV)	(µs/cm)	(mg/l)	(% saturation)	
20.06.22								
WS305	1188	6.42	10.1	-110.4	1836	0	0	SAL: 0.9 SSG:0.4
WS316	842	6.63	10.2	-82.7	1296	0	0	SAL:0.61 SSG:0.1
WS309	1079	6.6	10.1	-129.3	1660	0	0	SAL:0.82 SSG:0.3
CP108	778	6.9	10.5	-144.9	1197	0	0	SAL:0.57 SSG:0
CP208	767	6.78	12.4	-40.2	1180	0	0	SAL:0.56 SSG:0

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Water Sampling Pro Forma

Client Name: YHG
Site Name: Ten Acres
Weather: Sunny and dry
Ground Conditions: Dry
Operator: JC, JP, EH, AK

Date of Sampling: 15.06.22 – 22.06.22
Job Number: LD10385
Pressure Trend:
Instrument Type: Waterra pump, peristaltic pump

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
21.06.22									
CP203		50		2.75	7.25	8.82	26.5		
WS312		50		2.67	4.87	4.31	12.96		
WS308		50		2.65	4.05	2.74	8.24		
CP204		50		8.75	17.00				
RH201		50		41.70	41.70				
22.06.22									
RH201		50		29.30	41.50	29.91	71.80		
CP206		50		4.04	13.90		58.07		

mbgl– metres below ground level

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Water Sampling Pro Forma

Monitoring Location	Total Dissolved Solids	pH	Temp	Oxidation Reduction Potential	Electrical Conductivity	Dissolved Oxygen		Notes
	(mg/l)	(Units)	(°C)	(mV)	(µs/cm)	(mg/l)	(% saturation)	
21.06.22								
CP203	1371	6.65	10.6	-0113.3	2110	1.02	9.3	SAL:1.06 SSG:0.4
WS312	1168	6.58	10.8	-59.4	1798	1.83	16.7	SAL:0.88 SSG:0.2
WS308	1014	6.92	10.2	-178.8	1561	0	0	SAL:0.76 SSG:0.1
CP204								Could not pump with low flow
22.06.22								
RH201	845	6.88	12.6	-14.3	1299	3.12	29.7	SAL:0.02 SSG:0
CP206	1254	6.73	11	-86.1	1930	0.97	9	SAL:0.96 SSG:0.3

Please consider the environment before printing this document

Water Sampling Pro Forma

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
20.06.22									
RH205		50		26.6	50.82				
WS302		50		1.40	5.15				
WS105		50		0.92	1.86				
WS307		50		1.15	2.8				
WS106		50		1.71	1.82				
RH106		50		3.80	7.00				Blocked up to 7.00m.
WS303		50		2.55	5.02				Putrid odour

Please consider the environment before printing this document

Water Sampling Pro Forma

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
21.06.22									
WS301		50		2.74	2.95				Putrid odour
CP210		50		9.10	17.41				
WS313		50		DRY	4.00				
CP205		50		3.05	7.60				
WS319		50		2.20	3.08				
WS317		50		2.80	5.00				

Please consider the environment before printing this document

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name:
Site Name: Ten Acres
Weather: Sunny, Very hot
Ground Conditions:
Operator: JP AK

Date of Sampling: 18/07/2022
Job Number: LD10385
Pressure Trend:
Instrument Type: GFM 436

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
RH206	-	-	-	-	-	-	0.3	0		1012	0	22	44.5	
CP108	-	-	-	-	-	-	0	0		1012	0	2.36	5.53	
WS309	-	-	-	-	-	-	0	0		1010	0	2.45	4.05	
WS306	-	-	-	-	-	-	0	0		1009	0	1.4	5.05	
WS311	6	6	10	10	0.9	0.9	0	0		1009	0	DRY	2.05	
CP202	0.1	0	0.2	0.2	21.1	21.5	0	0		1008	0	2.25	15.05	H2S: 0 CO: 0 HEX: 0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS303	0	0	5.7	5.7	12.9	12.9	0	0		1008	0	2.6	4.95	H2S: 0 CO: -10 HEX: 254
RH101	-	-	-	-	-	-	-	-		-	-	3.05	19.75	
WS109	-	-	-	-	-	-	-	-		-	-	DRY	1.75	
WS307	-	-	-	-	-	-	-	-		-	-	1.25	2.97	
WS310	-	-	-	-	-	-	-	-		-	-	1.8	4	
CP109	-	-	-	-	-	-	-	-		-	-	2.55	13.05	
CP207	0.3	0.3	2.4	2.4	15.3	15.3	0	0		1008	0	7.38	19.62	H2S: 0 CO: 0 HEX: 0.035
RH205	0	0	0	0	19.9	19.9	0	0		1008	0	26.6	50.5	H2S: 0 CO: 0 HEX: 0.011
WS105	0.5	0.5	1.7	1.7	16.4	16.4	0	0		1008	0	1.05	1.88	H2S: 0 CO: 0 HEX: 0.221

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS302	0.3	0.3	4.2	4.2	15.3	15.3	0	0		1008	0	1.46	5.14	H2S: 0 CO: 0 HEX: 0
WS312	-0.3	-0.3	0.9	0.9	20.1	20.1	0	0		1008	0	2.8	4.9	H2S: 0 CO: 0 HEX: 0
CP203	-0.3	-0.3	0.2	0.2	21.4	21.5	0	0		1007	0	2.9	7.25	H2S: 0 CO: 0 HEX: 0
CP206	0	-0.2	0.3	0.3	20.9	20.9	0	0		1007	0	4.15		H2S: 0 CO: 0 HEX: 0
CP205	0	-0.3	0.3	0.3	21	21	0	0		1007	0	3.28	7.26	H2S: 0 CO: 0 HEX: 0
CP112/R H103	-	-	-	-	-	-	-	-		-	-	7.55	26.95	NO BUNG OR HEADWORKS
CP204	0	-0.3	0.2	0.2	21.4	21.4	0	0		1007	0	TUBING STUCK	TUBING STUCK	H2S: 0 CO: 0 HEX: 0
WS313	0	-0.4	2.9	2.9	18.7	18.7	0	0		1007	0	DRY	4.04	H2S: 0 CO: 0 HEX: 0
WS120	-	-	-	-	-	-	-	-		-	-	DRY	1.74	NO BUNG

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						Steady or Peak / Steady
WS308	0	-0.4	7.1	7.1	21.7	21.7	0	0		1007	0	2.76	4.05	H2S: 0 CO: 0 HEX: 0
WS113	-	-	-	-	-	-	-	-		-	-	1.5	1.85	
RH201	-0.4	-0.4	0	0	21.7	21.7	0	0		1007	0	29.3		H2S: 0 CO: 0 HEX: 0
WS316	-0.1	-0.1	2.9	2.9	18.8	18.8	0	0		1011	0	3.45	4.4	H2S: 0 CO: 0 HEX: <<
WS301	-0	0	6.6	6.6	10.2	10.2	0	0		1011	0	3.09	3.12	H2S: 0 CO: 0 HEX: 0
CP201	0	0	0.2	0.2	21.2	21.2	0.1	0.1		1009	0	3.18	8.2	H2S: 0 CO: 0 HEX: 0
CP107	0	0	0.1	0.1	21.5	21.5	0	0		1010	0	3.72	9.16	H2S: 0 CO: 0 HEX: ?
WS315	-0.1	-0.1	2.2	2.2	18.8	18.8	0.1	0.1		1009	1	4.05	4.47	H2S: 0 CO: 0 HEX: 0
CP208	-0.1	-0.1	0.3	0.3	21.2	21.2	0	0		1009	0	4.21	12.51	H2S: 0 CO: 0 HEX: 0

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						Steady or Peak / Steady
WS111	-0.1	-0.1	1.4	1.4	7.3	7.3	0	0		1008	0	DRY	2	H2S: 0 CO: 0 HEX: 0
CP209	0	0	0	0	20.9	20.9	0	0		1012	0	1.54	7.53	H2S: 0 CO: 0 HEX: 0
WS103	-0.1	-0.1	3.7	3.7	14.7	14.7	0	0		1012	0	1.8	2.26	H2S: 0 CO: 0 HEX: 0
WS318	-0.1	-0.1	2.9	2.9	18.3	18.3	0	0		1012	0	3.44	5.59	H2S: 0 CO: 0 HEX: 0
WS305	-0.1	-0.1	2.9	2.9	20.2	20.2	0.1	0.1		1011	1	3.48	4.68	H2S: 0 CO: 0 HEX: 0
RH204	0	0	0.6	0.6	20.3	20.3	0	0		1011	0	24.8	47.23	
WS117	-0.1	-0.1	5.8	5.8	13.5	13.5	0	0		1011	0	2.74	3.5	
WS113	0	0	1.6	1.6	19	19	0	0		1011	0	1.96	1.97	
CP102	-	-	-	-	-	-	-	-		-	-	DRY	2.57	NO BUNG

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS304	-	-	-	-	-	-	-	-		-	-	DRY	4.56	NO BUNG
WS314	1.5	1.5	0.9	0.9	3	3	0	0		1007	0	DRY	3.99	H2S: 0 CO: 0 HEX: 0.119
RH202	-0.1	-0.1	0.5	0.5	20.1	20.1	0	0		1007	0			TUBE STUCK H2S: 0 CO: 0 HEX: 0
RH203	-0.1	-0.1	0.6	0.6	20.1	20.1	0	0		1008	0	31.94	50.62	H2S: 0 CO: 0 HEX: 0
CP210	-0.1	-0.1	0.6	0.6	19.9	19.9	0	0		1007	0	9.62	10.91	H2S: 0 CO: 0 HEX: 0
WS108	-	-	-	-	-	-	-	-		-	-	DRY	2.02	NO BUNG
WS107	-	-	-	-	-	-	-	-		-	-	1.59	2.22	
CP114	-	-	-	-	-	-	-	-		-	-	9.1	12.69	

RECORD OF MEASUREMENTS FOR GAS MONITORING BOREHOLES

Client Name:
Site Name: Ten Acres
Weather: Sunny, Very hot
Ground Conditions:
Operator: JP AK

Date of Sampling: 01/08/2022
Job Number: LD10385
Pressure Trend:
Instrument Type: GFM 436

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
CP102	-	-	-	-	-	-	-	-	-	-	-	DRY	1.3	
CP108	-	-	-	-	-	-	-	-	-	-	-	2.25	5.15	
CP109	-	-	-	-	-	-	-	-	-	-	-	1.6	12.95	
CP109	-	-	-	-	-	-	-	-	-	-	-	3.69	9.1	
CP112/ RH103	-	-	-	-	-	-	-	-	-	-	-	7.5	26.9	
CP114	-	-	-	-	-	-	-	-	-	-	-	DRY	4	

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
CP201	-	-	-	-	-	-	-	-	-	-	-	3.09	8.12	
CP202A	-	-	-	-	-	-	-	-	-	-	-	2.44	15	Putrid
CP203	-	-	-	-	-	-	-	-	-	-	-	3	7.25	
CP204	-	-	-	-	-	-	-	-	-	-	-	8.7	16.8	
CP205	-	-	-	-	-	-	-	-	-	-	-	3.4	7.67	
CP206	-	-	-	-	-	-	-	-	-	-	-	4.25	13.95	
CP207	-	-	-	-	-	-	-	-	-	-	-	7.5	19.2	
CP208	-	-	-	-	-	-	-	-	-	-	-	4.13	12.47	
CP209	-	-	-	-	-	-	-	-	-	-	-	1.36	7.28	

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
CP210	-	-	-	-	-	-	-	-	-	-	-	9.46	17.68	
RH101	-	-	-	-	-	-	-	-	-	-	-	3.18	19.7	
RH106	-	-	-	-	-	-	-	-	-	-	-	DRY	3.95	
RH201	-	-	-	-	-	-	-	-	-	-	-	29.28	41.15	
RH202	-	-	-	-	-	-	-	-	-	-	-	30.26	50.76	
RH203	-	-	-	-	-	-	-	-	-	-	-	31.85	50.48	
RH204	-	-	-	-	-	-	-	-	-	-	-	DRY	11.4	Tube stuck
RH205	-	-	-	-	-	-	-	-	-	-	-	26.6	50.35	
RH206	-	-	-	-	-	-	-	-	-	-	-	21.95	44.45	

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS103	-	-	-	-	-	-	-	-	-	-	-	1.55	2	
WS104	-	-	-	-	-	-	-	-	-	-	-	DRY	1.75	
WS105	-	-	-	-	-	-	-	-	-	-	-	1.1	1.9	
WS107	-	-	-	-	-	-	-	-	-	-	-	1.42	2	
WS108	-	-	-	-	-	-	-	-	-	-	-	DRY	2	
WS109	-	-	-	-	-	-	-	-	-	-	-	DRY	1.76	
WS111	-	-	-	-	-	-	-	-	-	-	-	DRY	1.63	
WS112	-	-	-	-	-	-	-	-	-	-	-	DRY	1.96	
WS113	-	-	-	-	-	-	-	-	-	-	-	1.6	1.85	No bung

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS120	-	-	-	-	-	-	-	-	-	-	-	DRY	1.75	
WS301	-	-	-	-	-	-	-	-	-	-	-	3.17	3.21	
WS302	-	-	-	-	-	-	-	-	-	-	-	1.45	5.15	
WS303	-	-	-	-	-	-	-	-	-	-	-	2.65	5	
WS304	-	-	-	-	-	-	-	-	-	-	-	4.24	4.25	
WS305	-	-	-	-	-	-	-	-	-	-	-	3.42	4.4	
WS306	-	-	-	-	-	-	-	-	-	-	-	1.46	5.1	
WS307	-	-	-	-	-	-	-	-	-	-	-	1.3	3.02	
WS308	-	-	-	-	-	-	-	-	-	-	-	2.85	4.05	

Borehole Ref.	CH_4% by Volume		CO_2 % by Volume		O_2 % by Volume		Flow Rate l/hr		Sample Type	Barometric Pressure (mb)	Relative Pressure (mb)	Depth to Water (m BtC)	Depth to Base (mBtC)	Notes Steady or Peak / Steady
	Peak	Steady	Peak	Steady	Peak (low)	Steady	Peak	Steady						
WS310	-	-	-	-	-	-	-	-	-	-	-	1.9	4.05	
WS311	-	-	-	-	-	-	-	-	-	-	-	DRY	2.1	
WS312	-	-	-	-	-	-	-	-	-	-	-	2.9	4.9	
WS313	-	-	-	-	-	-	-	-	-	-	-	DRY	4.05	
WS314	-	-	-	-	-	-	-	-	-	-	-	DRY	3.96	
WS315	-	-	-	-	-	-	-	-	-	-	-	3.97	4.28	
WS316	-	-	-	-	-	-	-	-	-	-	-	3.47	4.42	
WS317	-	-	-	-	-	-	-	-	-	-	-	2.83	3.45	
WS318	-	-	-	-	-	-	-	-	-	-	-	3.38	5.39	

A P P E N D I X K

Groundwater Development and Sampling Records

Well Development Data

Client Name: Your Housing Group Ltd. **Job Number: LD10162**

Site Name: Ten Acres Lane - Newton Heath

Date	Borehole	Depth to water (m bgl)	Depth to Base (m bgl)	Notes
09/11/2020	CP110	2.61	3.86	10x well volume removed. Water was silty.
	RH106	24.81	41.87	43 litres removed, well dry with very slow recharge
	RH102	2.65	13.54	No bung. Water silty with very strong rotten egg odour. 10x well volume removed - water appears clearer.
	RH110	21.76	22.55	Unable to remove any water
	CP103a	5.29	8.61	Taller pipe. Rotten egg odour. 10x well volume removed.
	CP103b	5.23	6.13	Shorter pipe. Rotten egg odour. 10x well volume removed.
	RH101	9.47	20.32	35 litres removed, hole dry.
10/11/2020	CP107	3.46	8.91	10x well volume removed. Water was silty.
	CP113	1.82	3.49	7 litres removed, hole dry. Brown silty water.
	CP109	2.42	12.9	Grey silty water with strong eggy odour
	CP112	7.14	27.22	Silty water with slight eggy odour. Poor headworks
	CP108	1.77	5.14	silty water. 15 litres removed, water running clear.
	WS109	DRY	1.66	-
	WS112	DRY	1.76	-
	WS101	0.44	1.82	7 litres very silty water removed, hole dry.
	WS103	1.15	1.85	10x well volume removed. Water slightly silty.
	RH108	8.64	14.74	Verysilty/sl sandy water removed. 15 litres removed, blocking tubing. After developing base at 13.02m
	RH109a	9.97	15.73	Very silty/sandy water. 30 litres removed, tubing blocked.
	RH109b	9.4	17.06	Very silty/sandy water. 10x well volume removed, very slow.
11/11/2020	WS107	0.25	1.76	10x well volume removed, slow recharge.
	WS108	1.76	2.11	10x well volume removed, slow recharge.
	WS113	1.33	1.8	10x well volume removed, slow recharge.
	WS119	DRY	1.81	-
	WS102	1.25	1.75	10x well volume removed, fast recharge.
	WS120	1.65	1.69	Unable to remove any water
	WS104	1.59	1.78	10x well volume removed, slow recharge.
	WS105	0.9	1.74	10x well volume removed, fast recharge.
	WS106	0.72	1.72	10x well volume removed, fast recharge.
	WS111	0.45	1.38	Silty, slow recharge.

Water Sampling Pro Forma

Client Name: YHG
Site Name: Ten Acres
Weather: Overcast and dry
Ground Conditions: Recently wet
Operator: JC & JP

Date of Sampling: 05-06/05/2022
Job Number: LD10385
Pressure Trend:
Instrument Type: Waterra pump, bailers, HDPE tubing

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
WS302	-	50	-	~1.5m	5.50	7.84	23.52	-	Light brown water with black plant like detritus.
WS307	-	50	-	~1.0m	3.50	5.00	15.00	-	Light brown water with black plant like detritus. Putrid / solvent odour becoming stronger as developed. Dead bee next to well.
WS306	-	50	-	~1.0m	5.00	8.00	24.00	-	Initially greenish grey becoming brown. Hydrocarbon / putrid odour.
WS310	-	50	-	2.40m	3.90	4.67	14.00	-	Greenish grey with black plant like and fine white detritus. Putrid-hydrocarbon odour.
WS311	-	50	-	Dry	2.50	-	-	-	Dry
WS303	-	50	-	~2.00m	5.50	7.00	21.00	-	Greyish brown water. Putrid odour. Clear on second bucket.
WS301	-	50	-	2.50m	2.90	0.80	0.24	-	No bung. Dark brown with oily sheen and black plant like detritus.
WS309	-	50	-	Dry	1.50	-	-	-	Can see bentonite in standpipe. Base should be at 4.00m.
WS313	-	50	-	Dry	Dry	-	Dry	-	Dry

Please consider the environment before printing this document

Water Sampling Pro Forma

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
CP202	200	50	-	1.85	14.60	24.99	74.97	-	Gas valve left open. Dark brown with white detritus becoming grey with white froth and strong putrid odour.
CP207	200	50	-	6.10	19.10	25.48	76.44	-	Light brown water.
CP203	200	50	-	~1.00m	7.30	12.40	3700	-	Light brown water.
CP206	200	50	-	~1.00m	13.65	24.79	74.38	-	Light brown with fine sand or ash on surface.
CP204	200	50	-	~1.00m	17.00	31.36	28.00	-	Light brown with fine sand or ash on surface. Only did two buckets as ran dry.
WS308	-	50	-	~1.00m	4.00	5.88	17.64	-	Black oily water. Oily sheen and strong hydrocarbon odour.
WS312	-	50	-	2.75	5.50	5.00	6.00	-	Ran dry half a bucket. Light brown with black droplets.
WS313	-	50	-	Dry	-	-	-	-	Dry
WS314	-	50	-	Dry	3.95	-	-	-	Dry
CP210	200	50	-	~1.00m	17.5	18.30	-	-	Unable to develop as well full of f-m quartz media that was blocking up foot valve.
WS304	-	50	-	Dry	4.15	-	-	-	Dry
CP203	200	50	-	-	7.30	4.80	14.40	-	Light brown silty water. Slight putrid odour
CP206	200	50	-	-	13.65	6.95	20.87	-	No bung or valve. Light brown water with black detritus.

Please consider the environment before printing this document

Water Sampling Pro Forma

Monitoring Location	Borehole Diameter (mm)	Standpipe Diameter (mm)	Depth to Product (mbgl)	Depth to Water (mbgl)	Depth to Base (mbgl)	Volume of Water in Borehole (l)	Volume of Water Purged (l)	Depth Water Post Purge (mbgl)	Notes
CP204	200	50	-		17.00	12.94	38.80	-	Light brown water with black detritus becoming clear by second bucket.
CP205	-	-	-	-	-	-	-	-	No install?
CP209	200	50	-	~1.00m	7.14	11.76	35.30	-	Brown silty water with black detritus.
WS318	-	50	-	-	5.09	6.86	20.58	-	Dark brown water with slight oily sheen and black detritus.
WS306	-	50	-	~2.00m	4.20	4.31	14.00	-	Dark brown water with slight oil sheen. Frequent black detritus.
WS316	-	50	-	~2.00m	4.00	3.92	12.00	-	Dark brown water with slight oil sheen. Frequent black detritus.
WS317	-	50	-	~1.50m	3.13	2.94	14.00	-	Dark brown water with oil sheen. Frequent black detritus. Hydrocarbon odour. Becoming clearer as developed.
CP201	200	50	-	~2.00m	7.70	11.17	33.52	-	No valve. Light brown with strong putrid odour.
CP208	200	50	-	~3.60	11.85	16.17	48.50	-	Light brown water with black detritus.
WS315	-	50	-	~2.50	3.95	3.92	11.76	-	Light brown water with black detritus.

mbgl– metres below ground level

Please consider the environment before printing this document

A P P E N D I X L

PID Results

PID Results

Client Name: Your Housing Group Ltd.
Site Name: Ten Acres Lane - Newton Heath
Job Number: LD10162

Reference	Depth	PIDResult
CP101/RH109	1.5	0.30
CP101/RH109	4.5	0.70
CP101/RH109	6.5	0.20
CP101/RH109	10.5	0.00
CP103	1.5	3.50
CP103	8.5	0.50
CP103	0.5	0.50
CP103	2.5	1.70
CP103	9.5	0.20
CP103	3.5	1.00
CP103	5.5	4.30
CP103	14.5	0.20
CP105	0.5	0.10
CP105	4.5	0.10
CP105	1.5	0.80
CP105	2.5	0.20
CP108	2.4	0.30
CP108	5.1	0.10
CP108	1.5	0.50
CP108	0.5	0.10
CP110	0.6	0.10
CP113	0.8	0.80
CP113	0.5	0.10
CP114/RH108	8.5	0.20
CP114/RH108	0.5	0.10
CP114/RH108	5.5	0.00
TP109	1.1	0.00
TP110	1.2	1.80
TP110	3.3	13.80
TP114	3.6	0.40
TP114	0.9	0.50
TP115	0.4	0.20
TP117	3.6	5.00
TP117	1.7	0.40
TP118	1.8	0.60
TP118	0.5	0.20
TP118	1.8	0.60
TP125	3.3	0.30
TP125	2.4	0.30
TP127	1.2	0.30

TP127	4.35	0.30
TP128	3.6	0.10
TP130	0.3	0.10
TP132	0.3	0.40
TP132	2.6	0.40
TP133	0.6	0.20
TP134	0.2	0.20
TP135	1.2	0.20
TP138	3.3	0.10
TP140	1	0.10
TP142	2.7	0.00
TP145	2.2	0.60
TP145	3.9	2.10
TP146	4.3	1.10
TP146	0.8	0.20
WS101	3	0.00
WS101	0.5	0.00
WS102	2.5	1.00
WS104	5	0.10
WS106	4	0.10
WS106	2.72	0.00
WS107	1.4	1.50
WS108	0.8	5.40
WS109	3.4	0.70
WS109	0.9	0.00
WS109	2.35	0.80
WS119	1.5	8.40

A P P E N D I X M

Geotechnical Results

LABORATORY REPORT

4043

Contract Number: PSL22/3486

Report Date: 24 June 2022

Client's Reference: LD10385

Client Name: Wardell Armstrong
Northspring
36 Park Row
Leeds
LS1 5JL

For the attention of: Elliot Heatherington

Contract Title: Ten Acres Lane

Date Received: 17/5/2022
Date Commenced: 17/5/2022
Date Completed: 24/6/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Director)	R Berriman (Quality Manager)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T Watkins (Senior Technician)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP242		B	2.50		MADE GROUND brown clayey sand & gravel.
TP254		B	1.30		MADE GROUND brown very sandy clayey gravel with cobbles.
TP204		B	2.50		Dark brown gravelly sandy CLAY.
TP207		B	3.00		MADE GROUND brown clayey sand & gravel.
TP206		B	1.00		MADE GROUND dark brown very gravelly clayey sand.
TP226		B	1.50		MADE GROUND dark brown very gravelly very sandy clay.
TP227A		B	2.50		MADE GROUND brown clayey sand & gravel.
TP259		B	2.80		MADE GROUND brown very gravelly clayey sand.
TP260		B	2.10		MADE GROUND dark brown very gravelly very sandy clay.
TP261		B	2.00		MADE GROUND dark grey very sandy clayey gravel.
TP262		B	2.00		Grey sandy clayey GRAVEL with cobbles.
TP248A		B	1.40		MADE GROUND dark brown very sandy clayey gravel.
TP246A		B	1.50		MADE GROUND dark brown very sandy clayey gravel.
TP217A		B	1.60		MADE GROUND dark brown very sandy clayey gravel with some cobbles.
TP258		B	2.50		MADE GROUND brown clayey sand & gravel.

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP242		B	2.50		19		2.51					
TP254		B	1.30		16							
TP204		B	2.50		29		2.61	46	23	23	70	Intermediate Plasticity CI
TP207		B	3.00		25							
TP206		B	1.00		25		2.42					
TP226		B	1.50		20		2.47	44	22	22	51	Intermediate Plasticity CI
TP227A		B	2.50		12		2.42					
TP259		B	2.80		25		2.38					
TP260		B	2.10		14							
TP261		B	2.00		11		2.35					
TP262		B	2.00		7.3							
TP248A		B	1.40		25							
TP246A		B	1.50		25							
TP217A		B	1.60		21		2.32					
TP258		B	2.50		19							

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

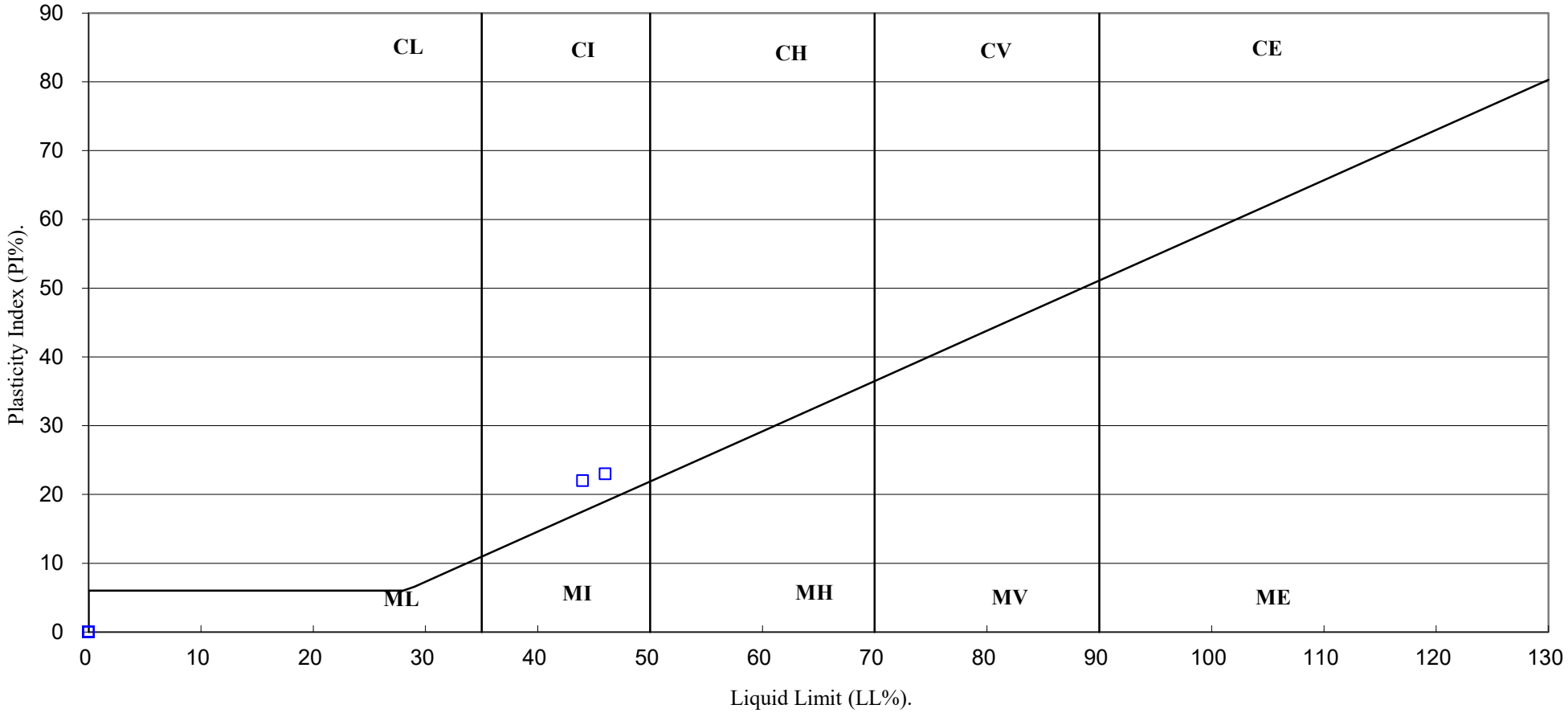
UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3486
Client Ref:
LD10385

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3486 Client Ref: LD10385

PARTICLE SIZE DISTRIBUTION TEST

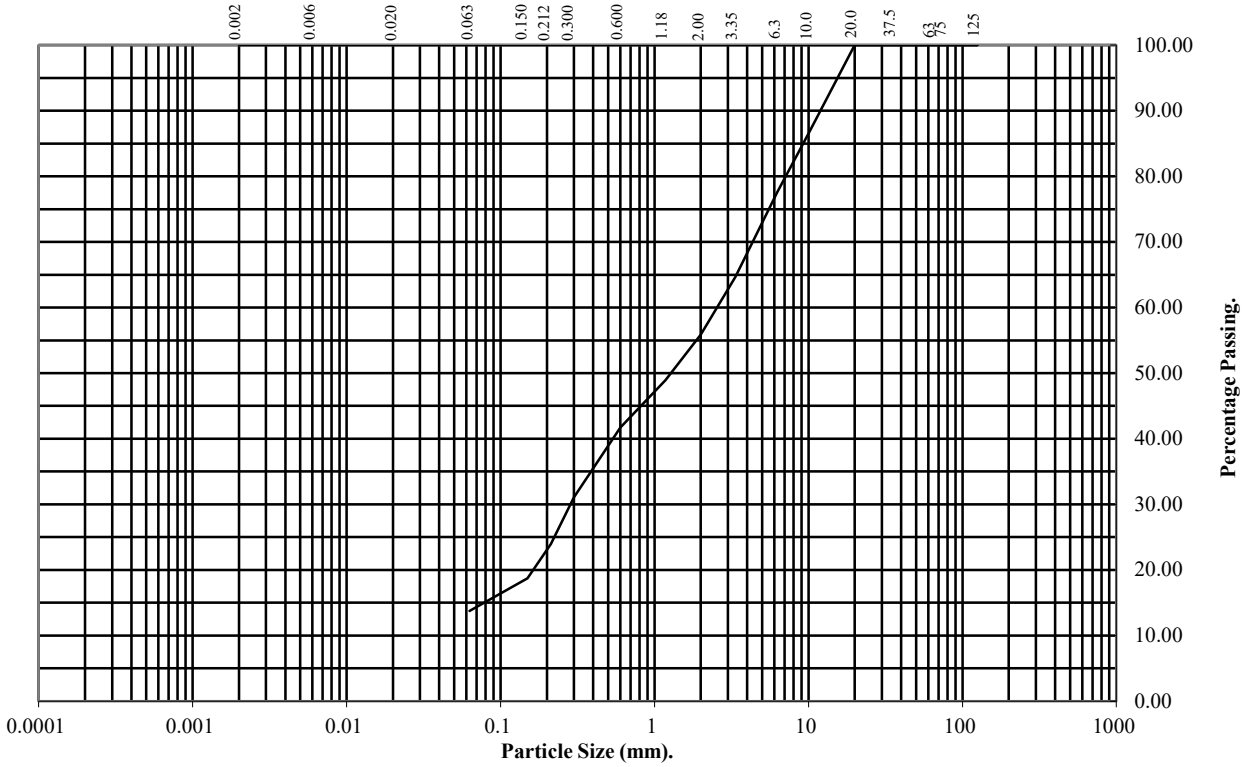
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP242 **Top Depth (m):** 2.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	87
6.3	78
3.35	65
2	56
1.18	49
0.6	42
0.3	31
0.212	24
0.15	19
0.063	14

Soil Fraction	Total Percentage
Cobbles	0
Gravel	44
Sand	42
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

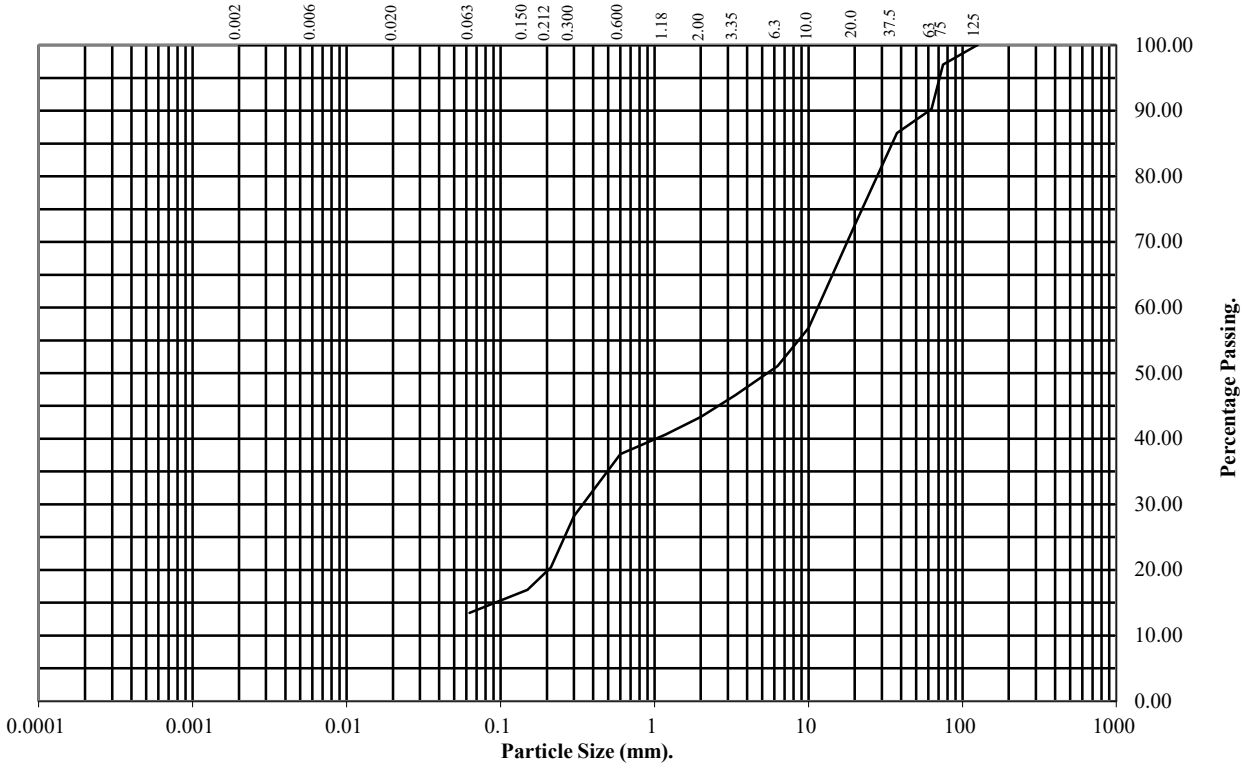
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP254 **Top Depth (m):** 1.30

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	97
63	90
37.5	87
20	73
10	57
6.3	51
3.35	47
2	43
1.18	41
0.6	38
0.3	28
0.212	20
0.15	17
0.063	13

Soil Fraction	Total Percentage
Cobbles	10
Gravel	47
Sand	30
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

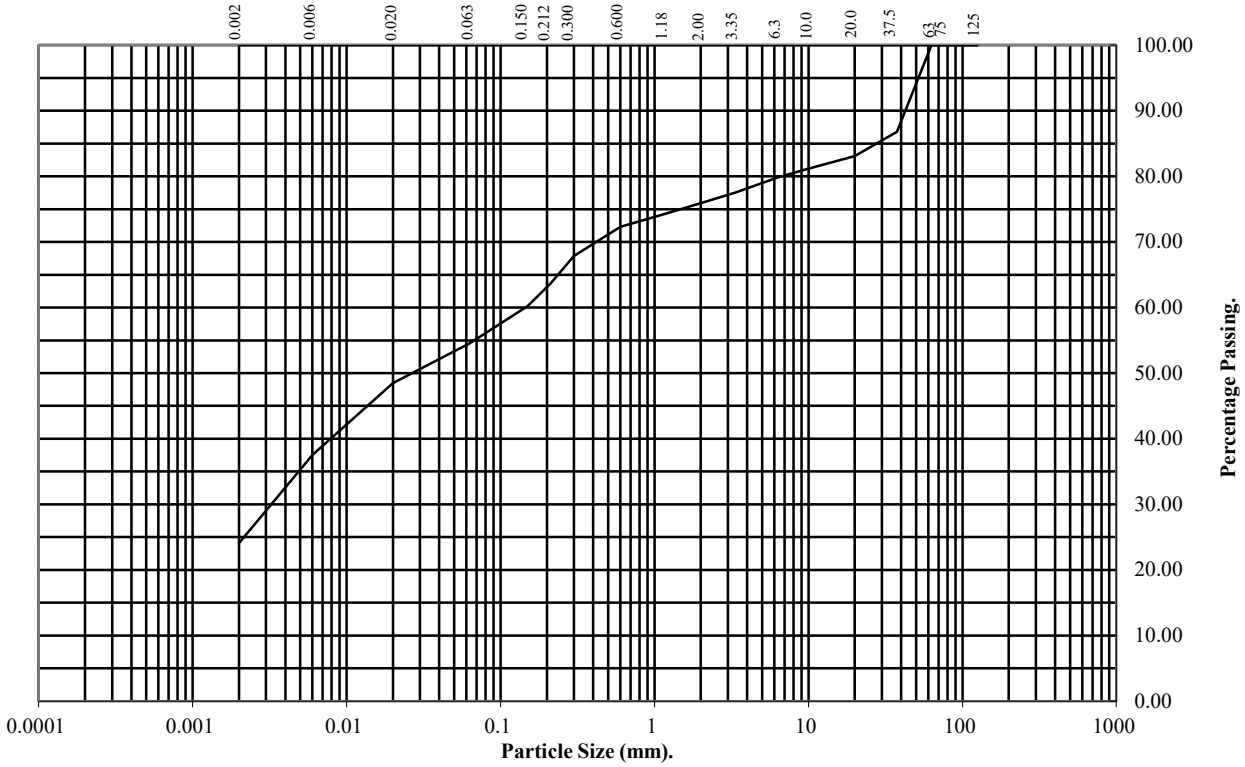
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP204 **Top Depth (m):** 2.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	87
20	83
10	81
6.3	80
3.35	78
2	76
1.18	74
0.6	72
0.3	68
0.212	64
0.15	60
0.063	55

Particle Diameter	Percentage Passing
0.02	48
0.006	38
0.002	24

Soil Fraction	Total Percentage
Cobbles	0
Gravel	24
Sand	21
Silt	31
Clay	24

Remarks:
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

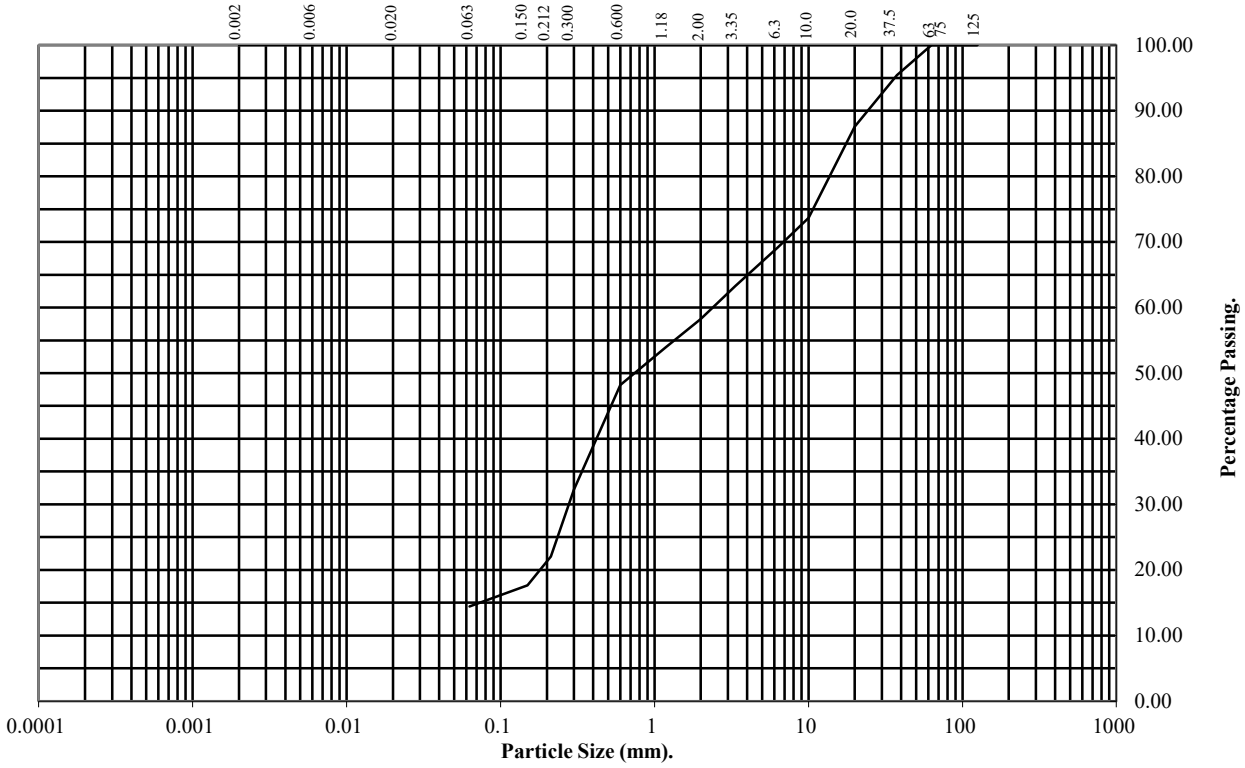
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP207 **Top Depth (m):** 3.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	95
20	88
10	74
6.3	69
3.35	63
2	58
1.18	54
0.6	48
0.3	32
0.212	22
0.15	18
0.063	14

Soil Fraction	Total Percentage
Cobbles	0
Gravel	42
Sand	44
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

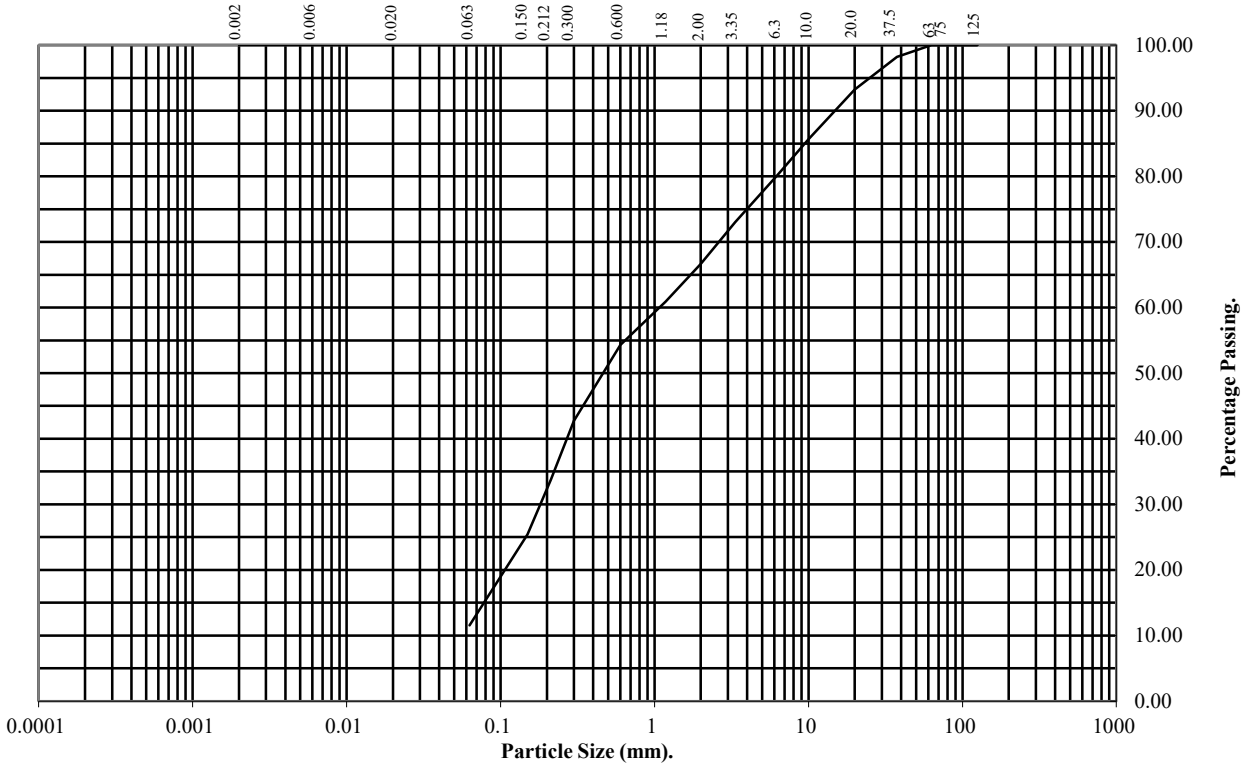
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP206 **Top Depth (m):** 1.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	98
20	93
10	86
6.3	80
3.35	73
2	67
1.18	61
0.6	54
0.3	43
0.212	34
0.15	25
0.063	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	33
Sand	55
Silt/Clay	12

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3486
Client Ref:
LD10385

PARTICLE SIZE DISTRIBUTION TEST

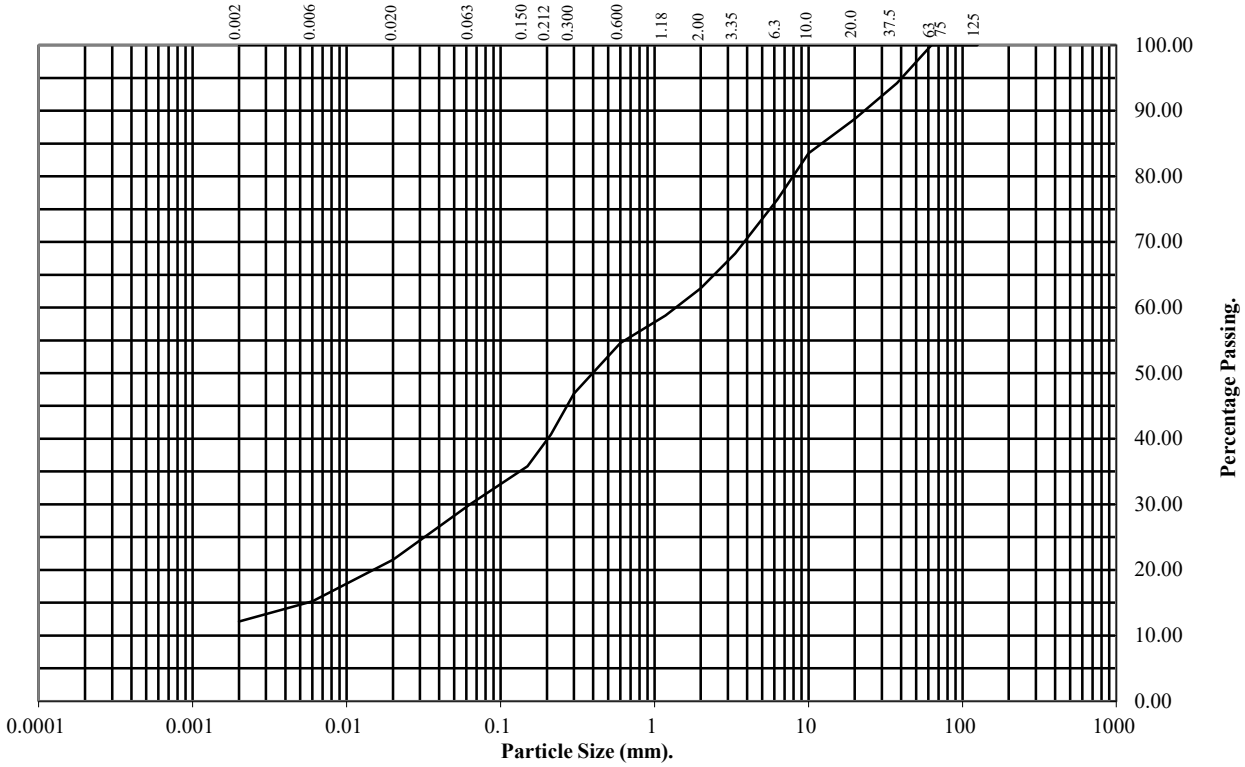
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP226 **Top Depth (m):** 1.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	94
20	89
10	84
6.3	76
3.35	68
2	63
1.18	59
0.6	55
0.3	47
0.212	41
0.15	36
0.063	30

Particle Diameter	Percentage Passing
0.02	22
0.006	15
0.002	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	37
Sand	33
Silt	18
Clay	12

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Ten Acres Lane**	**Contract No:** PSL22/3486 **Client Ref:** LD10385

PARTICLE SIZE DISTRIBUTION TEST

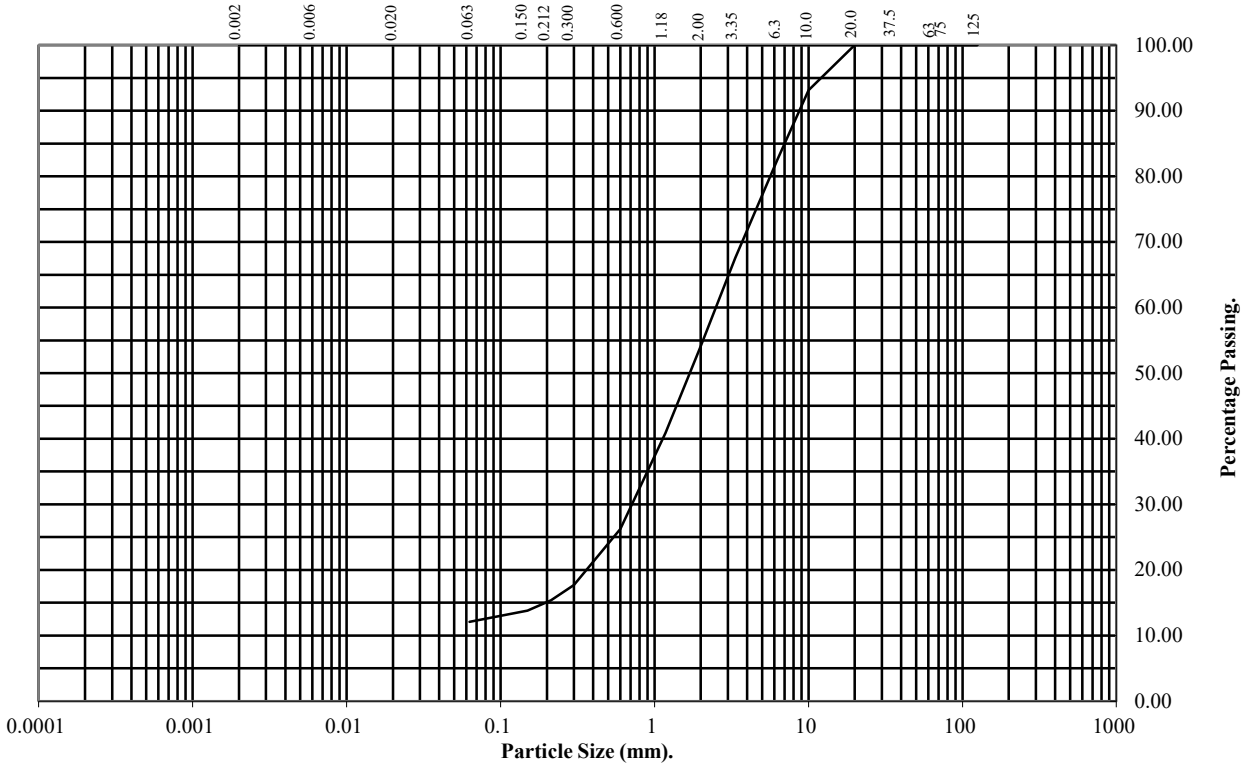
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP227A **Top Depth (m):** 2.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	93
6.3	83
3.35	68
2	54
1.18	41
0.6	26
0.3	18
0.212	15
0.15	14
0.063	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	46
Sand	42
Silt/Clay	12

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

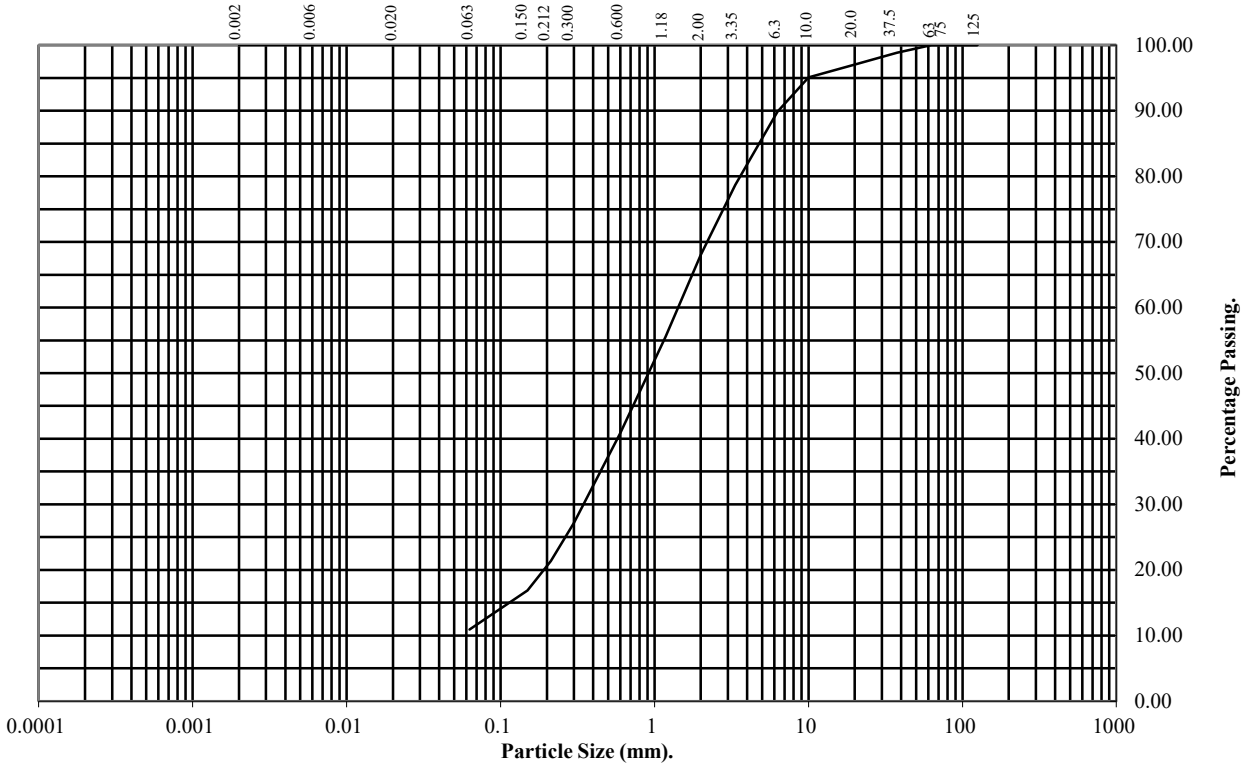
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP259 **Top Depth (m):** 2.80

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	99
20	97
10	95
6.3	90
3.35	79
2	68
1.18	56
0.6	41
0.3	27
0.212	21
0.15	17
0.063	11

Soil Fraction	Total Percentage
Cobbles	0
Gravel	32
Sand	57
Silt/Clay	11

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

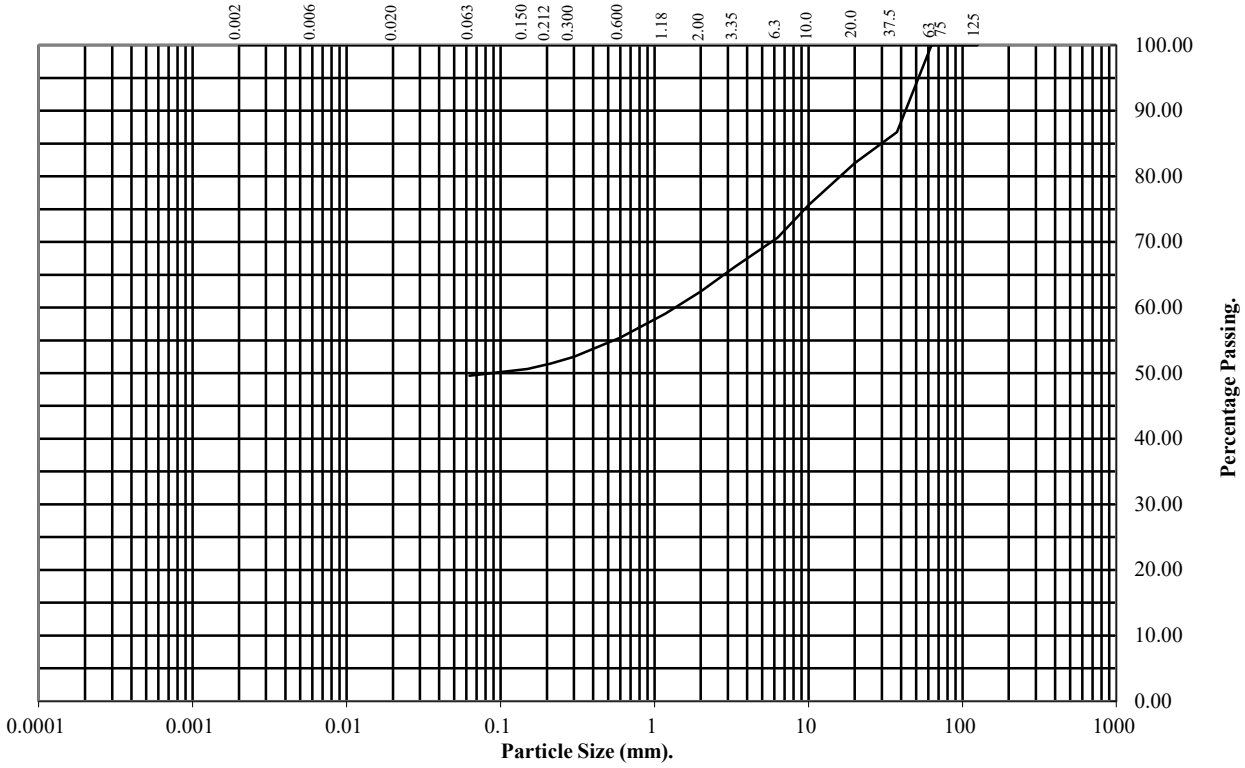
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP260 **Top Depth (m):** 2.10

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	87
20	82
10	76
6.3	71
3.35	66
2	62
1.18	59
0.6	55
0.3	53
0.212	51
0.15	51
0.063	50

Soil Fraction	Total Percentage
Cobbles	0
Gravel	38
Sand	12
Silt/Clay	50

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

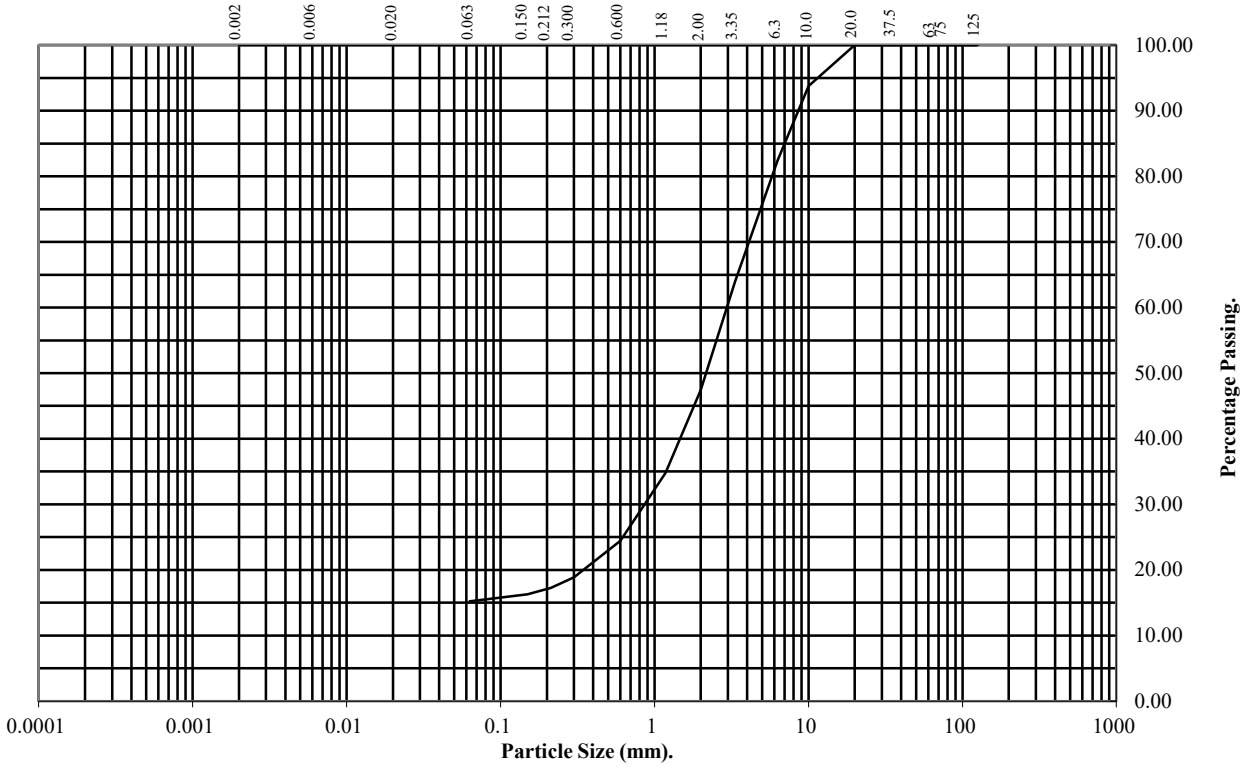
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP261 **Top Depth (m):** 2.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	94
6.3	82
3.35	64
2	47
1.18	35
0.6	24
0.3	19
0.212	17
0.15	16
0.063	15

Soil Fraction	Total Percentage
Cobbles	0
Gravel	53
Sand	32
Silt/Clay	15

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

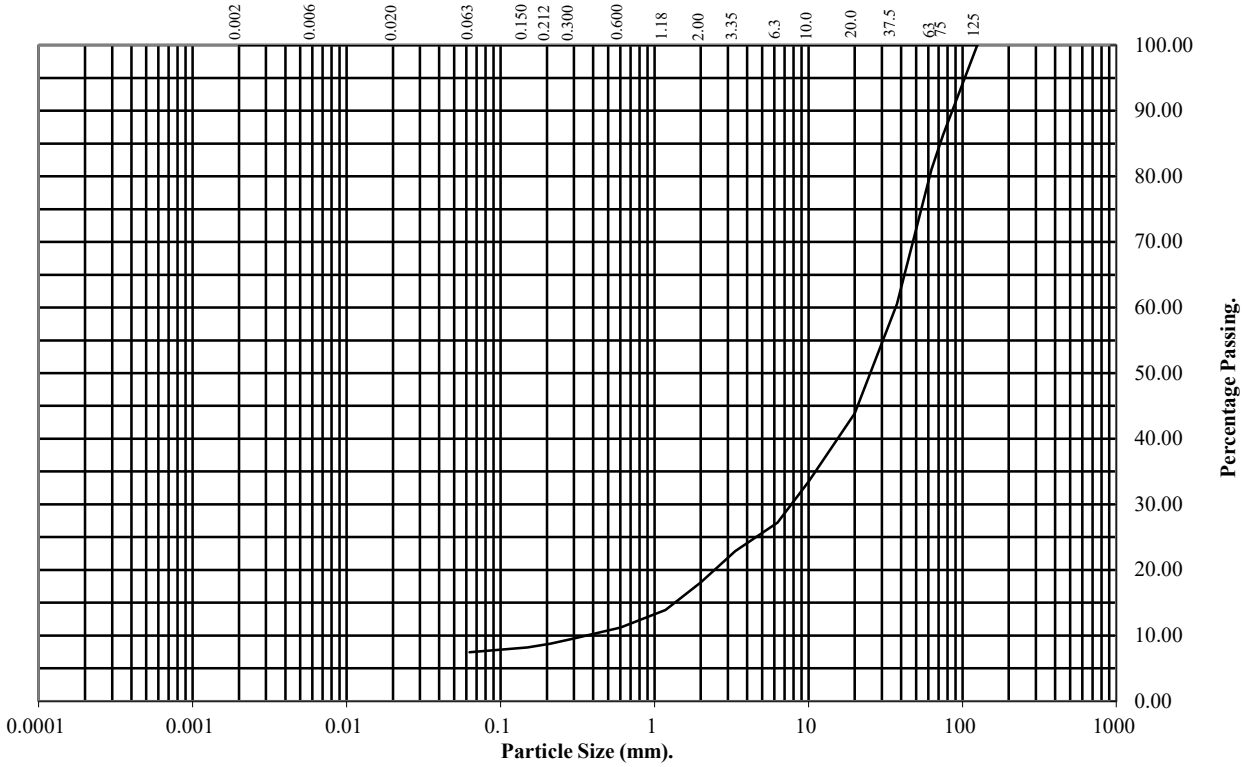
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP262 **Top Depth (m):** 2.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	86
63	81
37.5	61
20	44
10	33
6.3	27
3.35	23
2	18
1.18	14
0.6	11
0.3	10
0.212	9
0.15	8
0.063	7

Soil Fraction	Total Percentage
Cobbles	19
Gravel	63
Sand	11
Silt/Clay	7

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

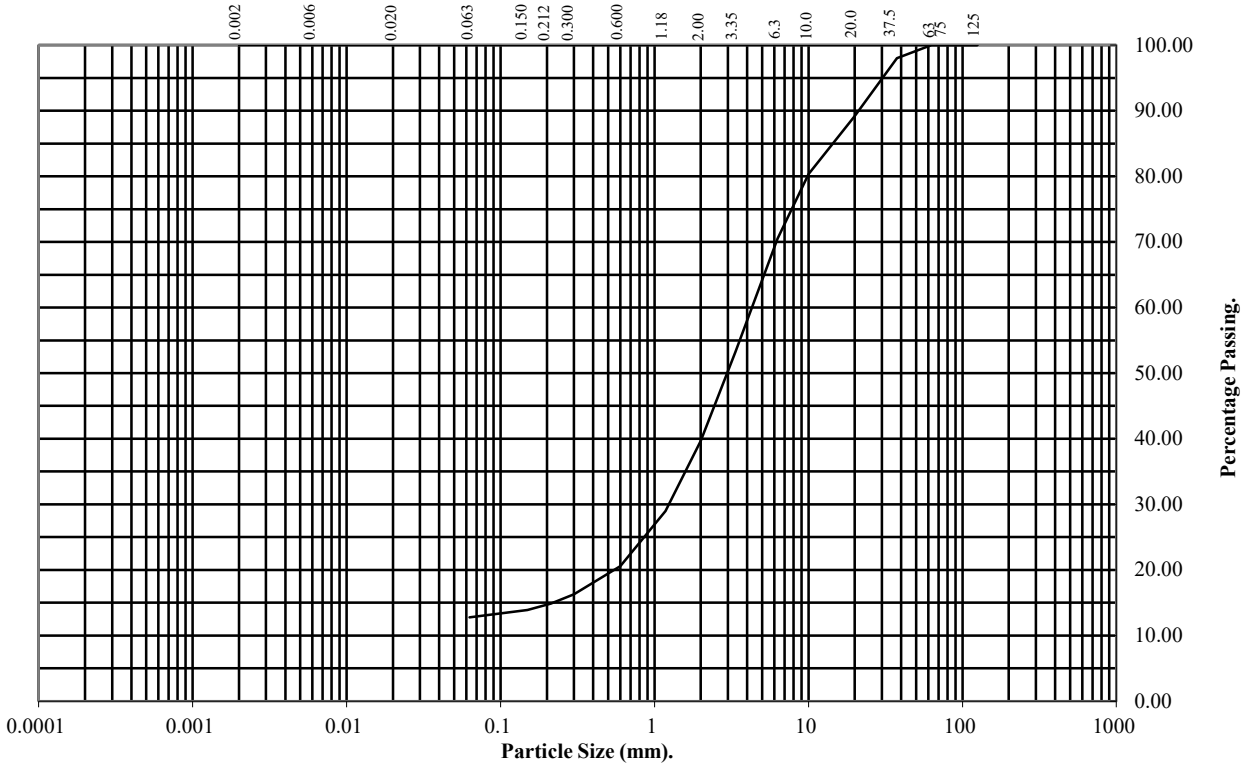
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP248A** **Top Depth (m):** **1.40**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	98
20	89
10	80
6.3	70
3.35	53
2	40
1.18	29
0.6	21
0.3	16
0.212	15
0.15	14
0.063	13

Soil Fraction	Total Percentage
Cobbles	0
Gravel	60
Sand	27
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

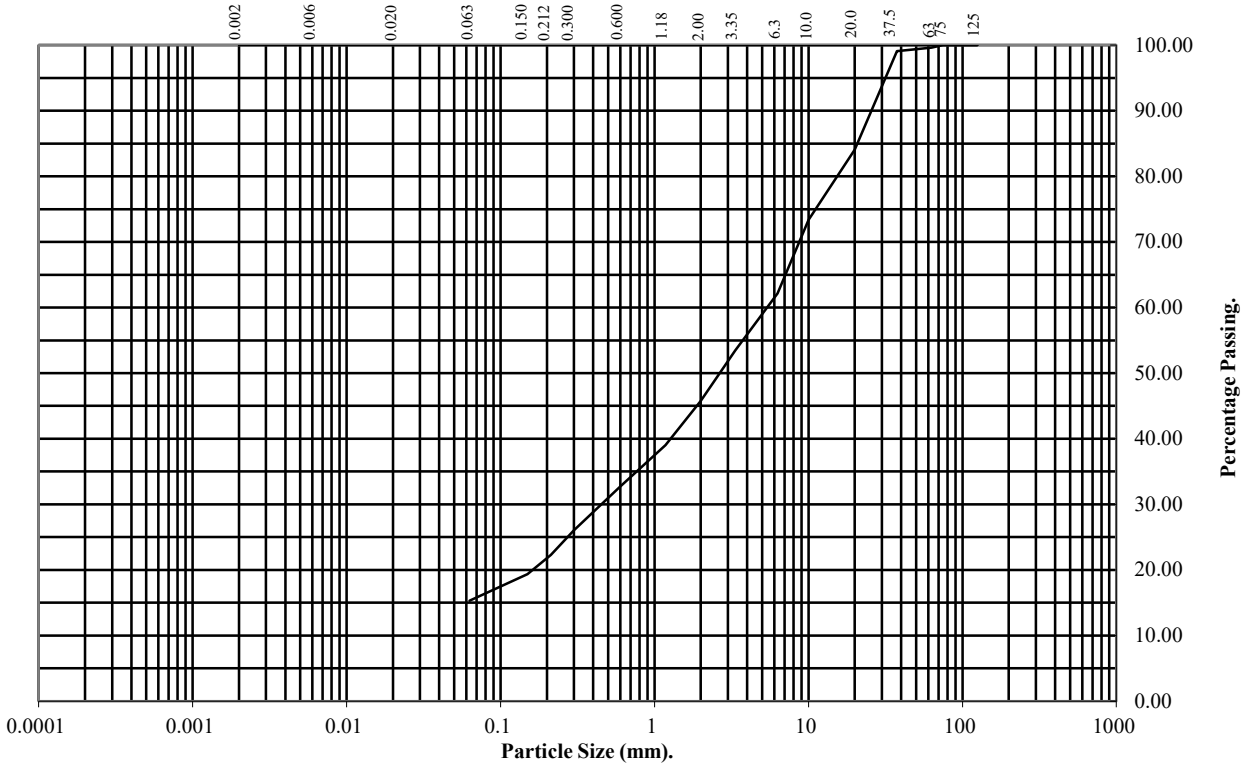
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP246A **Top Depth (m):** 1.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	99
20	84
10	73
6.3	62
3.35	53
2	46
1.18	39
0.6	33
0.3	26
0.212	22
0.15	19
0.063	15

Soil Fraction	Total Percentage
Cobbles	0
Gravel	54
Sand	31
Silt/Clay	15

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

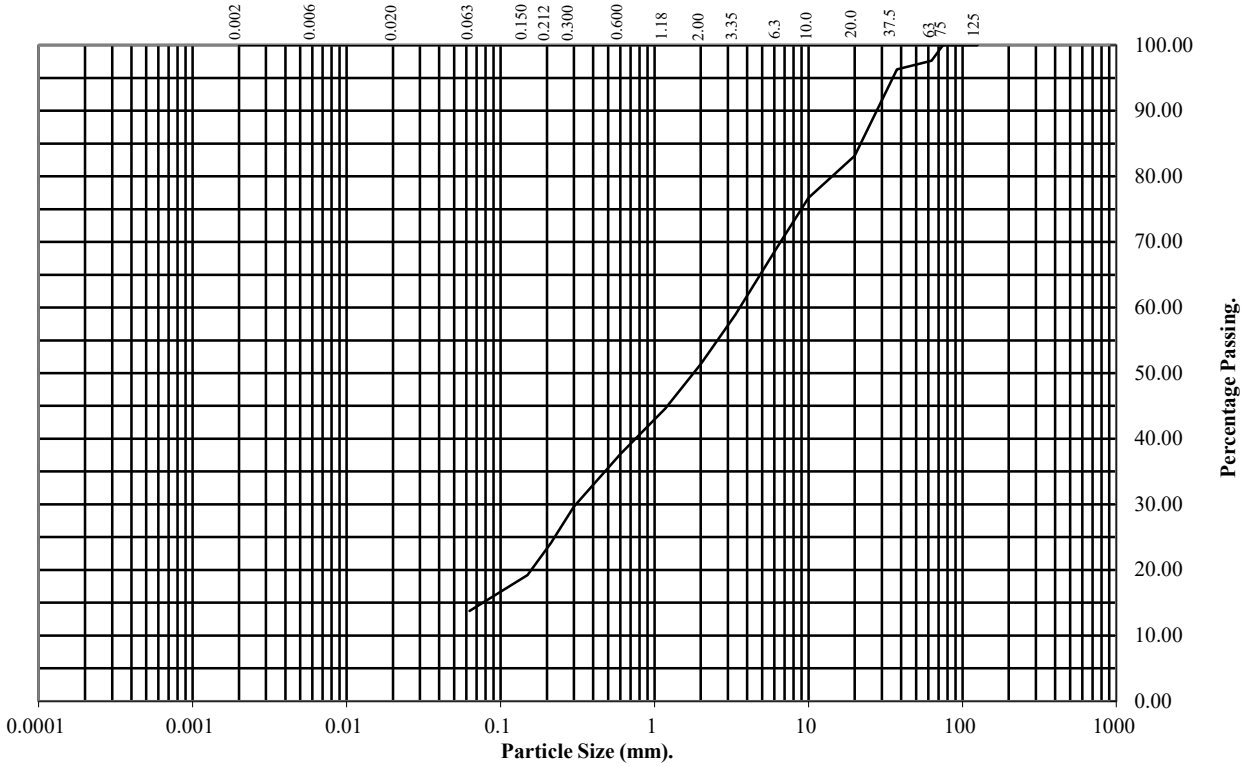
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP217A **Top Depth (m):** 1.60

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	98
37.5	96
20	83
10	77
6.3	69
3.35	59
2	51
1.18	45
0.6	38
0.3	30
0.212	24
0.15	19
0.063	14

Soil Fraction	Total Percentage
Cobbles	2
Gravel	47
Sand	37
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

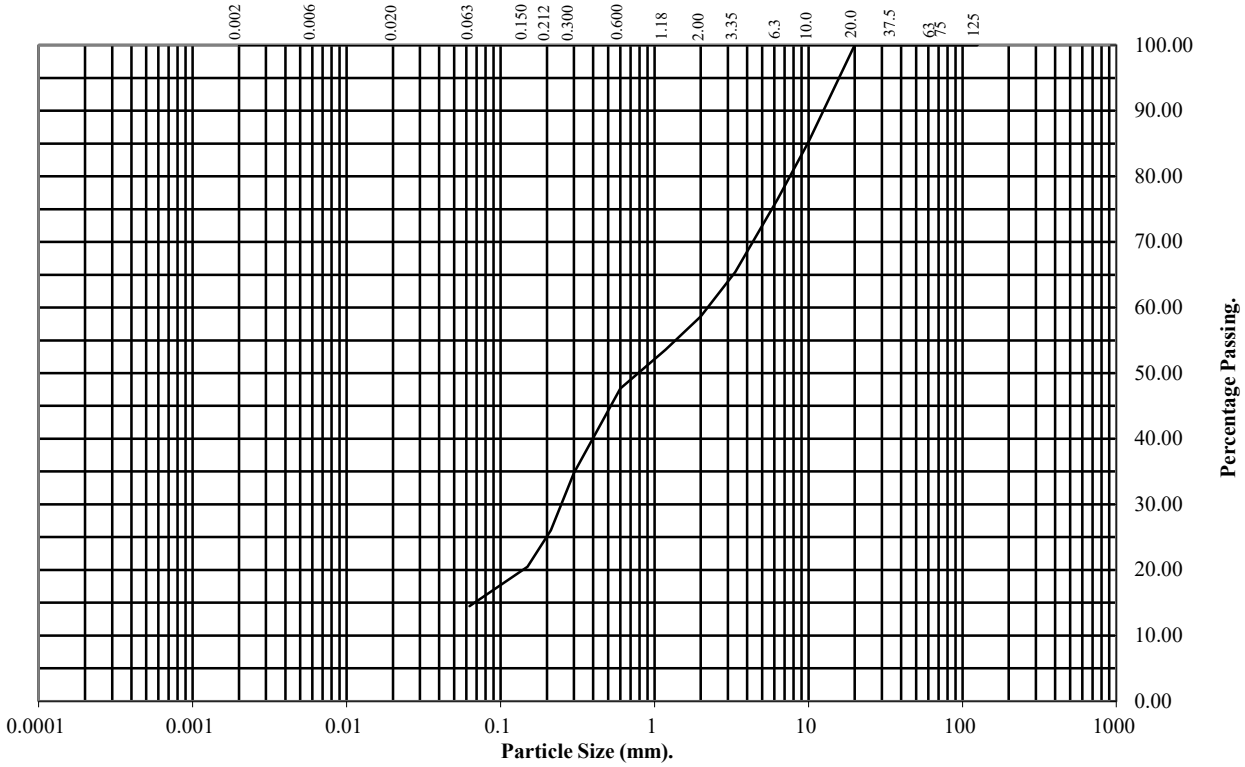
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP258 **Top Depth (m):** 2.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	85
6.3	76
3.35	65
2	59
1.18	54
0.6	48
0.3	35
0.212	26
0.15	21
0.063	14

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	45
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

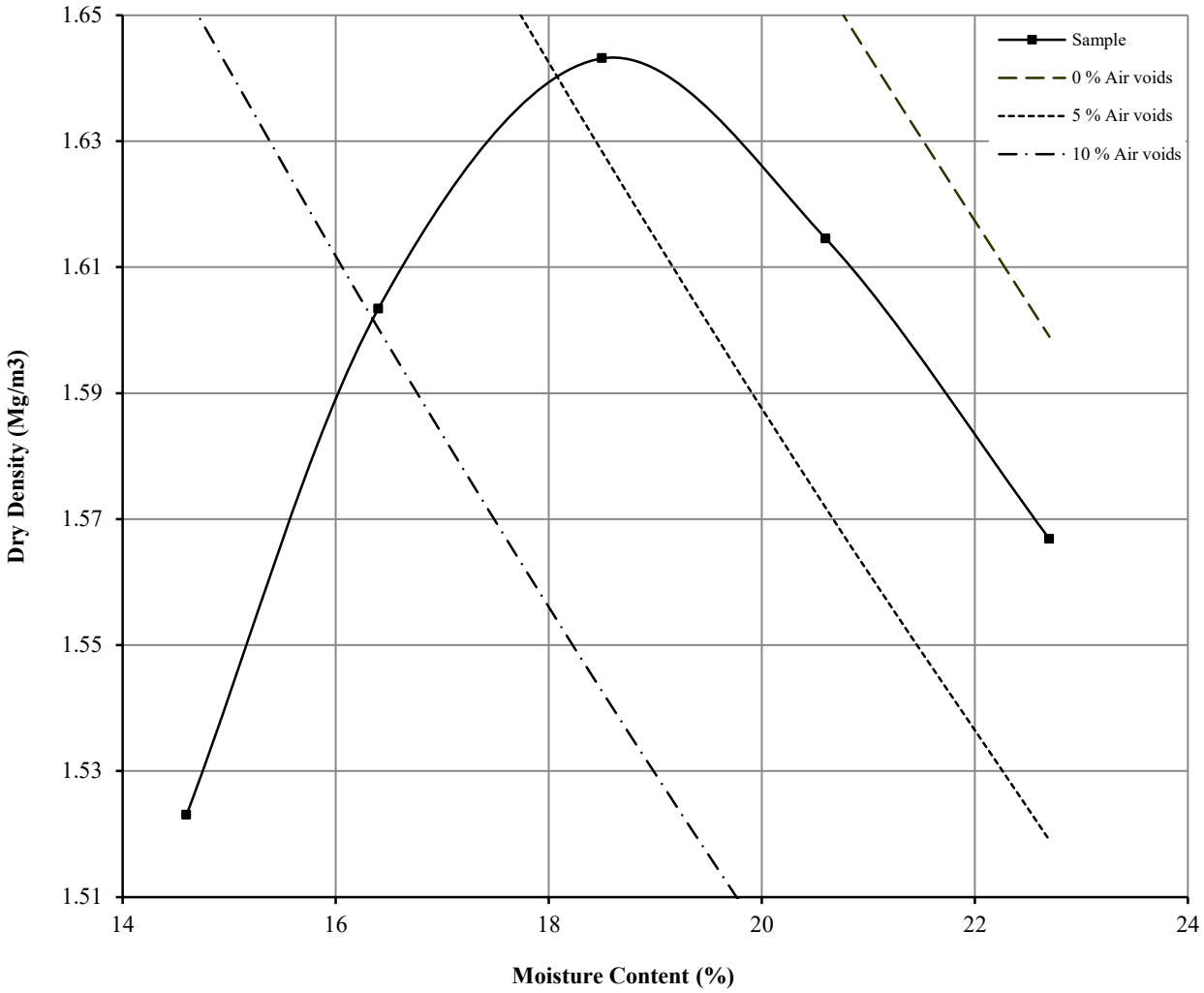
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP242 **Top Depth (m) :** 2.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		19	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.51	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.64	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		19			
Remarks See summary of soil descriptions					

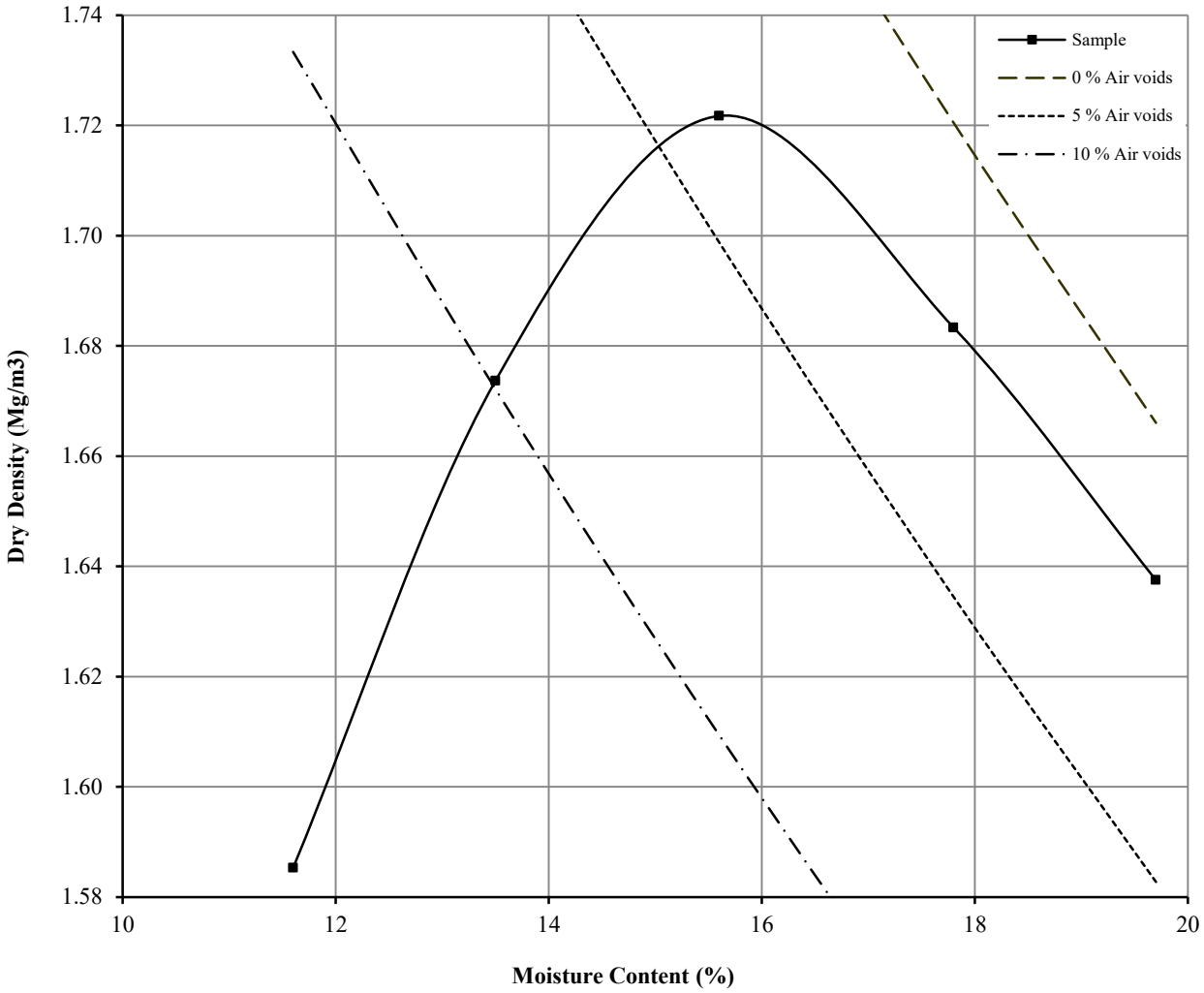
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP254 **Top Depth (m) :** 1.30

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		16	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.48	Assumed	Material Retained on 37.5 mm Test Sieve (%):		13
Maximum Dry Density (Mg/m3):		1.72	Material Retained on 20.0 mm Test Sieve (%):		14
Optimum Moisture Content (%):		16			
Remarks See summary of soil descriptions					

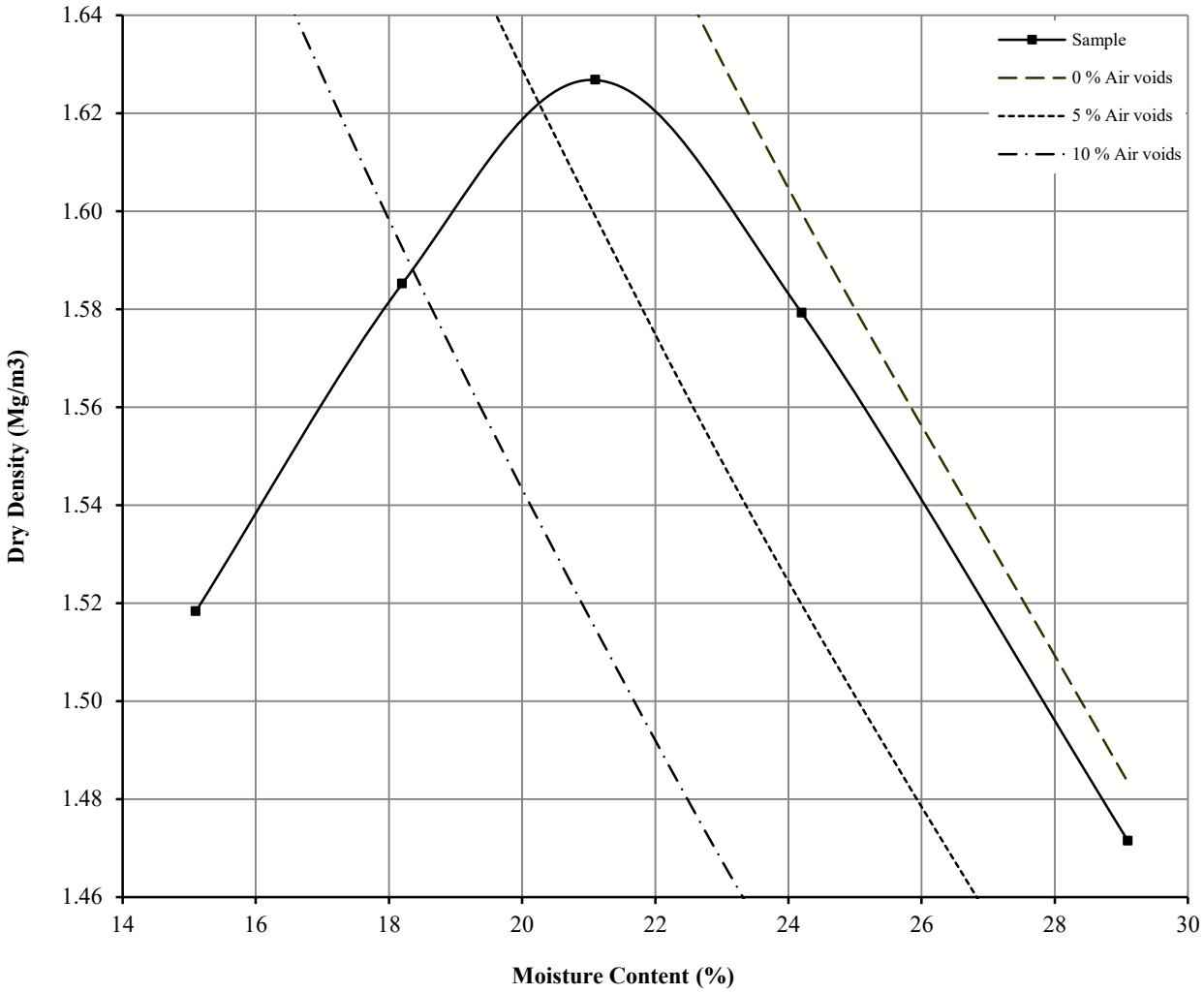
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP204 **Top Depth (m) :** 2.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		29	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.61	Measured	Material Retained on 37.5 mm Test Sieve (%):		13
Maximum Dry Density (Mg/m3):		1.63	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		21			
Remarks See summary of soil descriptions					

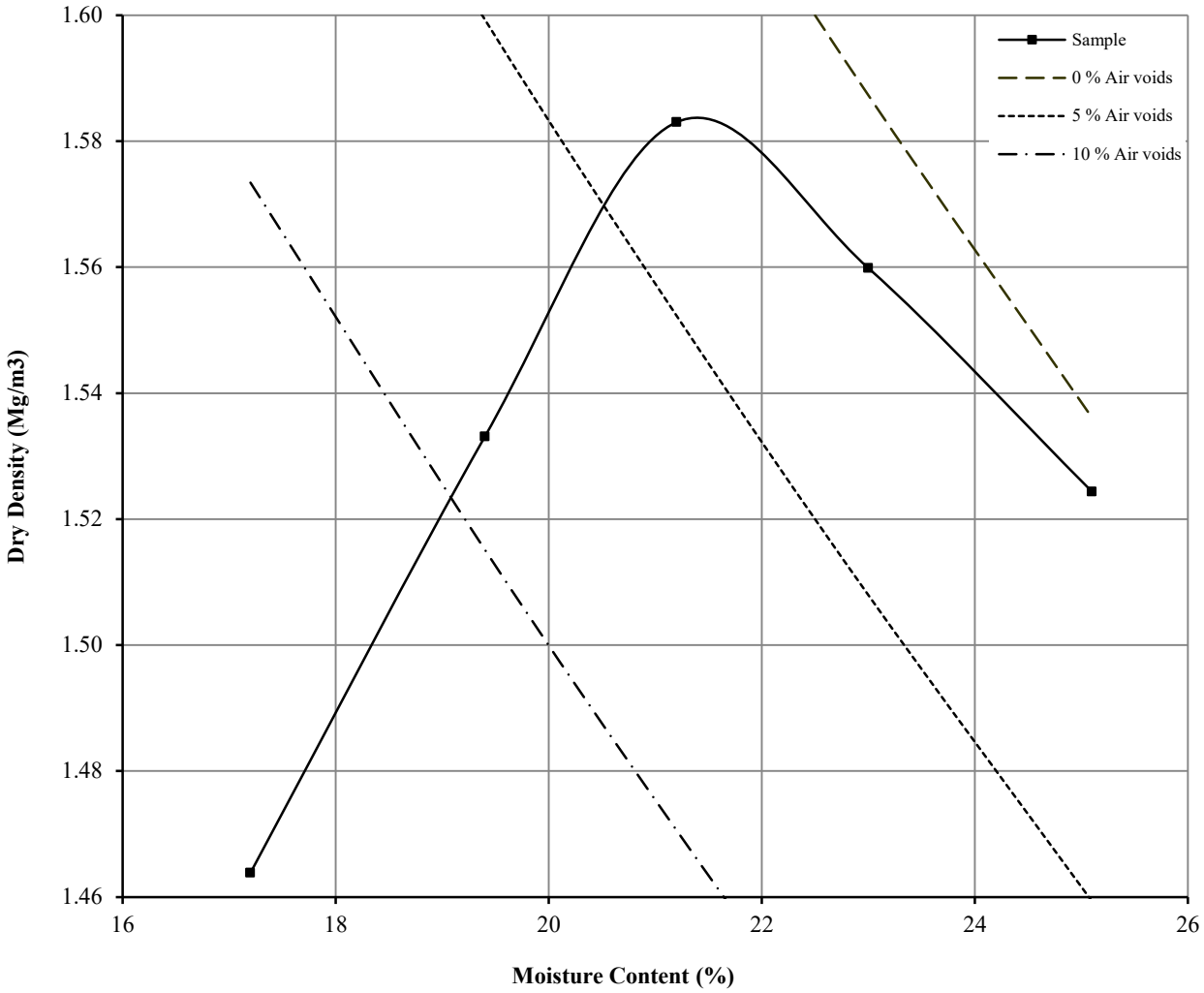
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP207 **Top Depth (m) :** 3.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		25	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.5	Assumed	Material Retained on 37.5 mm Test Sieve (%):		5
Maximum Dry Density (Mg/m3):		1.58	Material Retained on 20.0 mm Test Sieve (%):		7
Optimum Moisture Content (%):		21			
Remarks See summary of soil descriptions					

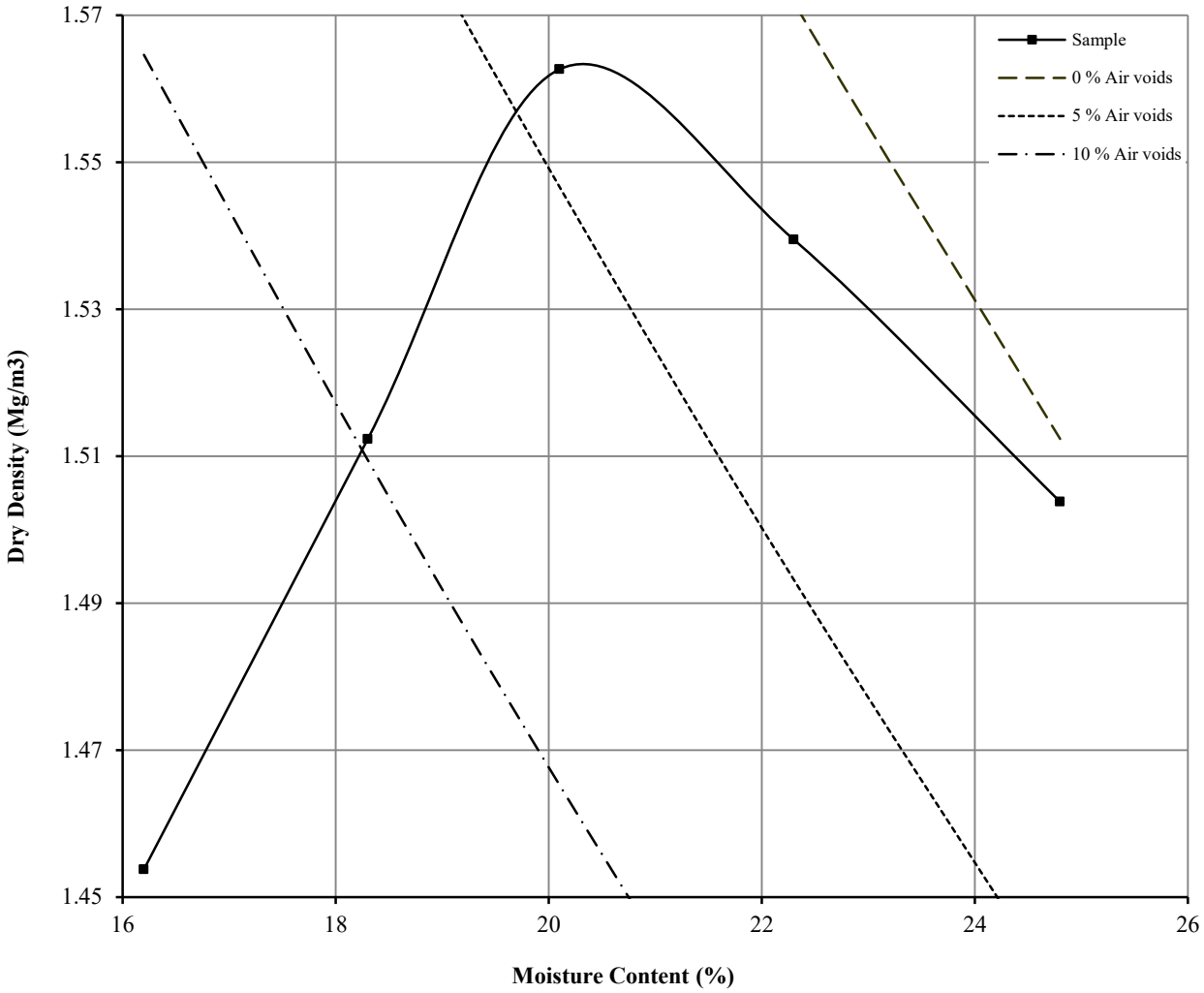
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP206 **Top Depth (m) :** 1.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		25	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.42	Measured	Material Retained on 37.5 mm Test Sieve (%):		2
Maximum Dry Density (Mg/m3):		1.56	Material Retained on 20.0 mm Test Sieve (%):		5
Optimum Moisture Content (%):		20			
Remarks See summary of soil descriptions					

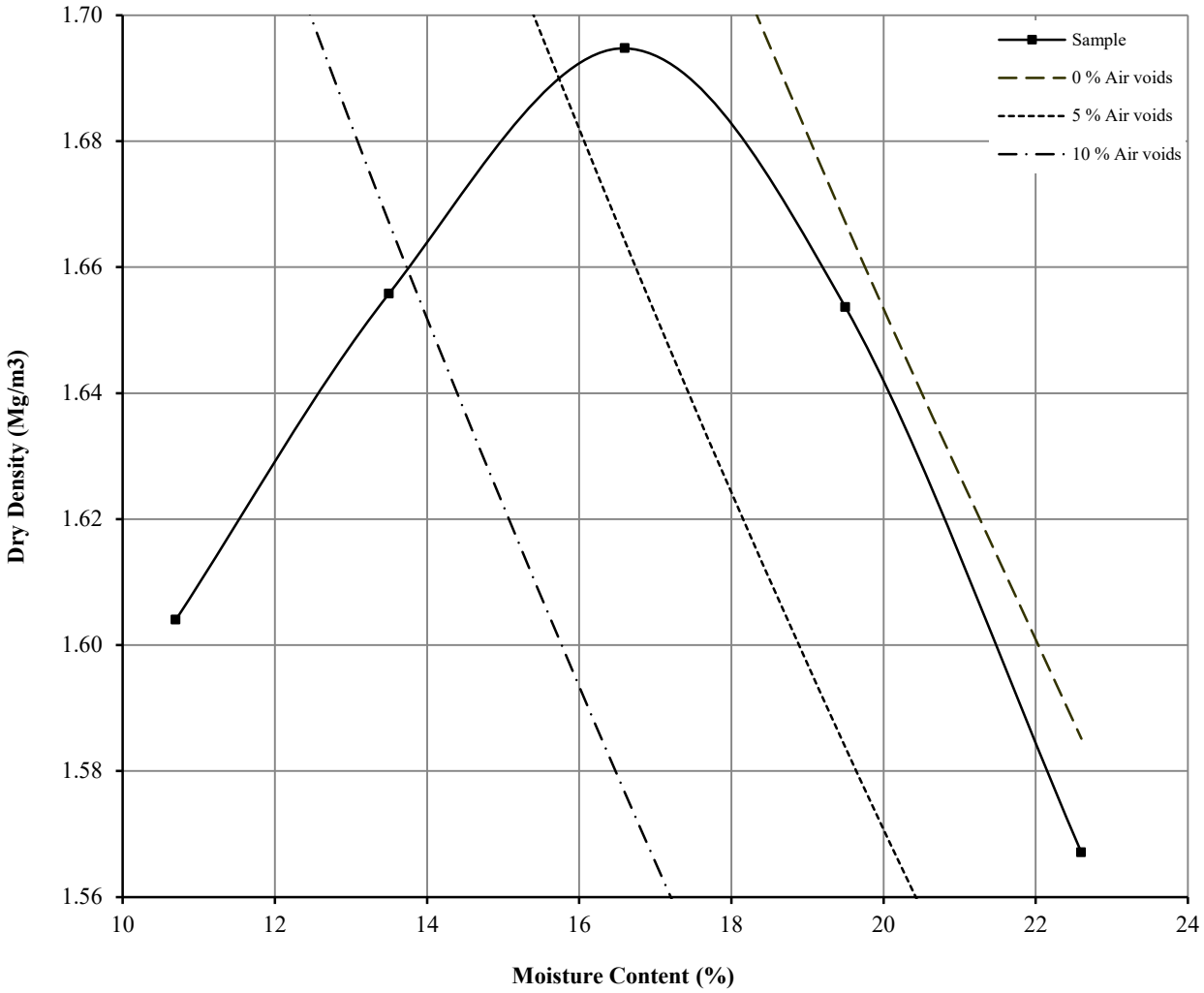
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP226 **Top Depth (m) :** 1.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.47	Measured	Material Retained on 37.5 mm Test Sieve (%):		6
Maximum Dry Density (Mg/m3):		1.69	Material Retained on 20.0 mm Test Sieve (%):		5
Optimum Moisture Content (%):		17			
Remarks See summary of soil descriptions					

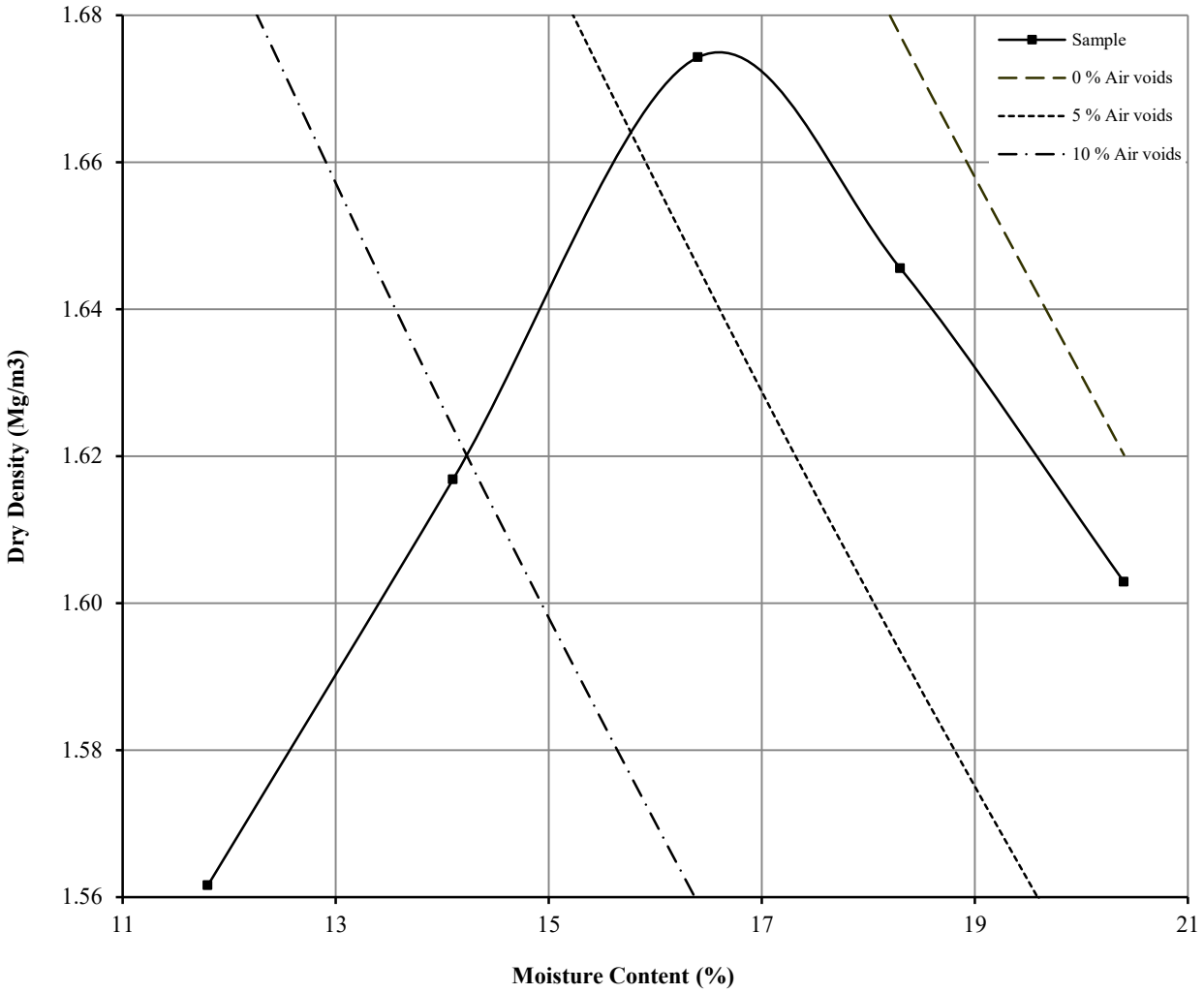
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP227A **Top Depth (m) :** 2.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		12	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.42	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.67	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		16			
Remarks See summary of soil descriptions					

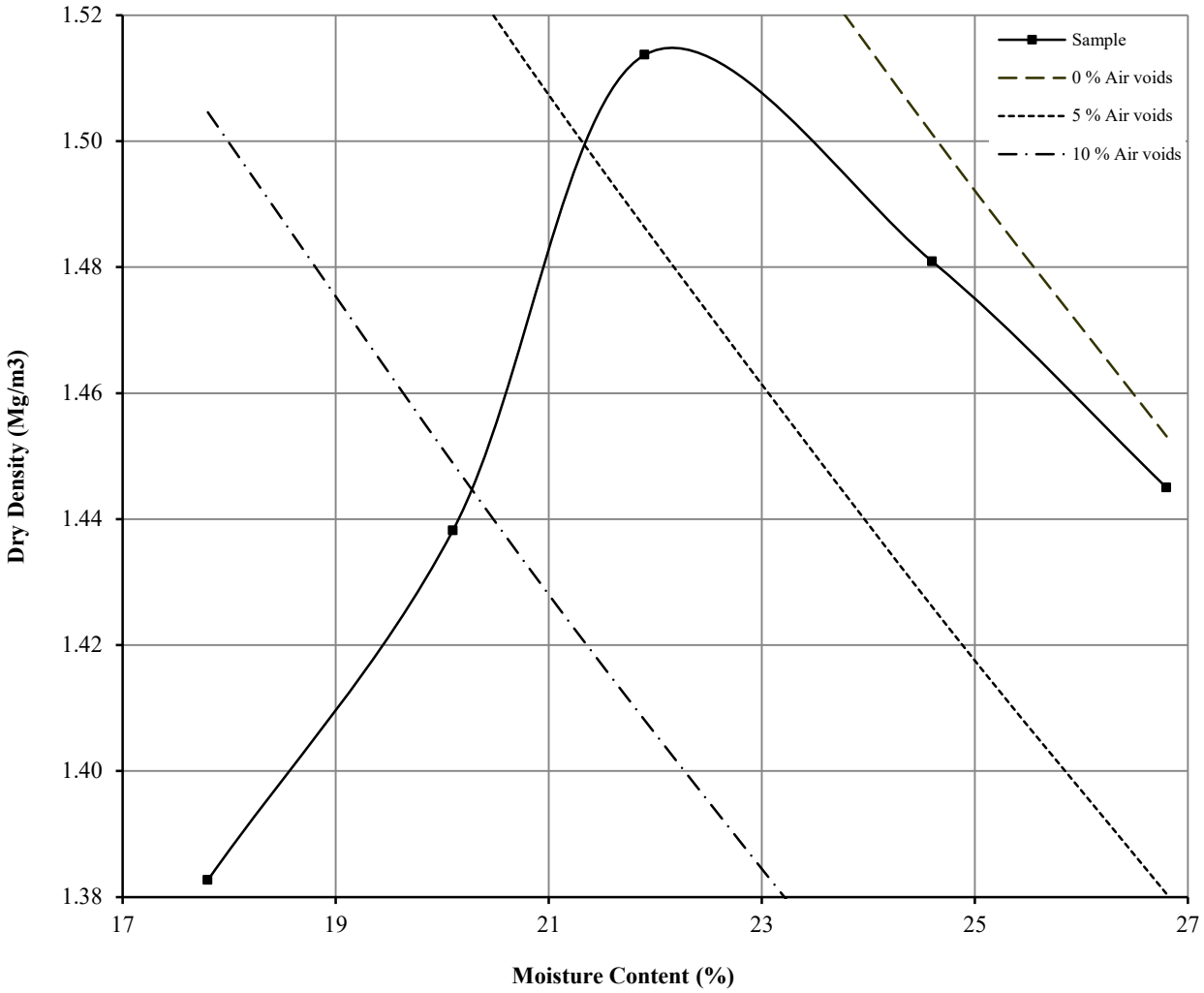
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP259 **Top Depth (m) :** 2.80

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		25	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.38	Measured	Material Retained on 37.5 mm Test Sieve (%):		1
Maximum Dry Density (Mg/m3):		1.51	Material Retained on 20.0 mm Test Sieve (%):		2
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

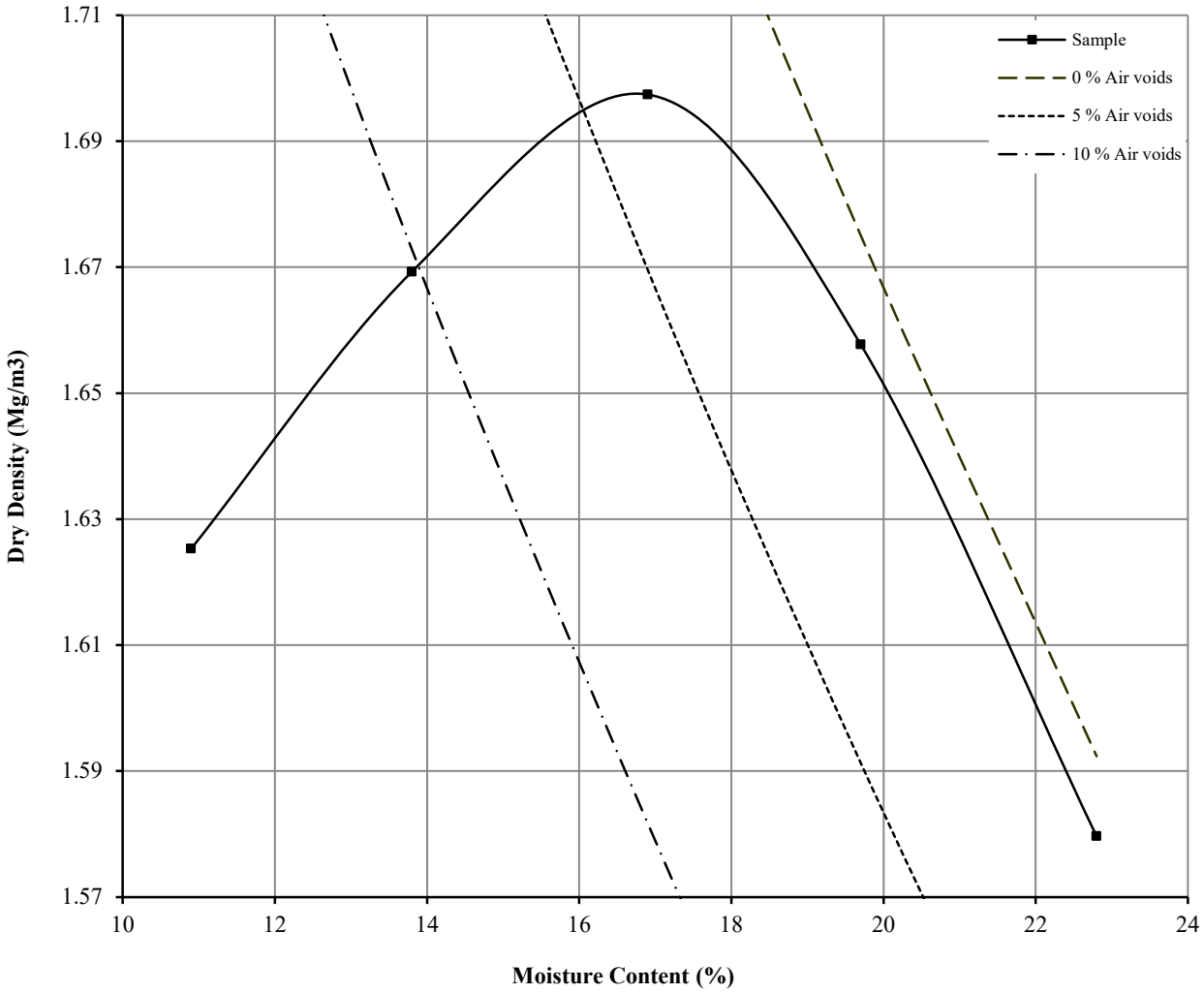
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP260 **Top Depth (m) :** 2.10

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		14	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.5	Assumed	Material Retained on 37.5 mm Test Sieve (%):		13
Maximum Dry Density (Mg/m3):		1.70	Material Retained on 20.0 mm Test Sieve (%):		5
Optimum Moisture Content (%):		17			
Remarks See summary of soil descriptions					

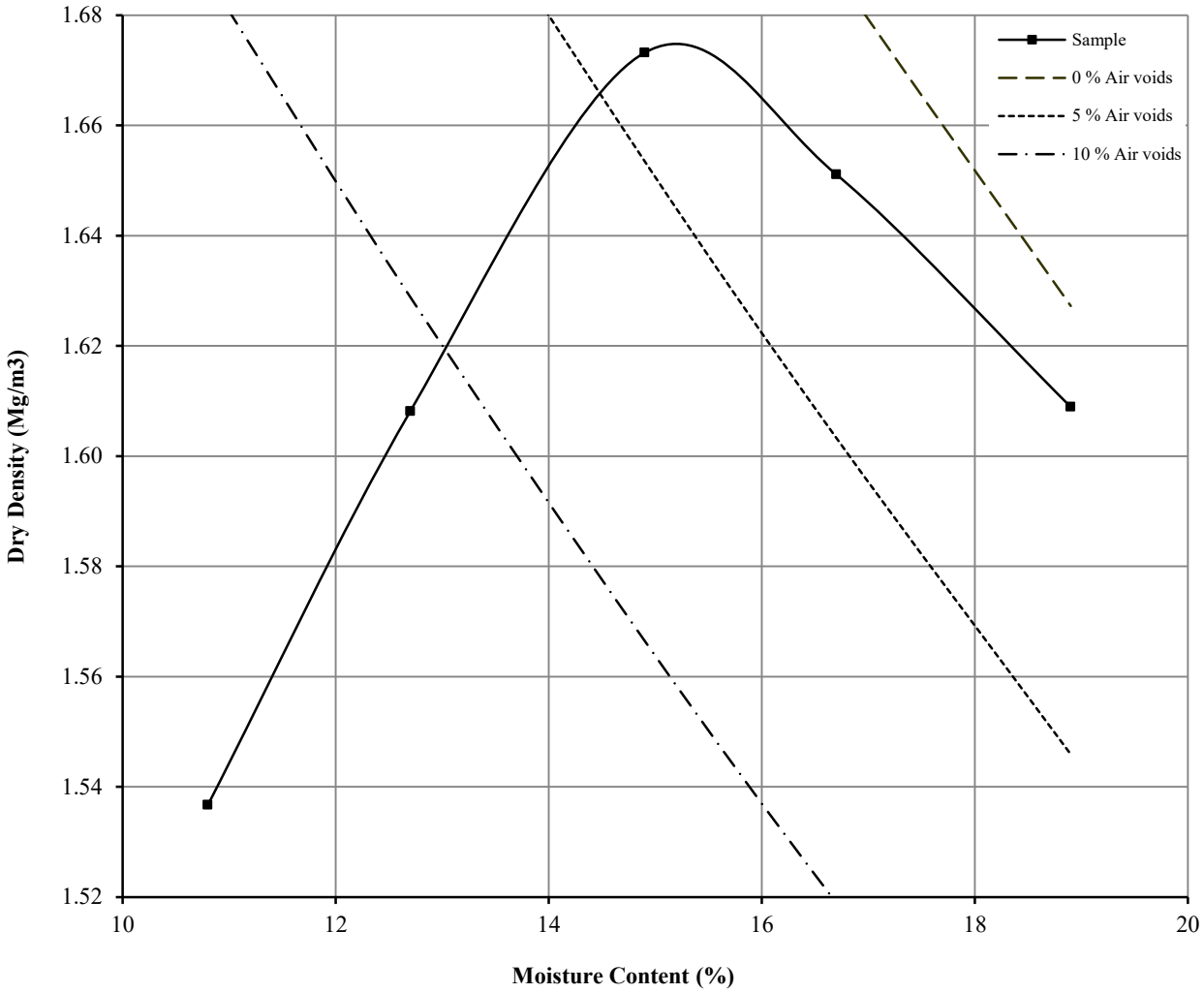
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP261 **Top Depth (m) :** 2.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		11	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.35	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.67	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		15			
Remarks See summary of soil descriptions					

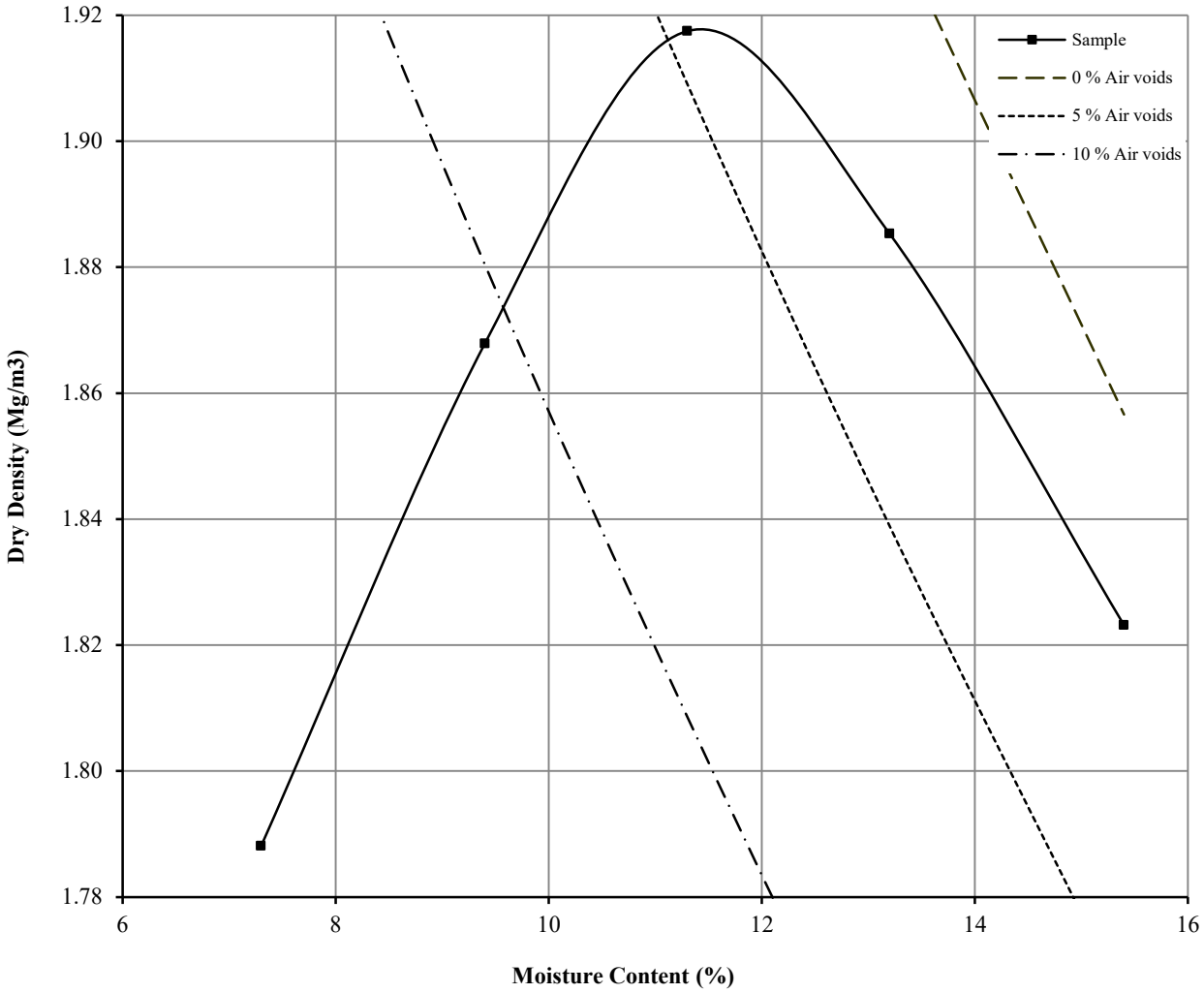
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP262 **Top Depth (m) :** 2.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		7.3	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.6	Assumed	Material Retained on 37.5 mm Test Sieve (%):		39
Maximum Dry Density (Mg/m3):		1.92	Material Retained on 20.0 mm Test Sieve (%):		17
Optimum Moisture Content (%):		11			
Remarks See summary of soil descriptions					

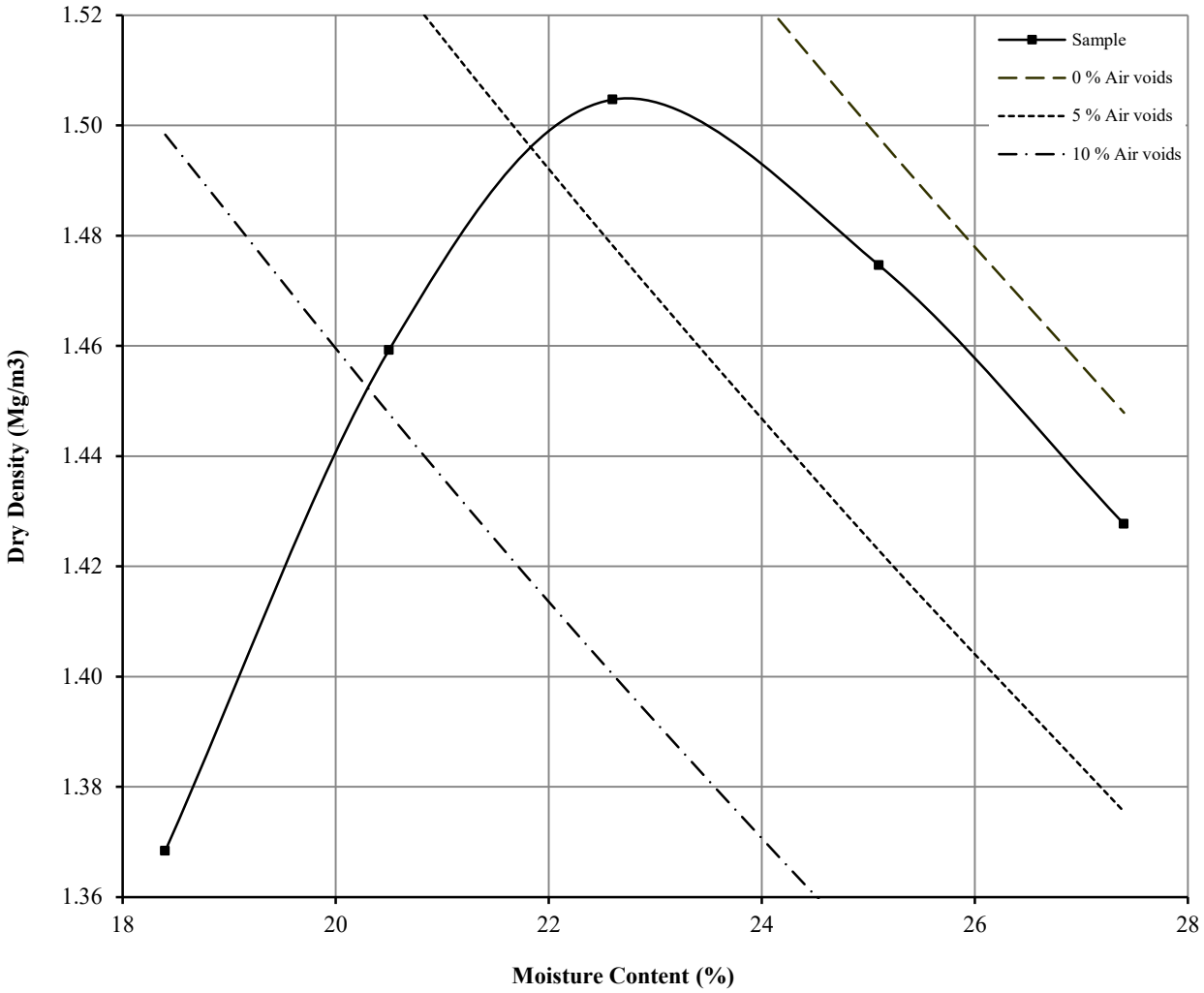
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP248A **Top Depth (m) :** 1.40

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		25	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.4	Assumed	Material Retained on 37.5 mm Test Sieve (%):		2
Maximum Dry Density (Mg/m3):		1.50	Material Retained on 20.0 mm Test Sieve (%):		9
Optimum Moisture Content (%):		23			
Remarks See summary of soil descriptions					

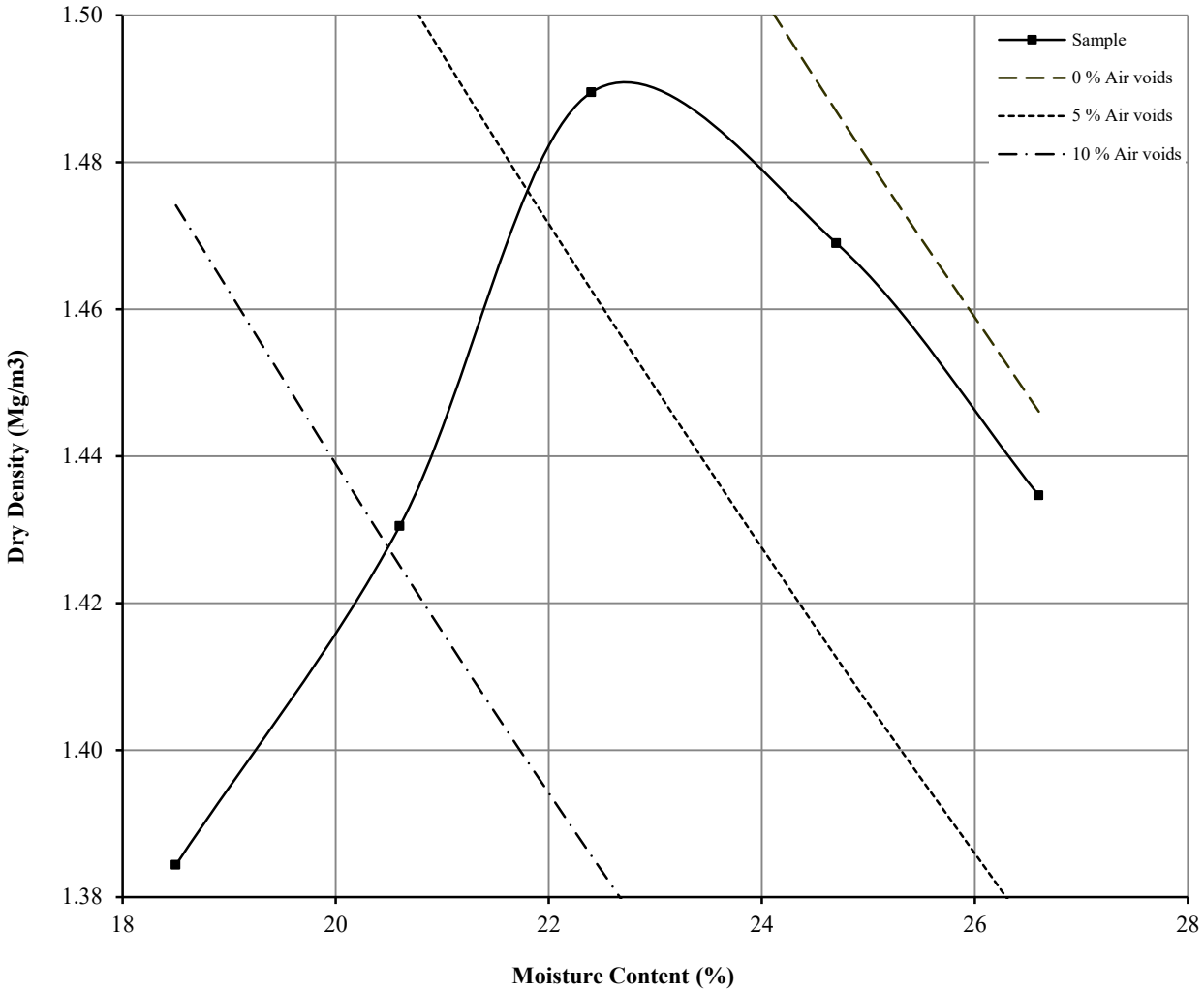
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP246A **Top Depth (m) :** 1.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		25	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.35	Assumed	Material Retained on 37.5 mm Test Sieve (%):		1
Maximum Dry Density (Mg/m3):		1.49	Material Retained on 20.0 mm Test Sieve (%):		15
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

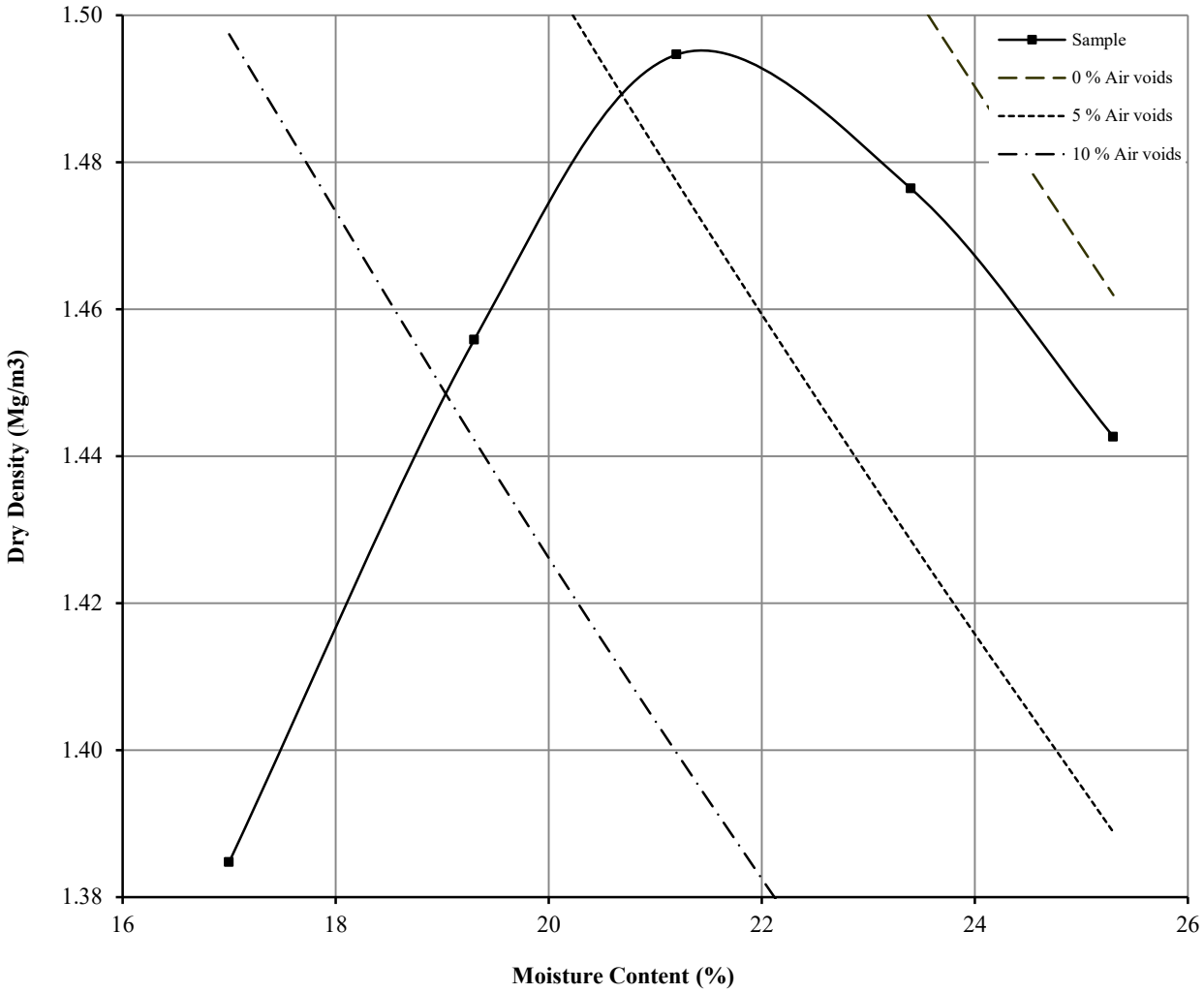
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP217A **Top Depth (m) :** 1.60

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		21	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.32	Assumed	Material Retained on 37.5 mm Test Sieve (%):		4
Maximum Dry Density (Mg/m3):		1.49	Material Retained on 20.0 mm Test Sieve (%):		13
Optimum Moisture Content (%):		21			
Remarks See summary of soil descriptions					

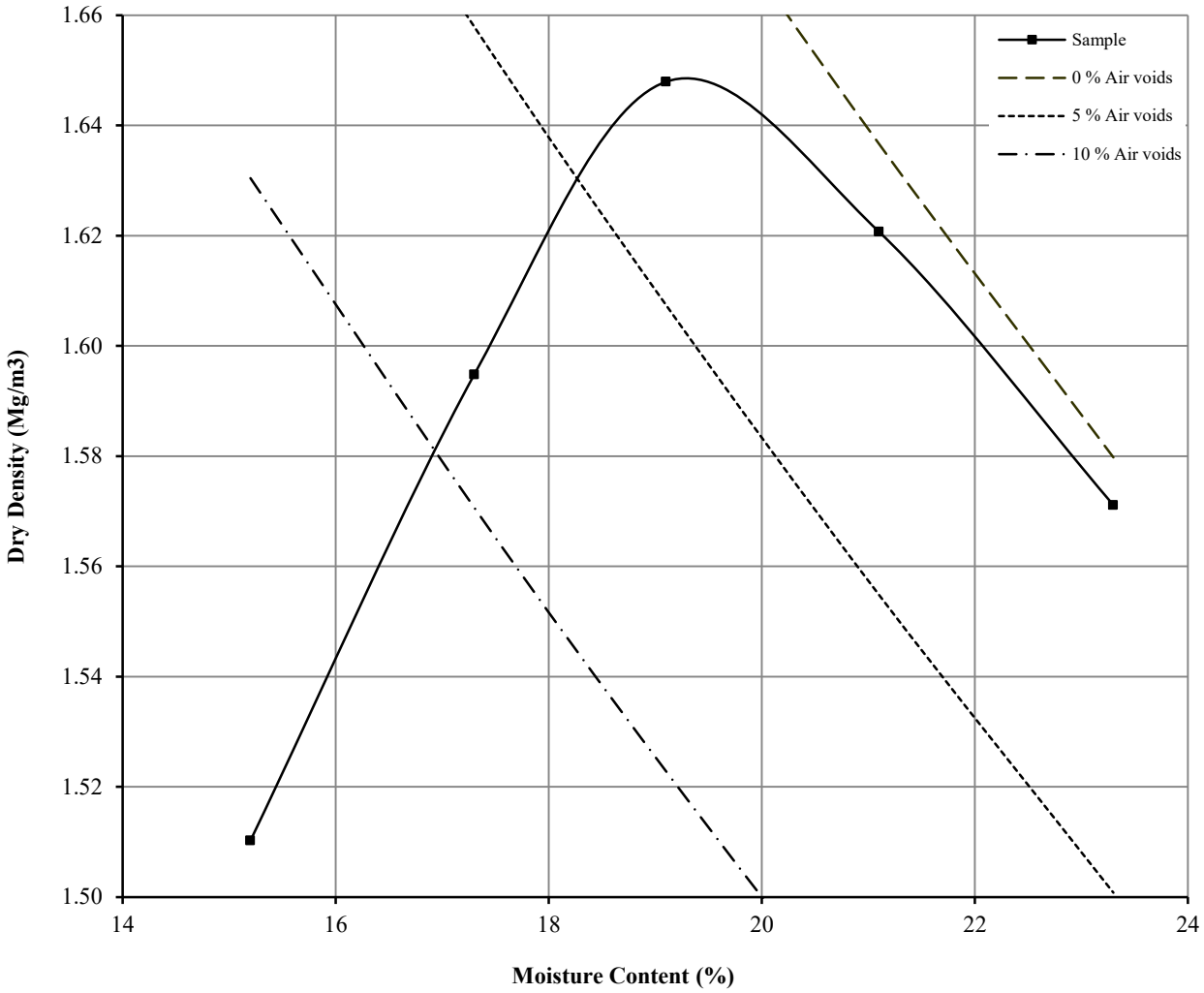
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP258 **Top Depth (m) :** 2.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		19	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.5	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.65	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		19			
Remarks See summary of soil descriptions					

EMERY EXPANSION TEST.

Road and Transport Association of Canada 1974.

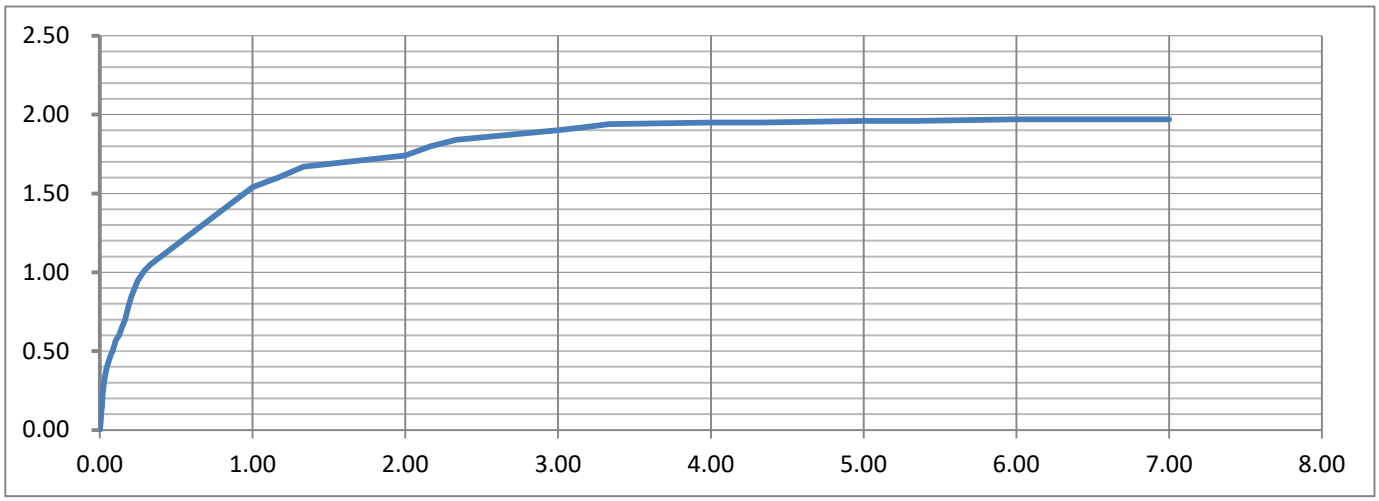
Hole Number: TP259 **Top Depth (m):** 2.80

Sample Number: **Base Depth(m):**

Sample Type: B

INITIAL CONDITIONS.		FINAL CONDITIONS.	
Initial Height - mm:	126.79	Final Height - mm:	128.76
Initial Diameter - mm:	152.77	Final Mass - g:	4404.00
Initial Mass - g:	4321.00	Final Volume - cm3:	2360.50
Initial Volume - cm3:	2324.38	Dry Mass - g:	3451.00
Dry Mass - g:	3451.00	Final Moisture Content - %:	28
Initial Moisture Content - %:	25	Final Bulk Density - Mg/m3:	1.87
Initial Bulk Density - Mg/m3:	1.86	Final Dry Density - Mg/m3:	1.46
Initial Dry Density - Mg/m3:	1.48	Test Temperature oC:	82

Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm
0	0	0.00	120	50	0.50	2880	174	1.74
5	3	0.03	150	57	0.57	3120	180	1.80
10	6	0.06	180	60	0.60	3360	184	1.84
15	12	0.12	210	65	0.65	4320	190	1.90
20	15	0.15	240	70	0.70	4560	192	1.92
25	20	0.20	270	78	0.78	4800	194	1.94
30	25	0.25	300	85	0.85	5760	195	1.95
40	30	0.30	360	95	0.95	6240	195	1.95
50	34	0.34	420	101	1.01	7200	196	1.96
60	38	0.38	480	105	1.05	7680	196	1.96
75	42	0.42	1440	154	1.54	8640	197	1.97
90	45	0.45	1680	160	1.60	9120	197	1.97
105	48	0.48	1920	167	1.67	10080	197	1.97



PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3486
Client Ref:
LD10385

EMERY EXPANSION TEST.

Road and Transport Association of Canada 1974.

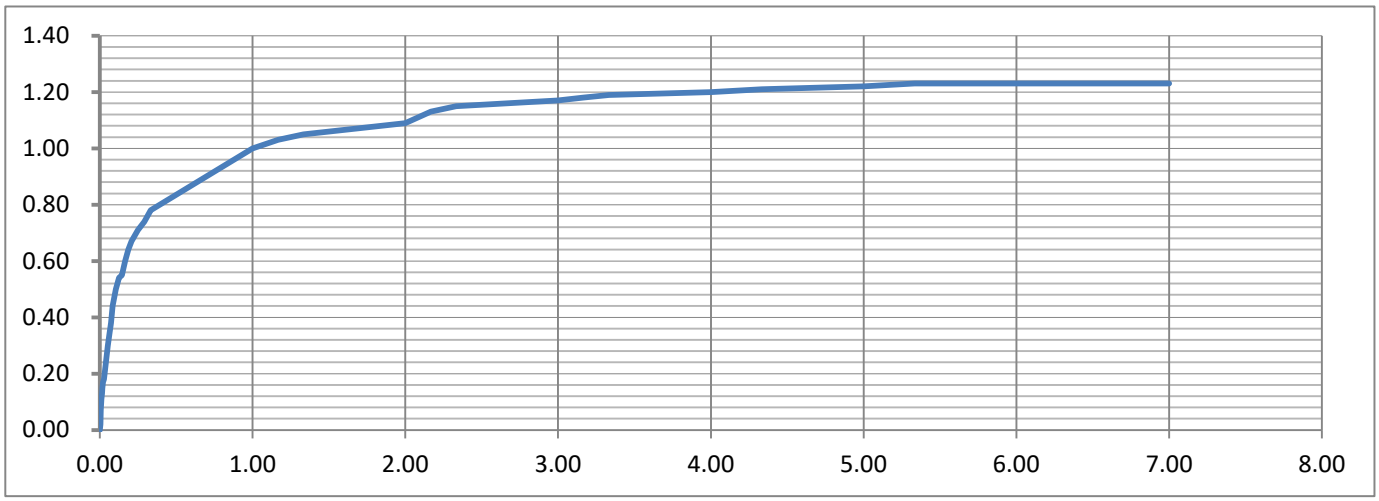
Hole Number: TP248A **Top Depth (m):** 1.40

Sample Number: **Base Depth(m):**

Sample Type: B

INITIAL CONDITIONS.		FINAL CONDITIONS.	
Initial Height - mm:	126.97	Final Height - mm:	128.20
Initial Diameter - mm:	152.77	Final Mass - g:	4351.00
Initial Mass - g:	4275.00	Final Volume - cm3:	2350.23
Initial Volume - cm3:	2327.68	Dry Mass - g:	3411.00
Dry Mass - g:	3411.00	Final Moisture Content - %:	28
Initial Moisture Content - %:	25	Final Bulk Density - Mg/m3:	1.85
Initial Bulk Density - Mg/m3:	1.84	Final Dry Density - Mg/m3:	1.45
Initial Dry Density - Mg/m3:	1.47	Test Temperature oC:	82

Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm
0	0	0.00	120	44	0.44	2880	109	1.09
5	2	0.02	150	50	0.50	3120	113	1.13
10	7	0.07	180	54	0.54	3360	115	1.15
15	11	0.11	210	55	0.55	4320	117	1.17
20	13	0.13	240	60	0.60	4560	118	1.18
25	15	0.15	270	64	0.64	4800	119	1.19
30	17	0.17	300	67	0.67	5760	120	1.20
40	18	0.18	360	71	0.71	6240	121	1.21
50	21	0.21	420	74	0.74	7200	122	1.22
60	25	0.25	480	78	0.78	7680	123	1.23
75	30	0.30	1440	100	1.00	8640	123	1.23
90	34	0.34	1680	103	1.03	9120	123	1.23
105	38	0.38	1920	105	1.05	10080	123	1.23



PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3486
Client Ref:
LD10385

EMERY EXPANSION TEST.

Road and Transport Association of Canada 1974.

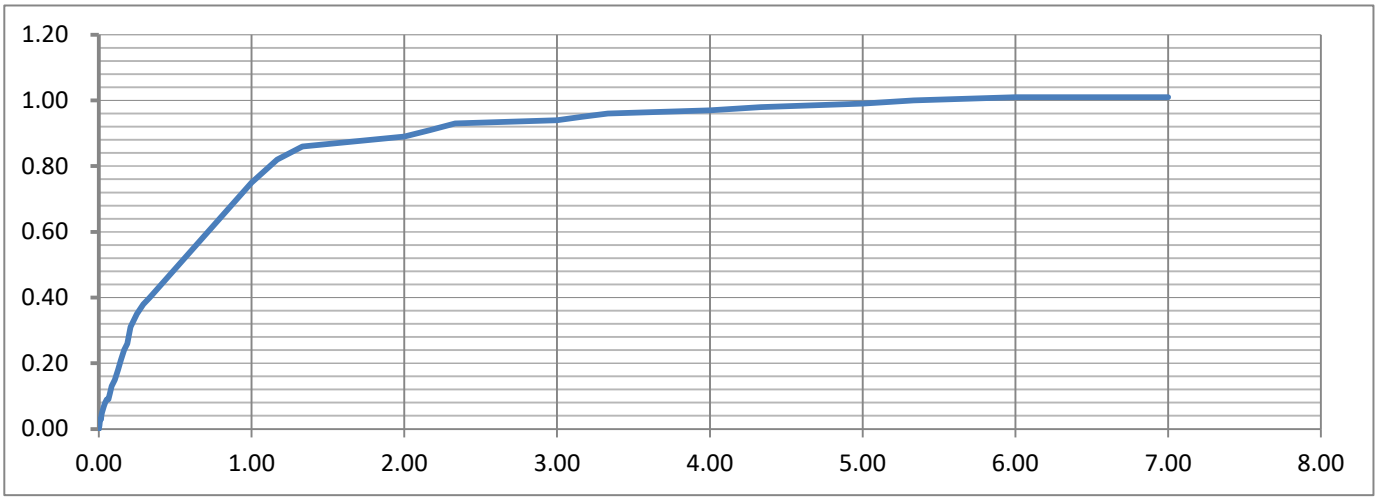
Hole Number: TP246A **Top Depth (m):** 1.40

Sample Number: **Base Depth(m):**

Sample Type: B

INITIAL CONDITIONS.		FINAL CONDITIONS.	
Initial Height - mm:	127.37	Final Height - mm:	128.38
Initial Diameter - mm:	151.94	Final Mass - g:	4302.00
Initial Mass - g:	4238.00	Final Volume - cm3:	2328.03
Initial Volume - cm3:	2309.71	Dry Mass - g:	3392.00
Dry Mass - g:	3392.00	Final Moisture Content - %:	27
Initial Moisture Content - %:	25	Final Bulk Density - Mg/m3:	1.85
Initial Bulk Density - Mg/m3:	1.83	Final Dry Density - Mg/m3:	1.46
Initial Dry Density - Mg/m3:	1.47	Test Temperature oC:	82

Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm
0	0	0.00	120	13	0.13	2880	89	0.89
5	1	0.01	150	15	0.15	3120	91	0.91
10	2	0.02	180	18	0.18	3360	93	0.93
15	3	0.03	210	21	0.21	4320	94	0.94
20	3	0.03	240	24	0.24	4560	95	0.95
25	4	0.04	270	26	0.26	4800	96	0.96
30	5	0.05	300	31	0.31	5760	97	0.97
40	6	0.06	360	35	0.35	6240	98	0.98
50	7	0.07	420	38	0.38	7200	99	0.99
60	8	0.08	480	40	0.40	7680	100	1.00
75	9	0.09	1440	75	0.75	8640	101	1.01
90	9	0.09	1680	82	0.82	9120	101	1.01
105	11	0.11	1920	86	0.86	10080	101	1.01



PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3486
Client Ref:
LD10385

EMERY EXPANSION TEST.

Road and Transport Association of Canada 1974.

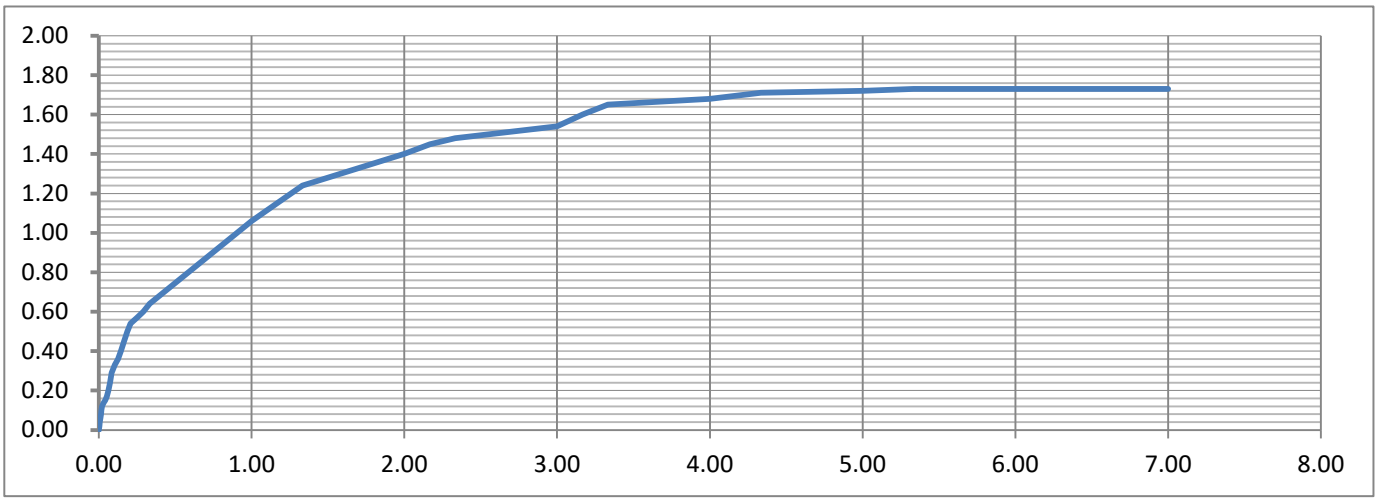
Hole Number: TP217A **Top Depth (m):** 1.60

Sample Number: **Base Depth(m):**

Sample Type: B

INITIAL CONDITIONS.		FINAL CONDITIONS.	
Initial Height - mm:	126.91	Final Height - mm:	128.64
Initial Diameter - mm:	151.92	Final Mass - g:	4269.00
Initial Mass - g:	4158.00	Final Volume - cm3:	2332.13
Initial Volume - cm3:	2300.76	Dry Mass - g:	3434.00
Dry Mass - g:	3434.00	Final Moisture Content - %:	24
Initial Moisture Content - %:	21	Final Bulk Density - Mg/m3:	1.83
Initial Bulk Density - Mg/m3:	1.81	Final Dry Density - Mg/m3:	1.47
Initial Dry Density - Mg/m3:	1.49	Test Temperature oC:	82

Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm	Elapsed Time Min	Dial Gauge Reading Div	Change In Height mm
0	0	0.00	120	29	0.29	2880	140	1.40
5	2	0.02	150	33	0.33	3120	145	1.45
10	4	0.04	180	36	0.36	3360	148	1.48
15	6	0.06	210	40	0.40	4320	154	1.54
20	8	0.08	240	45	0.45	4560	160	1.60
25	10	0.10	270	50	0.50	4800	165	1.65
30	12	0.12	300	54	0.54	5760	168	1.68
40	13	0.13	360	57	0.57	6240	171	1.71
50	14	0.14	420	60	0.60	7200	172	1.72
60	15	0.15	480	64	0.64	7680	173	1.73
75	17	0.17	1440	106	1.06	8640	173	1.73
90	20	0.20	1680	115	1.15	9120	173	1.73
105	24	0.24	1920	124	1.24	10080	173	1.73



PSL Professional Soils Laboratory

Ten Acres Lane

Contract No: PSL22/3486

Client Ref: LD10385

2531

ANALYTICAL TEST REPORT

Contract no: 109912

Contract name: Ten Acres Lane

Client reference: PSL22/3486

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road
Doncaster
DN4 0AR

Samples received: 31 May 2022

Analysis started: 31 May 2022

Analysis completed: 14 June 2022

Report issued: 14 June 2022

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing

Approved by:

Rachael Burton

Reporting Team Lead

Chemtech Environmental Limited

SOILS

Lab number			109912-01	109912-02	109912-03	109912-04	109912-05	109912-06
Sample id			TP204	TP206	TP207	TP217A	TP227A	TP242
Depth (m)			2.50	1.00	3.00	1.60	2.50	2.50
Sample Type			B	B	B	B	B	B
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	7.3	8.1	7.6	8.4	7.9	-
Magnesium (2:1 water soluble)	CE061	mg/l Mg	21	12	45	16	68	-
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	8.6	14	14	8.3	34	-
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	<1	9.1	1.3	4.9	2.9	-
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	314	200	1563	639	1965	-
Sulphate (total)	CE062 [U]	mg/kg SO_4	686	1369	11851	3685	13395	-
Sulphur (total)	CE119	mg/kg S	561	1095	5297	1632	7782	-
Sulphur (total)	CE119	% w/w S	0.06	0.11	0.53	0.16	0.78	-
Total Organic Carbon (TOC)	CE197	% w/w C	2.2	0.9	11.6	-	-	0.8
Estimate of OMC (calculated from TOC)	CE197	% w/w	3.7	1.5	20.0	-	-	1.3
Subcontracted analysis								
Calorific value	$	MJ/kg	-	-	-	-	9	-

Chemtech Environmental Limited

SOILS

Lab number			109912-07	109912-08	109912-09	109912-10	109912-11	109912-12
Sample id			TP246A	TP248A	TP254	TP258	TP260	TP261
Depth (m)			1.50	1.40	1.30	2.50	2.10	2.00
Sample Type			B	B	B	B	B	B
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	-	7.7	8.1	7.9	5.6	8.2
Magnesium (2:1 water soluble)	CE061	mg/l Mg	-	23	24	22	8.9	5.5
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	-	8.7	9.3	12	51	52
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	-	1.3	6.8	<1	2.6	1.9
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	-	439	819	1974	303	71
Sulphate (total)	CE062 [U]	mg/kg SO_4	-	2584	3135	5603	2230	891
Sulphur (total)	CE119	mg/kg S	-	2251	1573	2778	2509	2480
Sulphur (total)	CE119	% w/w S	-	0.23	0.16	0.28	0.25	0.25
Total Organic Carbon (TOC)	CE197	% w/w C	5.7	8.1	-	2.6	2.3	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	9.7	13.9	-	4.5	3.9	-
Subcontracted analysis								
Calorific value	$	MJ/kg	-	-	-	-	6	14

Chemtech Environmental Limited

SOILS

Lab number			109912-13
Sample id			TP262
Depth (m)			2.00
Sample Type			B
Date sampled			-
Test	**Method**	**Units**	
pH	CE004 [U]	units	8.8
Magnesium (2:1 water soluble)	CE061	mg/l Mg	7.5
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	10
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	<1
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	59
Sulphate (total)	CE062 [U]	mg/kg SO_4	925
Sulphur (total)	CE119	mg/kg S	672
Sulphur (total)	CE119	% w/w S	0.07
Total Organic Carbon (TOC)	CE197	% w/w C	2.9
Estimate of OMC (calculated from TOC)	CE197	% w/w	4.9
Subcontracted analysis			
Calorific value	$	MJ/kg	<2

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry		1	mg/l Mg
CE049	Chloride (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l Cl
CE049	Nitrate (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l NO_3
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO_4
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	U	100	mg/kg SO_4
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		0.01	% w/w S
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
$	Calorific value	Combustion, Carbon analyser	Dry		2	MJ/kg

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
109912-01	TP204	2.50	Y	All (NSD)
109912-02	TP206	1.00	Y	All (NSD)
109912-03	TP207	3.00	Y	All (NSD)
109912-04	TP217A	1.60	Y	All (NSD)
109912-05	TP227A	2.50	Y	All (NSD)
109912-08	TP248A	1.40	Y	All (NSD)
109912-09	TP254	1.30	Y	All (NSD)
109912-10	TP258	2.50	Y	All (NSD)
109912-11	TP260	2.10	Y	All (NSD)
109912-12	TP261	2.00	Y	All (NSD)
109912-13	TP262	2.00	Y	All (NSD)

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.

LABORATORY REPORT

4043

Contract Number: PSL22/3506

Report Date: 23 June 2022

Client's Reference: LD10385

Client Name: Wardell Armstrong
Northspring
36 Park Row
Leeds
LS1 5JL

For the attention of: Elliot Heatherington

Contract Title: Ten Acres Lane

Date Received: 18/5/2022
Date Commenced: 18/5/2022
Date Completed: 23/6/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Director)
R Berriman (Quality Manager)
S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
T Watkins (Senior Technician)

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e-mail: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP211		B	1.80		MADE GROUND dark grey very gravelly very sandy clay.
TP237		B	4.50		Brown slightly gravelly very sandy CLAY.
TP252		B	2.10		Brown slightly gravelly silty SAND.
TP202		B	2.00		Brown slightly gravelly sandy CLAY.
TP236		B	2.50		Brown slightly gravelly very sandy CLAY.
TP250		B	1.00		Grey gravelly sandy CLAY.
TP223		B	2.20		Dark grey slightly gravelly very sandy organic CLAY.
TP213		B	1.00		MADE GROUND brown very gravelly very sandy clay.
TP214		B	2.00		MADE GROUND brown very sandy clayey gravel with some cobbles.
TP219		B	1.20		MADE GROUND brown sandy clayey gravel with many cobbles.
TP220		B	2.00		MADE GROUND brown very sandy clayey gravel with cobbles.
TP236		B	1.50		MADE GROUND brown very sandy very clayey gravel with cobbles.
TP252		B	1.00		MADE GROUND brownvery sandy slightly clayey gravel of cobbles.
CP203		B	7.00		Brown slightly gravelly very sandy CLAY.
CP205		B	8.00		Brown very gravelly very sandy CLAY.
CP207		B	18.00		Brown gravelly very sandy CLAY.
CP210		B	10.00		Brown slightly silty SAND.
RH201		CS	15.80	16.00	Stiff brown very sandy CLAY.
RH202		CS	13.10	13.50	Stiff brown slightly gravelly very sandy CLAY.

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
RH205		CS	12.50	12.80	Stiff brown slightly gravelly very sandy CLAY.
RH206		CS	6.00	6.45	Brown slightly gravelly sandy CLAY.
CP207		U	15.00	15.45	Brown slightly gravelly very sandy CLAY.
CP202		B	11.00	12.00	Brown very sandy slightly silty GRAVEL.
CP204		B	4.00		MADE GROUND brown very sandy very clayey gravel.
CP206		B	4.00		Brown slightly gravelly sandy CLAY.
CP207		B	10.00	11.00	Brown very sandy very clayey GRAVEL.

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP211		B	1.80		31		2.59	46	24	22	71	Intermediate Plasticity CI
TP237		B	4.50		19		2.64	36	19	17	86	Intermediate Plasticity CI
TP252		B	2.10		20		2.61					
TP202		B	2.00		20		2.66	45	22	23	93	Intermediate Plasticity CI
TP236		B	2.50		20			36	18	18	91	Intermediate Plasticity CI
TP250		B	1.00		30		2.65	48	25	23	85	Intermediate Plasticity CI
TP223		B	2.20		50			90	38	52	93	Extremely High Plasticity CE
TP213		B	1.00		26		2.58					
TP214		B	2.00		21		2.40					
TP219		B	1.20		16		2.48					
TP220		B	2.00		20							
TP236		B	1.50		26							
TP252		B	1.00		15		2.55					
CP203		B	7.00		20		2.66					
CP205		B	8.00		17							
CP207		B	18.00		19							
CP210		B	10.00		14		2.62					
RH201		CS	15.80	16.00	14		2.64	27	15	12	98	Low Plasticity CL
RH202		CS	13.10	13.50	15			33	17	16	96	Low Plasticity CL

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

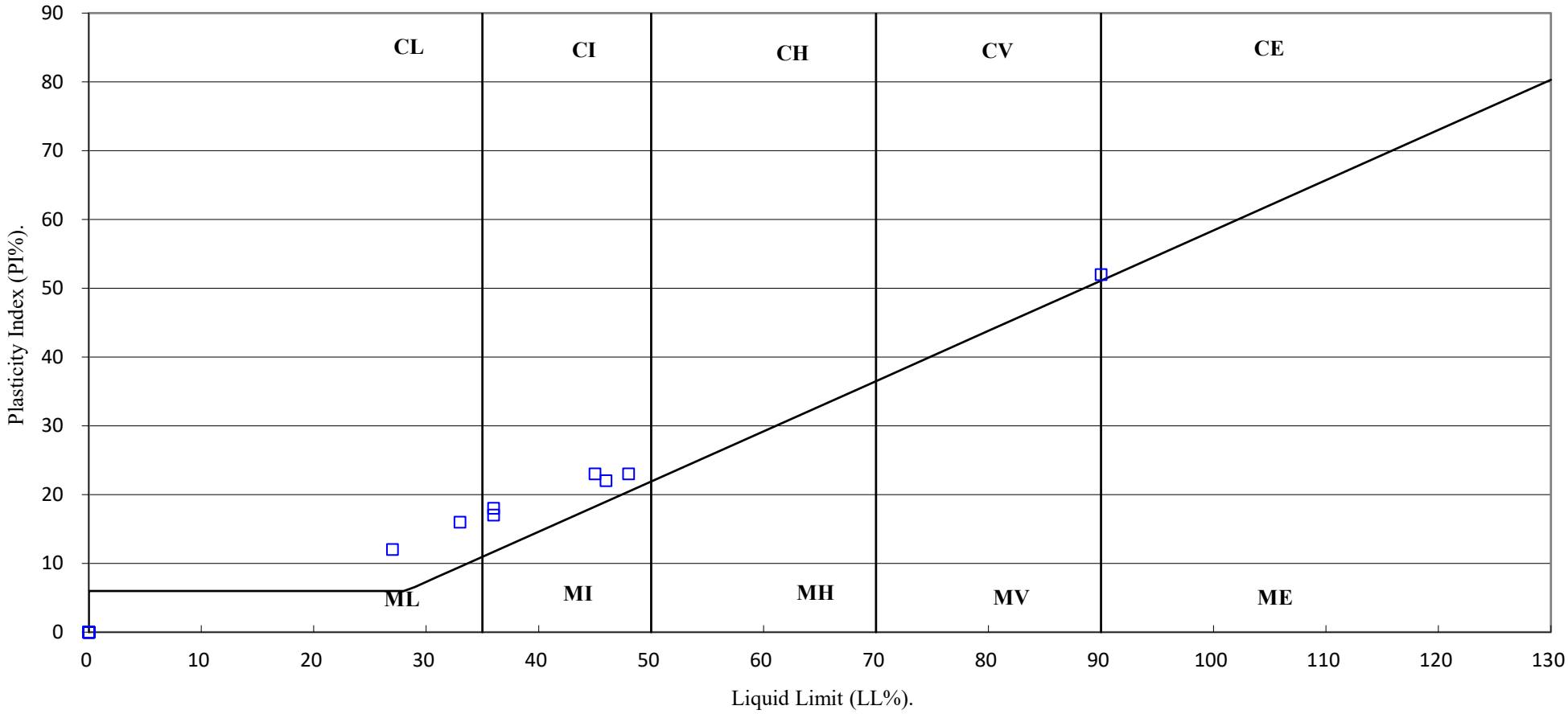
Contract No:

PSL22/3506

Client Ref:

LD10385

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506 Client Ref: LD10385

SUMMARY OF SOIL CLASSIFICATION TESTS

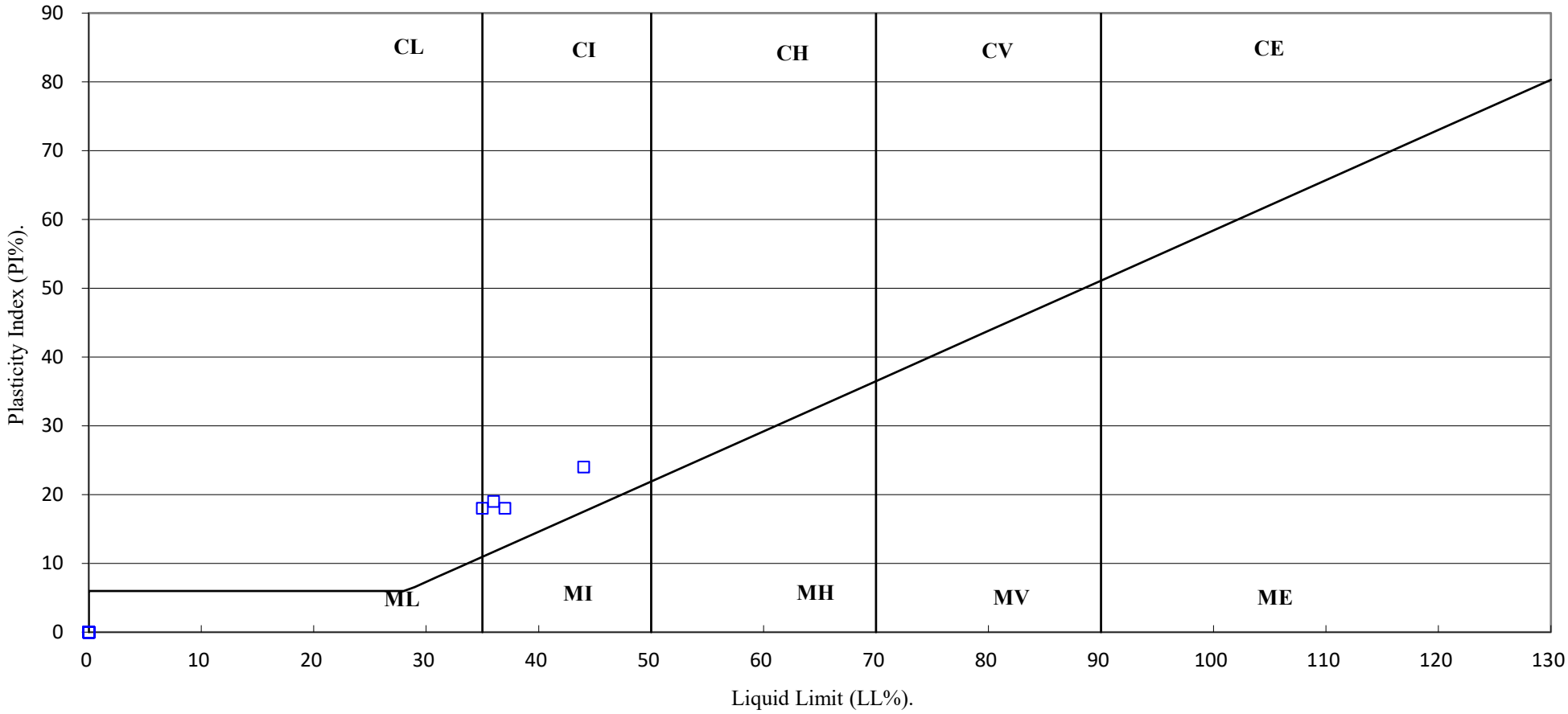
(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
RH205		CS	12.50	12.80	15			35	17	18	89	Intermediate Plasticity CI
RH206		CS	6.00	6.45	17		2.63	37	19	18	89	Intermediate Plasticity CI
CP207		U	15.00	15.45	14			36	17	19	92	Intermediate Plasticity CI
CP202		B	11.00	12.00	14							
CP204		B	4.00		20							
CP206		B	4.00		20			44	20	24	88	Intermediate Plasticity CI
CP207		B	10.00	11.00	20							

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506 Client Ref: LD10385

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506 Client Ref: LD10385

PARTICLE SIZE DISTRIBUTION TEST

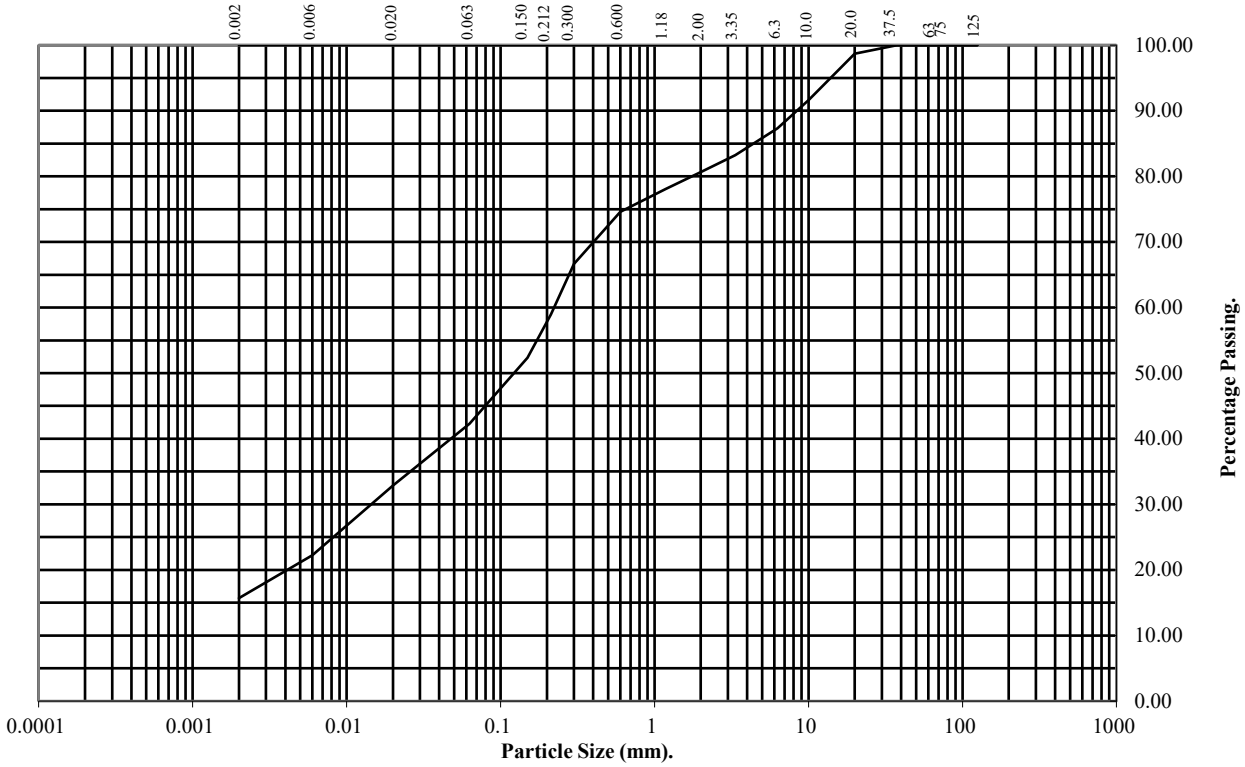
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP211 **Top Depth (m):** 1.80

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	99
10	92
6.3	87
3.35	83
2	81
1.18	78
0.6	75
0.3	67
0.212	59
0.15	52
0.063	42

Particle Diameter	Percentage Passing
0.02	33
0.006	22
0.002	16

Soil Fraction	Total Percentage
Cobbles	0
Gravel	19
Sand	39
Silt	26
Clay	16

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

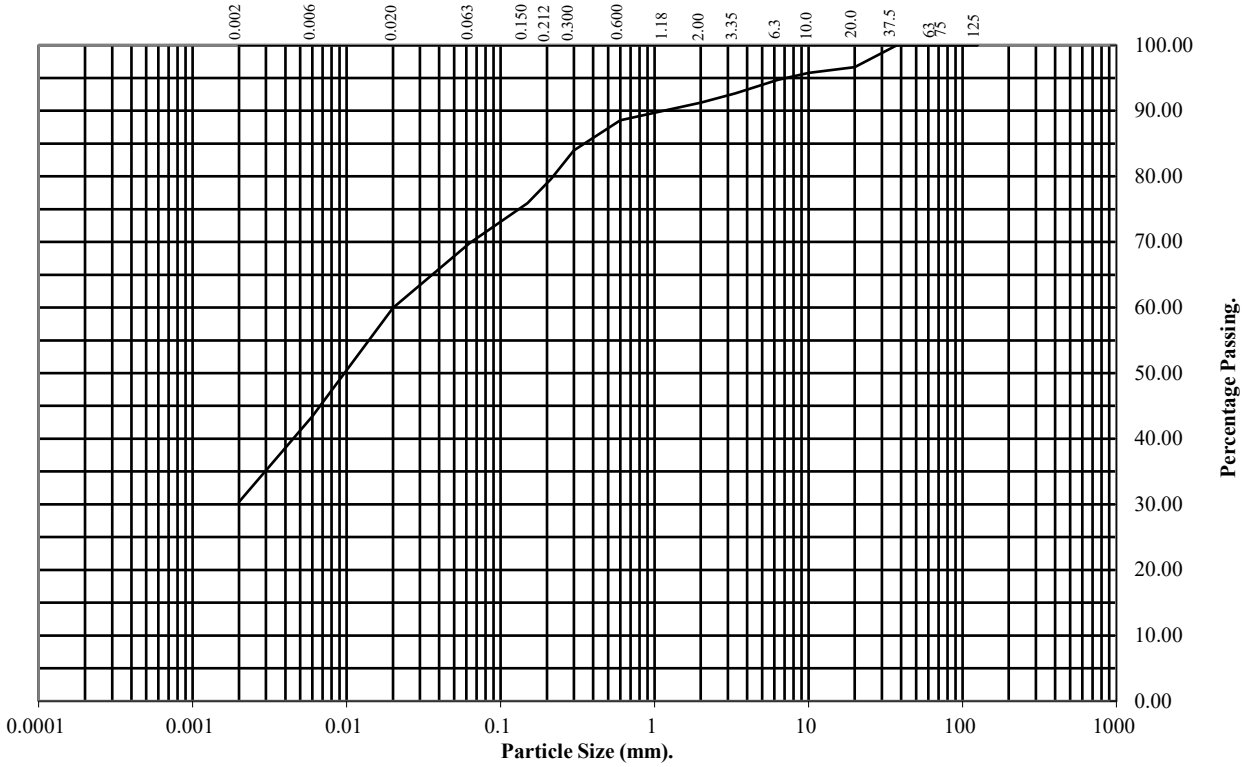
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP237 **Top Depth (m):** 4.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	97
10	96
6.3	95
3.35	93
2	91
1.18	90
0.6	89
0.3	84
0.212	80
0.15	76
0.063	70

Particle Diameter	Percentage Passing
0.02	60
0.006	43
0.002	30

Soil Fraction	Total Percentage
Cobbles	0
Gravel	9
Sand	21
Silt	40
Clay	30

Remarks:
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

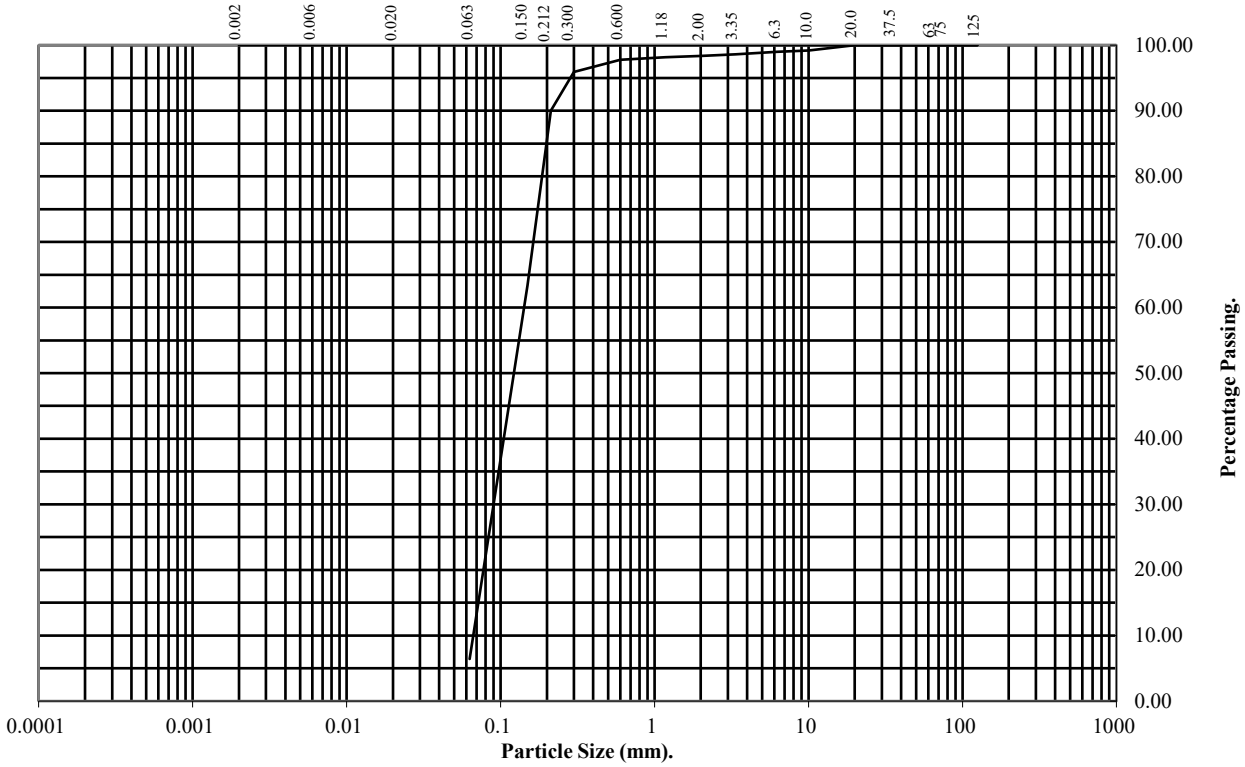
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP252** **Top Depth (m):** **2.10**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	99
3.35	99
2	98
1.18	98
0.6	98
0.3	96
0.212	90
0.15	63
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	92
Silt/Clay	6

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

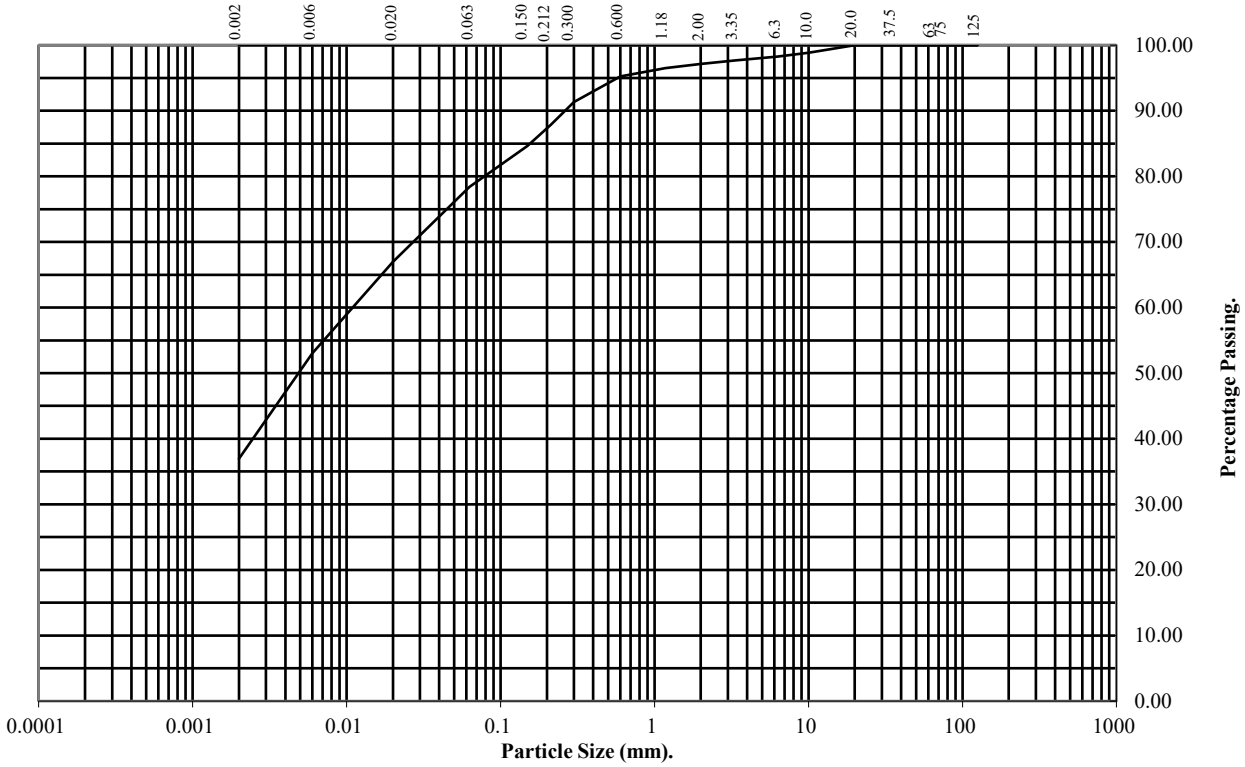
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP202 **Top Depth (m):** 2.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	98
3.35	98
2	97
1.18	97
0.6	95
0.3	91
0.212	88
0.15	85
0.063	78

Particle Diameter	Percentage Passing
0.02	67
0.006	53
0.002	37

Soil Fraction	Total Percentage
Cobbles	0
Gravel	3
Sand	19
Silt	41
Clay	37

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

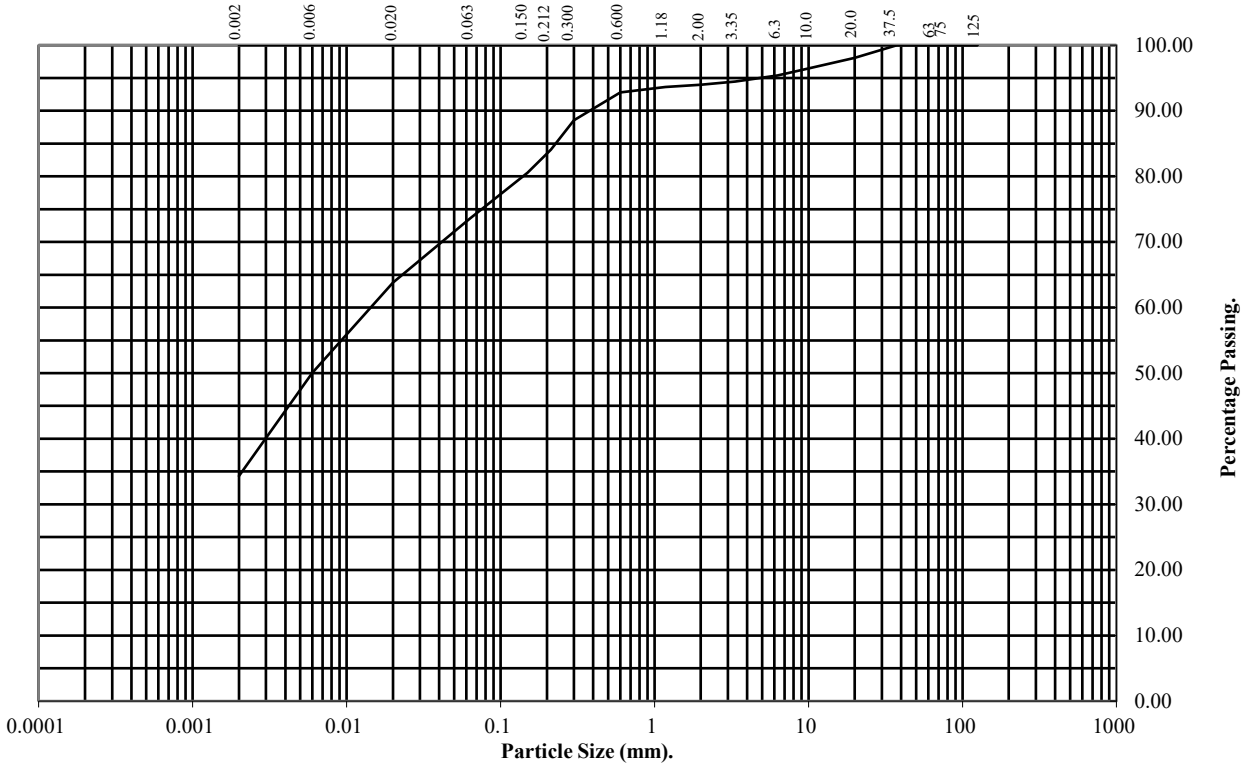
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP236 **Top Depth (m):** 2.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	98
10	96
6.3	95
3.35	94
2	94
1.18	94
0.6	93
0.3	89
0.212	84
0.15	81
0.063	74

Particle Diameter	Percentage Passing
0.02	64
0.006	50
0.002	34

Soil Fraction	Total Percentage
Cobbles	0
Gravel	6
Sand	20
Silt	40
Clay	34

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

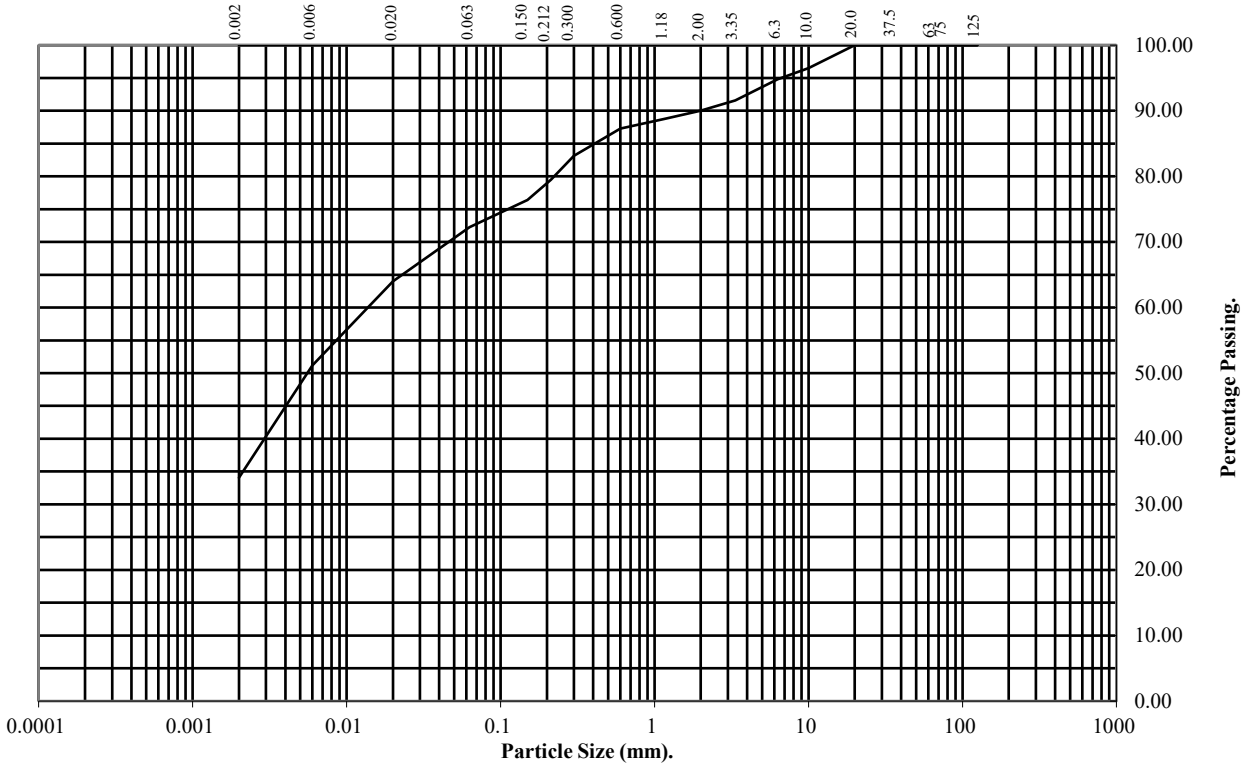
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP250** **Top Depth (m):** **1.00**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	97
6.3	95
3.35	92
2	90
1.18	89
0.6	87
0.3	83
0.212	79
0.15	76
0.063	72

Particle Diameter	Percentage Passing
0.02	64
0.006	51
0.002	34

Soil Fraction	Total Percentage
Cobbles	0
Gravel	10
Sand	18
Silt	38
Clay	34

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

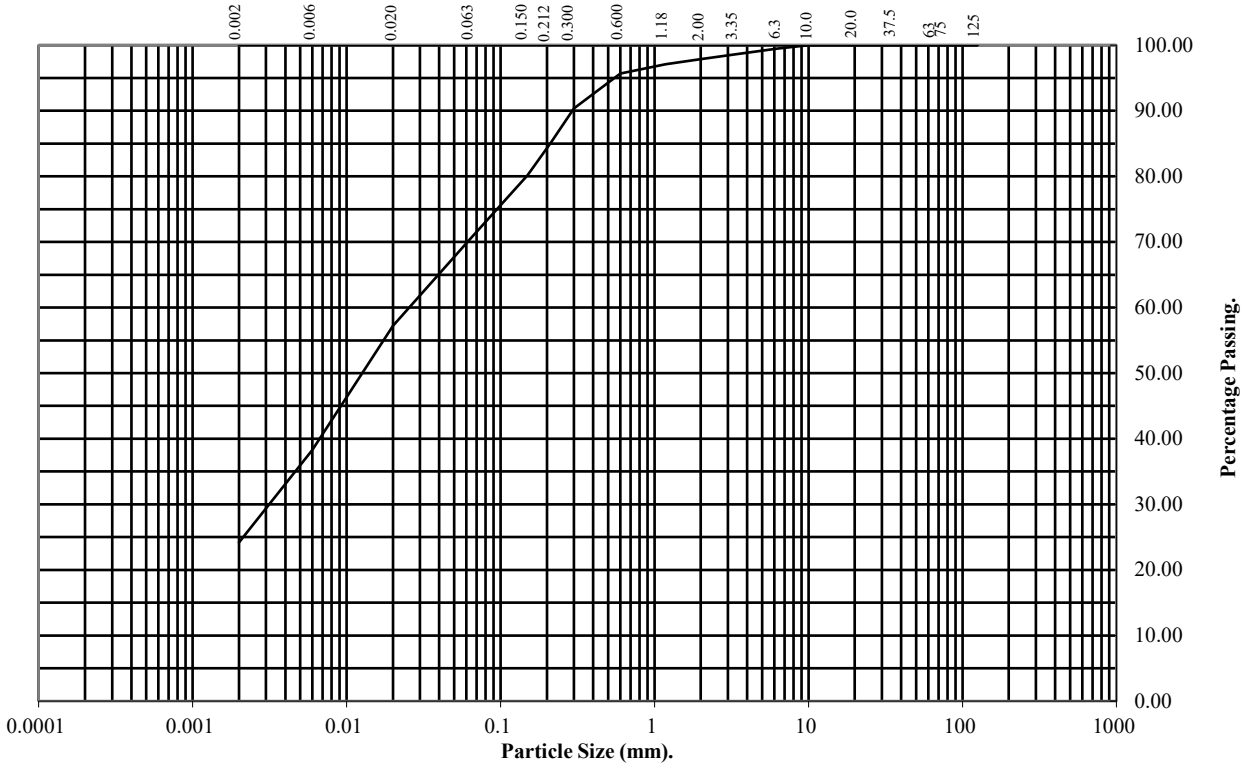
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP223 **Top Depth (m):** 2.20

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	99
3.35	99
2	98
1.18	97
0.6	96
0.3	90
0.212	85
0.15	80
0.063	70

Particle Diameter	Percentage Passing
0.02	57
0.006	38
0.002	24

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	28
Silt	46
Clay	24

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

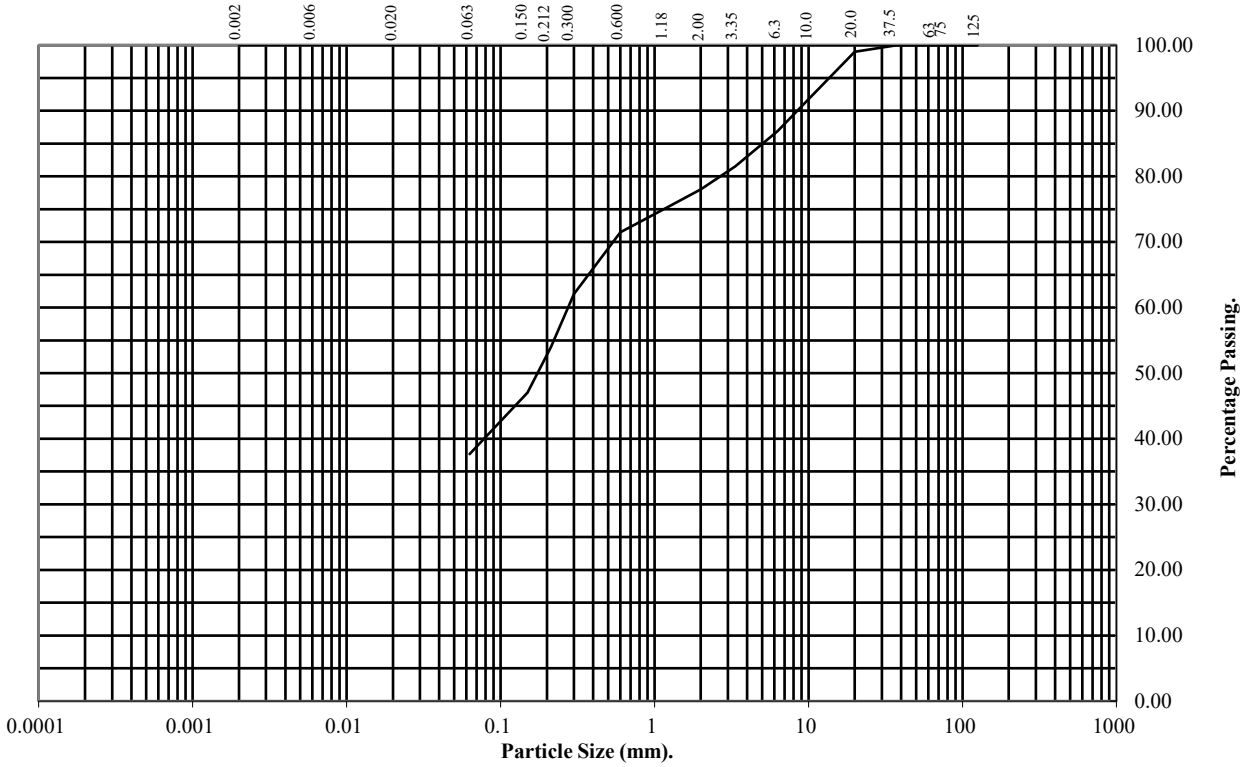
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP213 **Top Depth (m):** 1.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	99
10	92
6.3	87
3.35	82
2	78
1.18	75
0.6	71
0.3	62
0.212	54
0.15	47
0.063	38

Soil Fraction	Total Percentage
Cobbles	0
Gravel	22
Sand	40
Silt/Clay	38

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

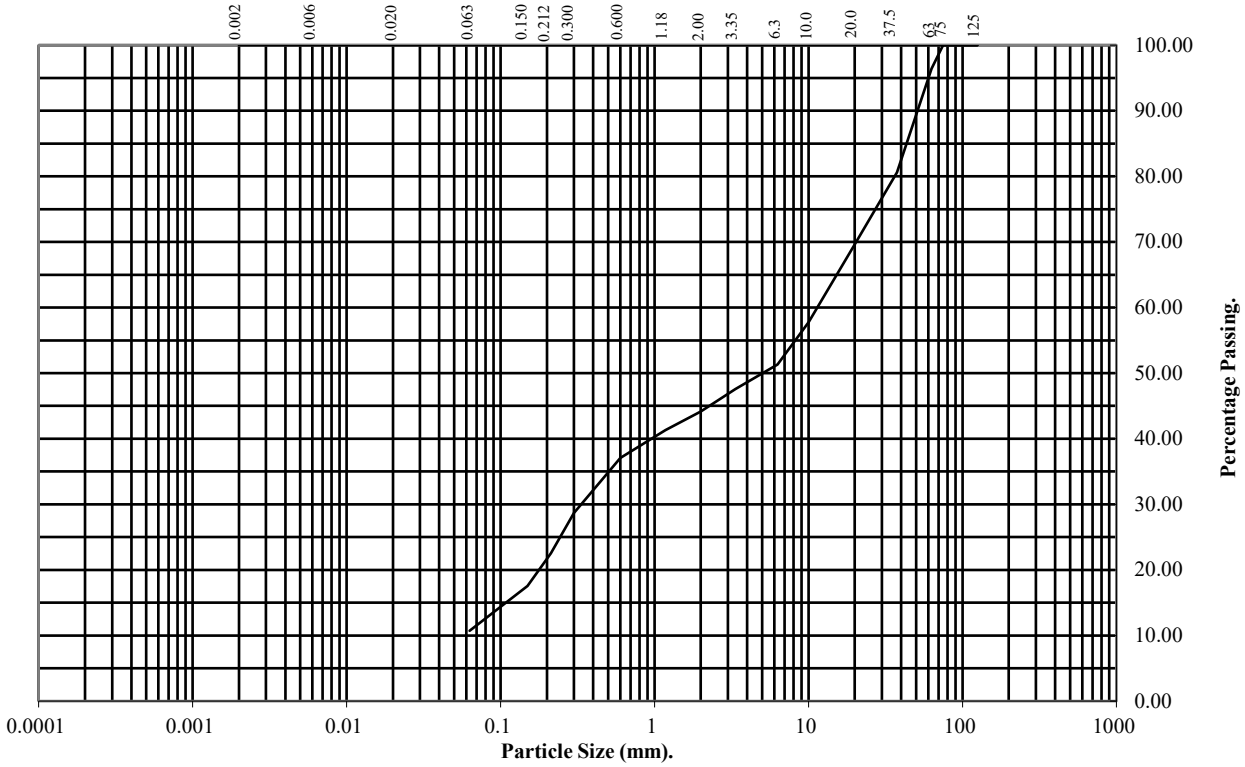
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP214 **Top Depth (m):** 2.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	96
37.5	81
20	70
10	58
6.3	51
3.35	48
2	44
1.18	41
0.6	37
0.3	29
0.212	23
0.15	18
0.063	11

Soil Fraction	Total Percentage
Cobbles	4
Gravel	52
Sand	33
Silt/Clay	11

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

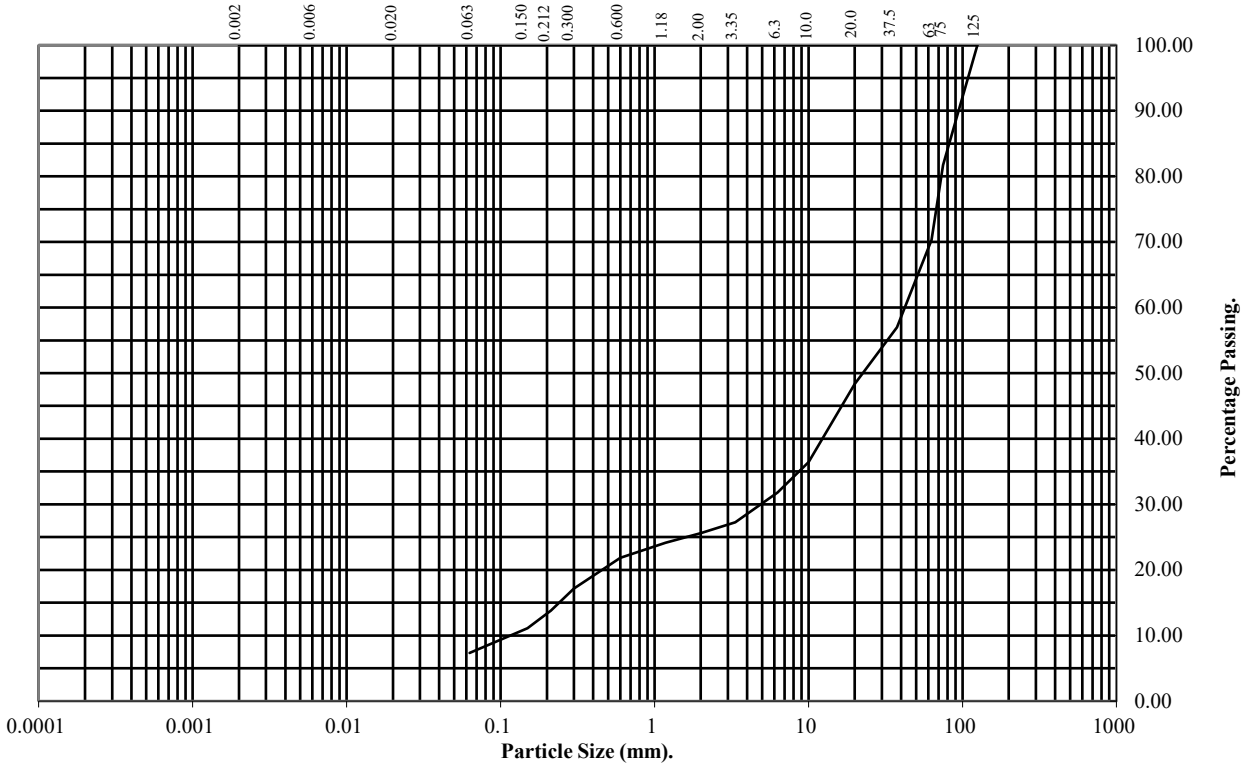
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP219 **Top Depth (m):** 1.20

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	82
63	70
37.5	57
20	48
10	36
6.3	32
3.35	27
2	26
1.18	24
0.6	22
0.3	17
0.212	14
0.15	11
0.063	7

Soil Fraction	Total Percentage
Cobbles	30
Gravel	44
Sand	19
Silt/Clay	7

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

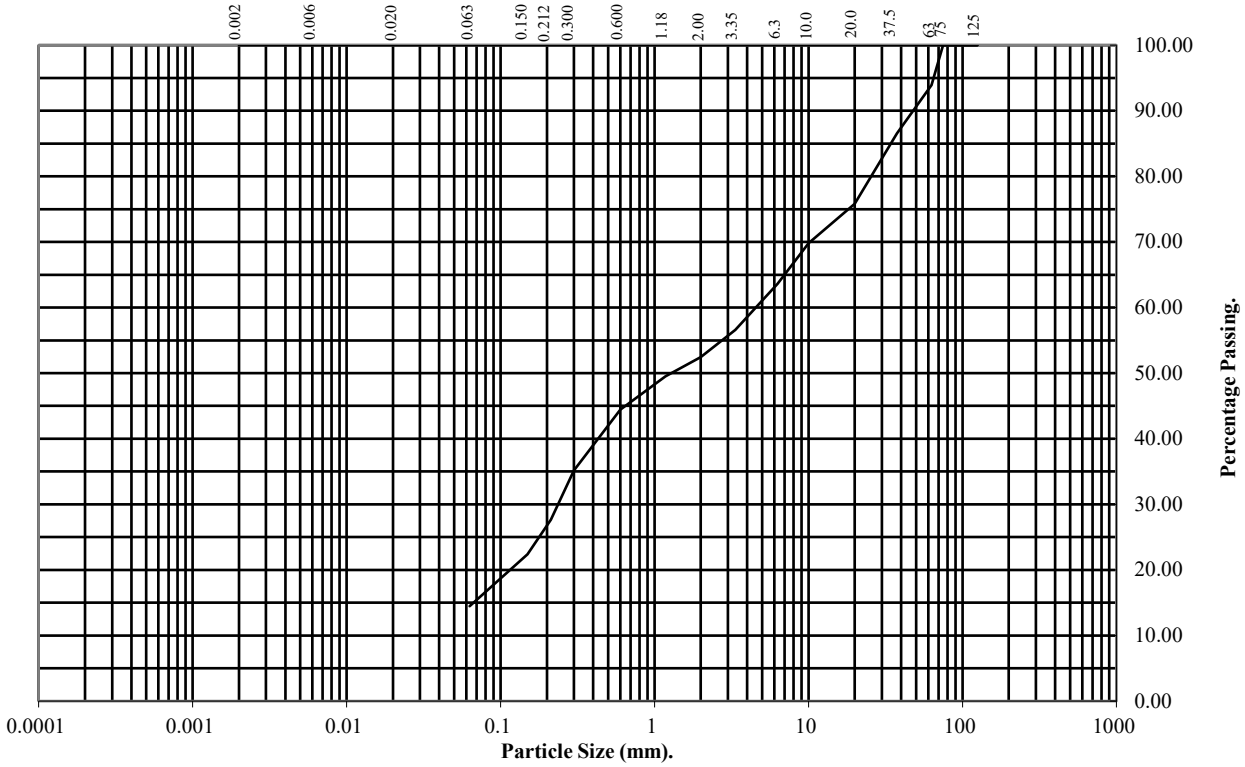
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP220 **Top Depth (m):** 2.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	94
37.5	87
20	76
10	70
6.3	64
3.35	57
2	52
1.18	50
0.6	44
0.3	35
0.212	28
0.15	22
0.063	14

Soil Fraction	Total Percentage
Cobbles	6
Gravel	42
Sand	38
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

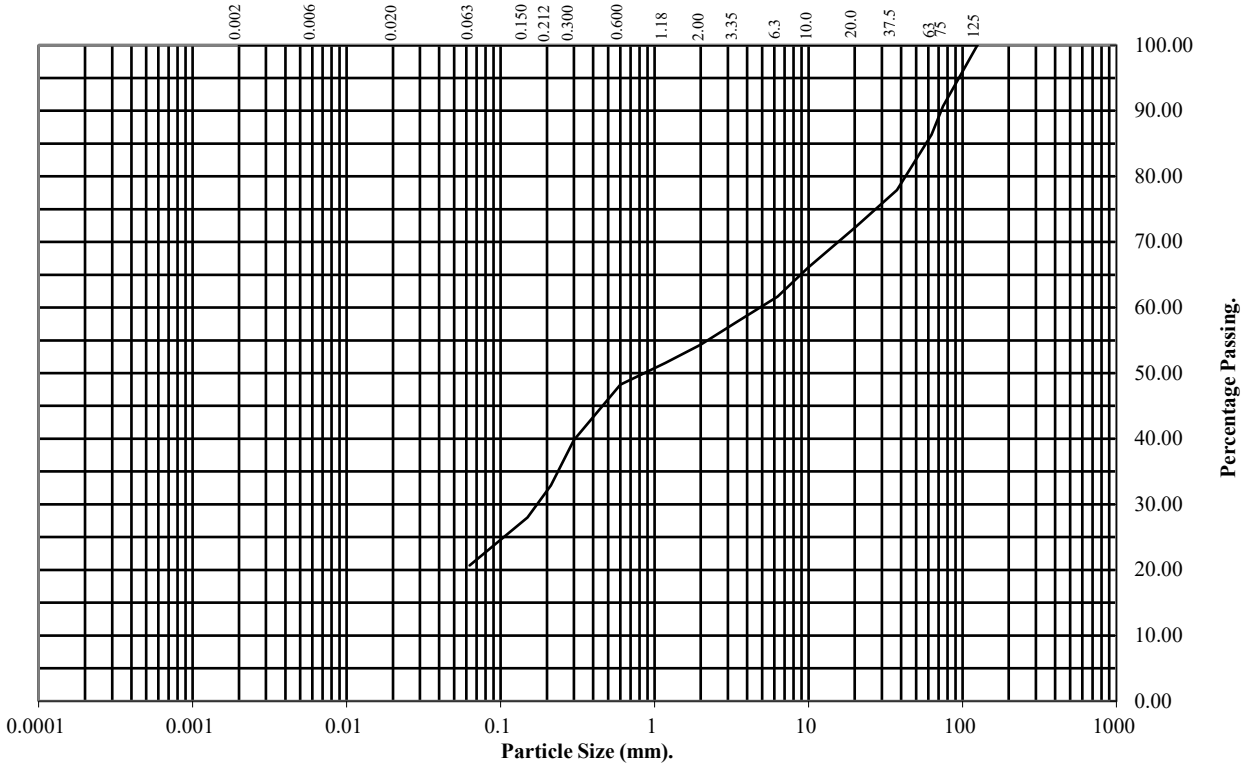
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP236 **Top Depth (m):** 1.50

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	91
63	86
37.5	78
20	72
10	66
6.3	62
3.35	58
2	54
1.18	52
0.6	48
0.3	40
0.212	33
0.15	28
0.063	21

Soil Fraction	Total Percentage
Cobbles	14
Gravel	32
Sand	33
Silt/Clay	21

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

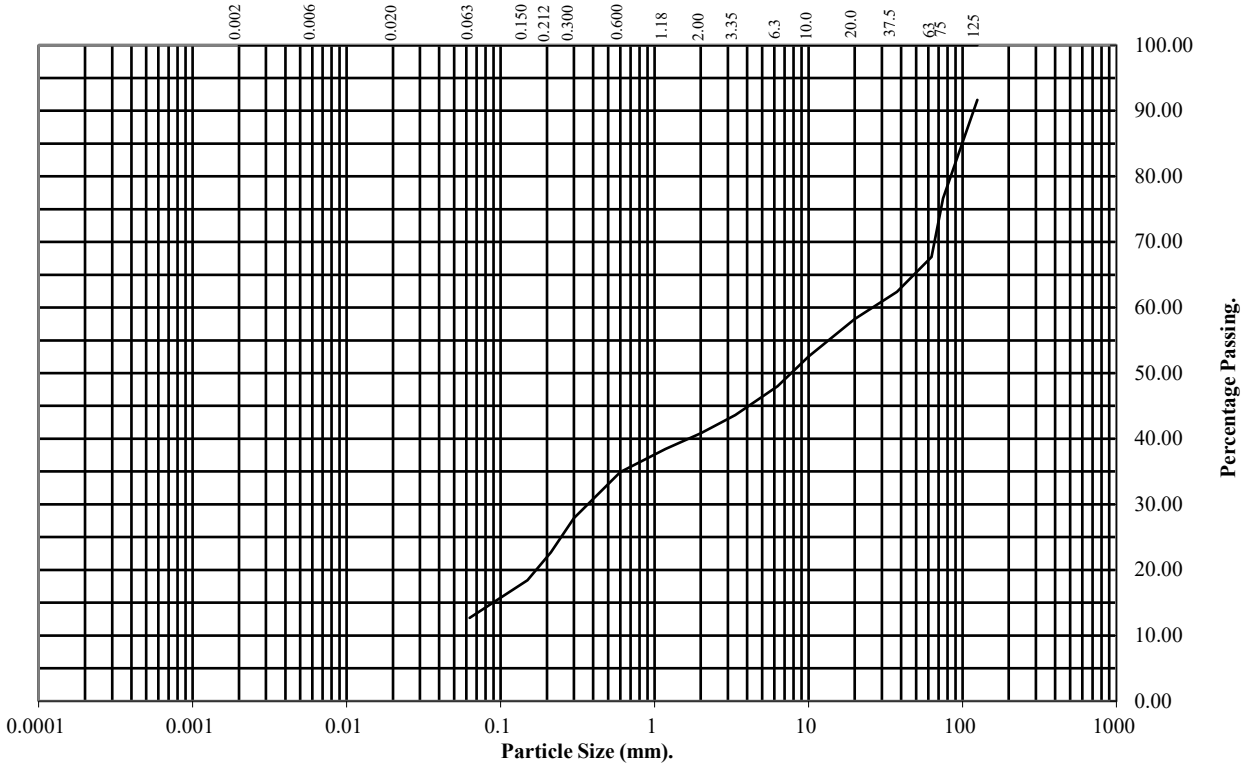
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP252 **Top Depth (m):** 1.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	92
75	77
63	68
37.5	62
20	58
10	53
6.3	48
3.35	44
2	41
1.18	38
0.6	35
0.3	28
0.212	23
0.15	18
0.063	13

Soil Fraction	Total Percentage
Cobbles	32
Gravel	27
Sand	28
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

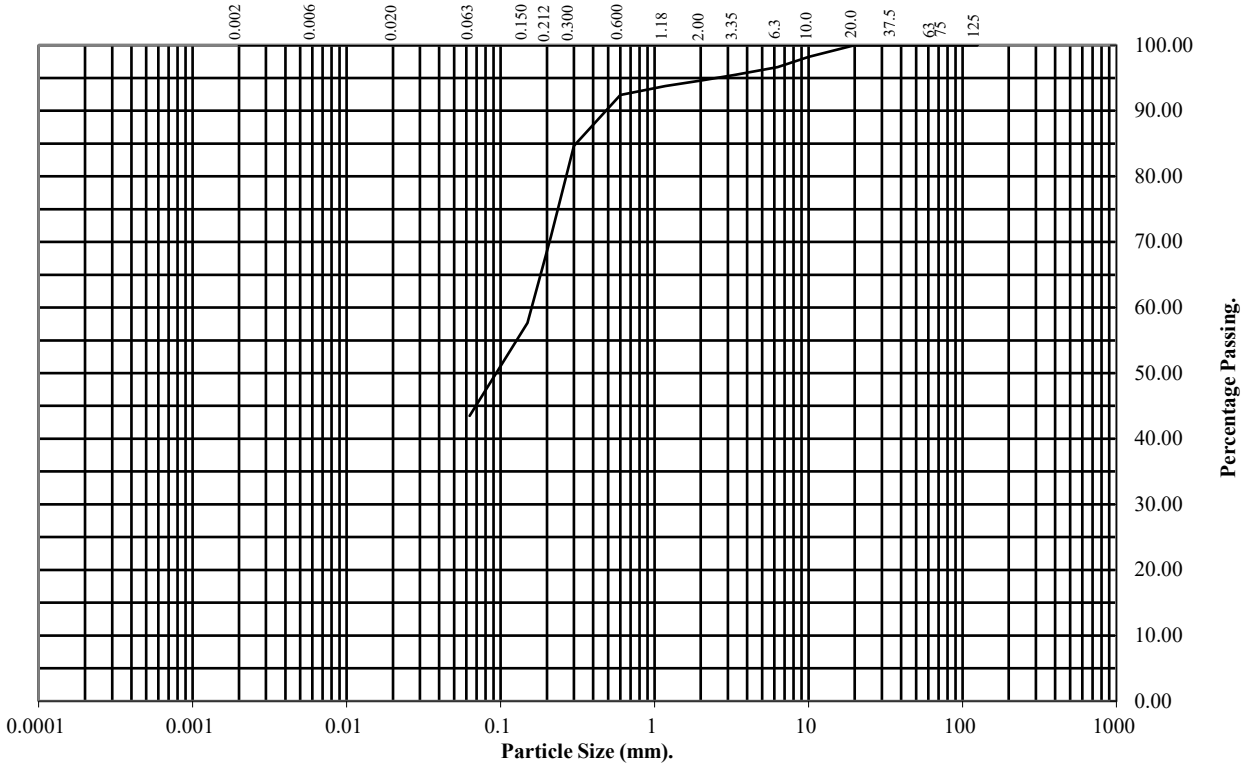
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP203 **Top Depth (m):** 7.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	98
6.3	97
3.35	95
2	95
1.18	94
0.6	92
0.3	85
0.212	71
0.15	58
0.063	43

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	52
Silt/Clay	43

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

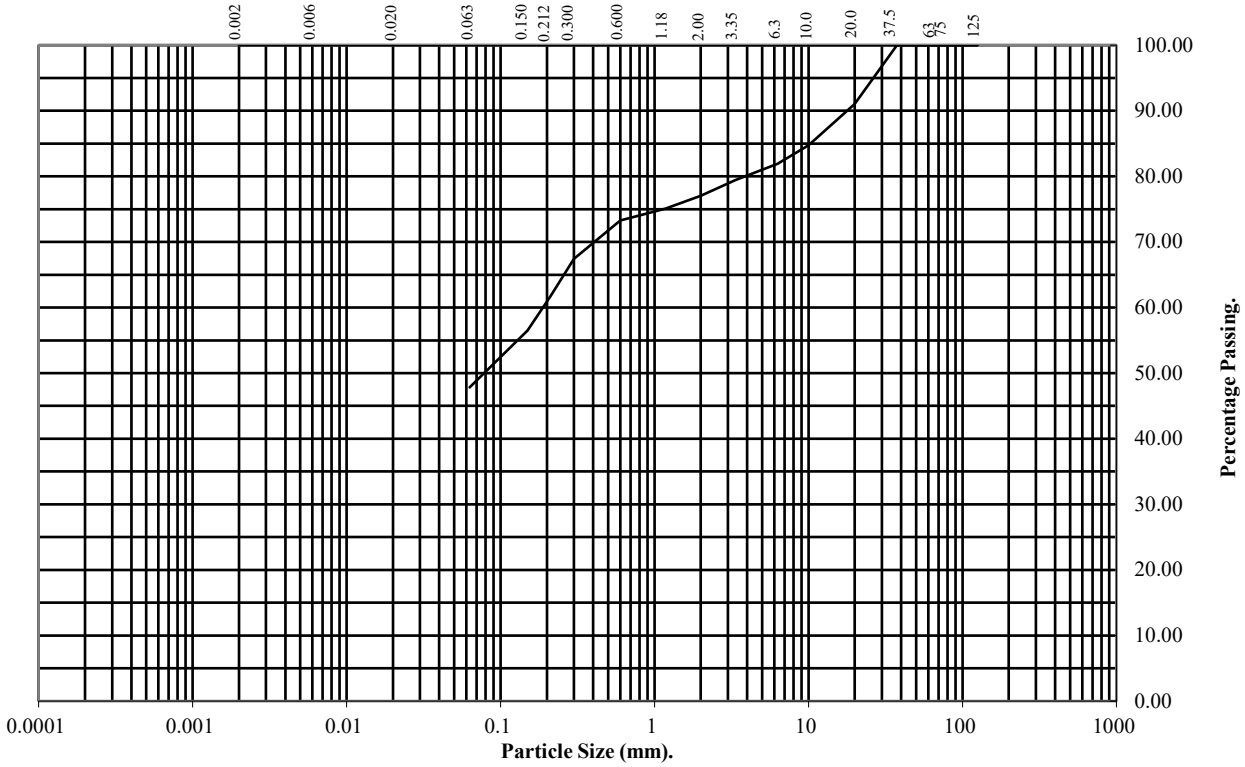
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP205 **Top Depth (m):** 8.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	85
6.3	82
3.35	79
2	77
1.18	75
0.6	73
0.3	67
0.212	62
0.15	57
0.063	48

Soil Fraction	Total Percentage
Cobbles	0
Gravel	23
Sand	29
Silt/Clay	48

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

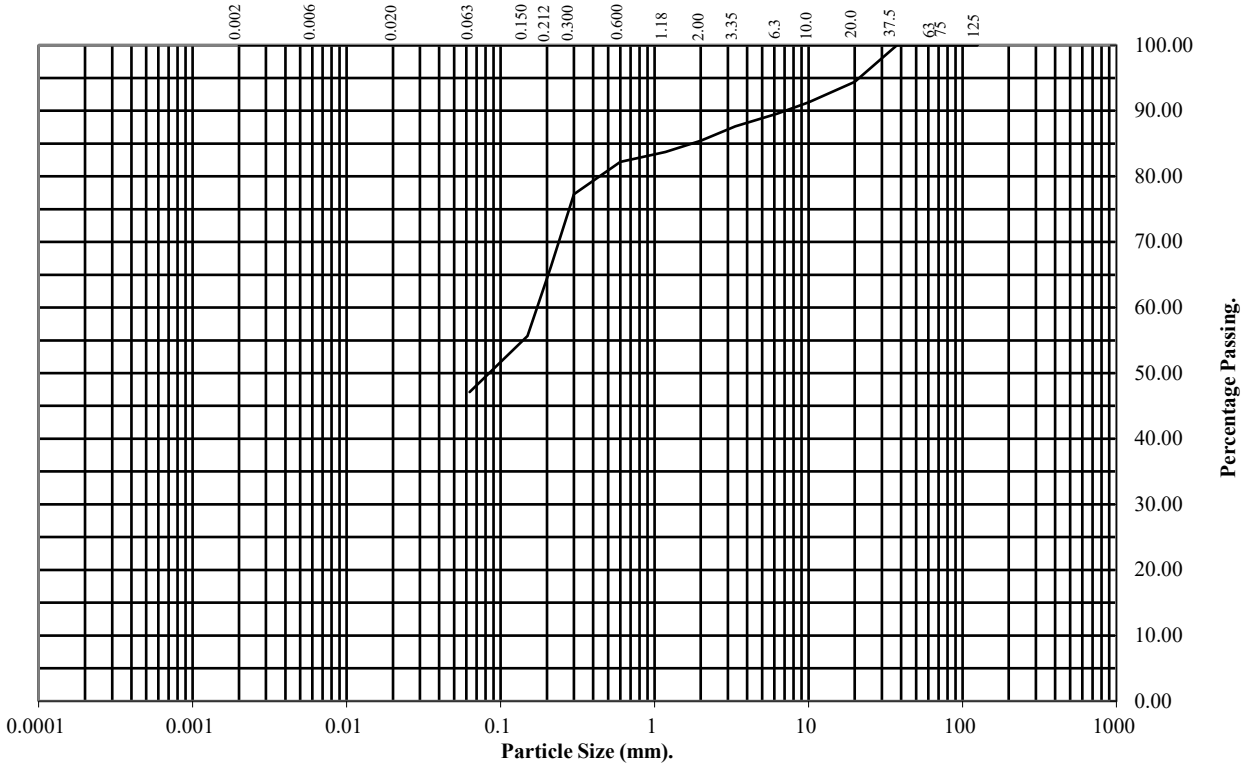
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP207 **Top Depth (m):** 18.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	94
10	91
6.3	90
3.35	88
2	85
1.18	84
0.6	82
0.3	77
0.212	66
0.15	56
0.063	47

Soil Fraction	Total Percentage
Cobbles	0
Gravel	15
Sand	38
Silt/Clay	47

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

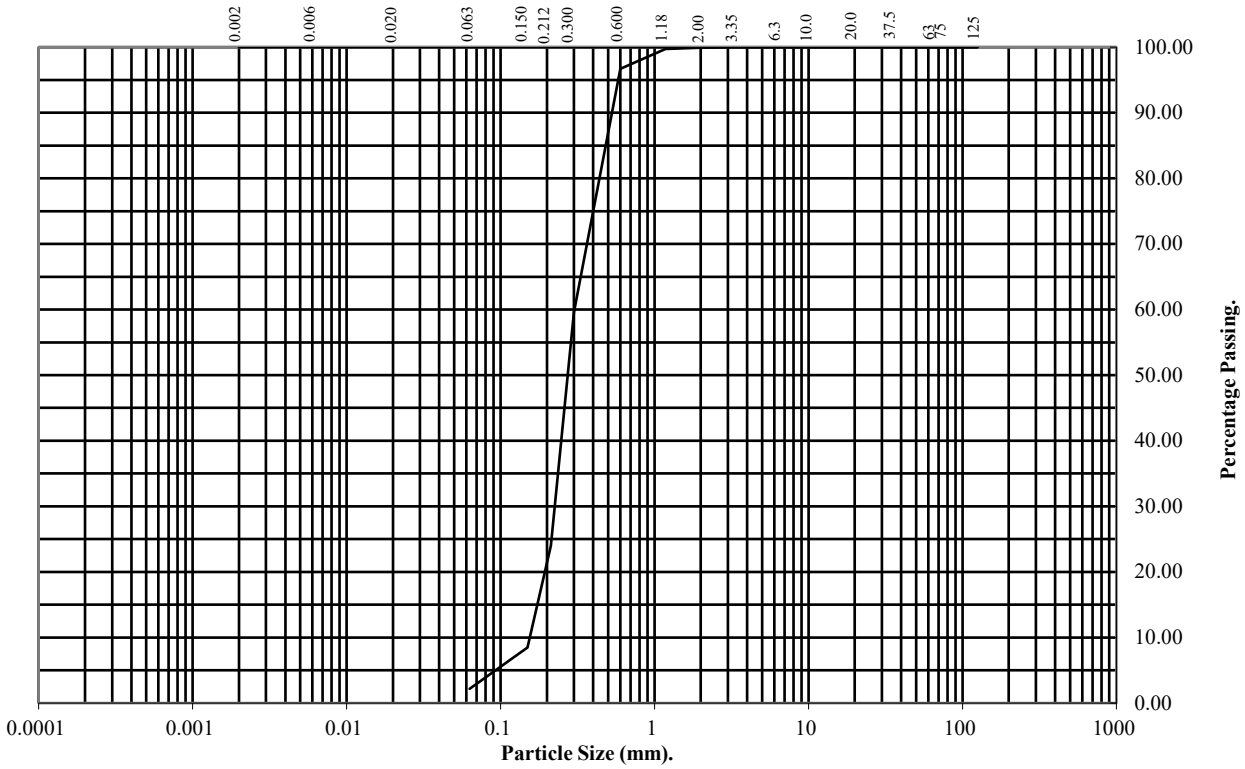
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP210 **Top Depth (m):** 10.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.6	97
0.3	60
0.212	24
0.15	8
0.063	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	98
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

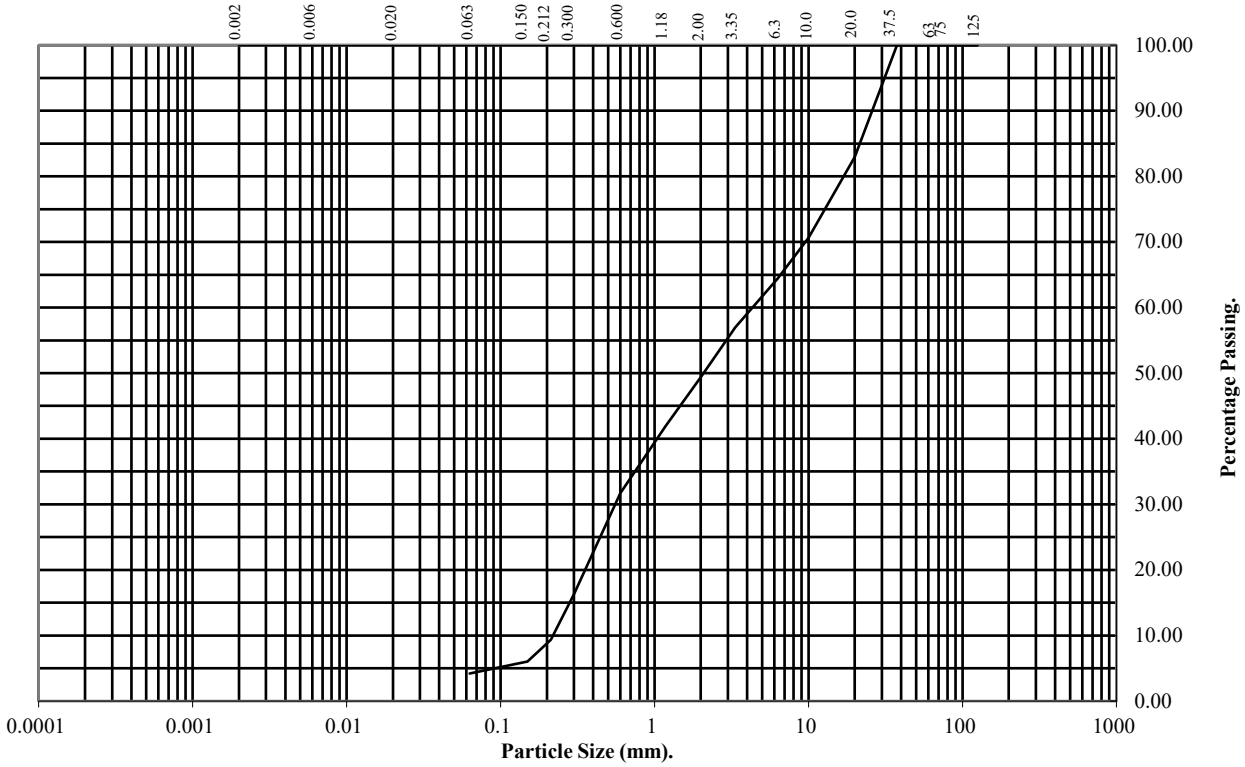
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP202 **Top Depth (m):** 11.00

Sample Number: **Base Depth(m):** 12.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	83
10	71
6.3	64
3.35	57
2	49
1.18	42
0.6	32
0.3	16
0.212	9
0.15	6
0.063	4

Soil Fraction	Total Percentage
Cobbles	0
Gravel	51
Sand	45
Silt/Clay	4

Remarks:

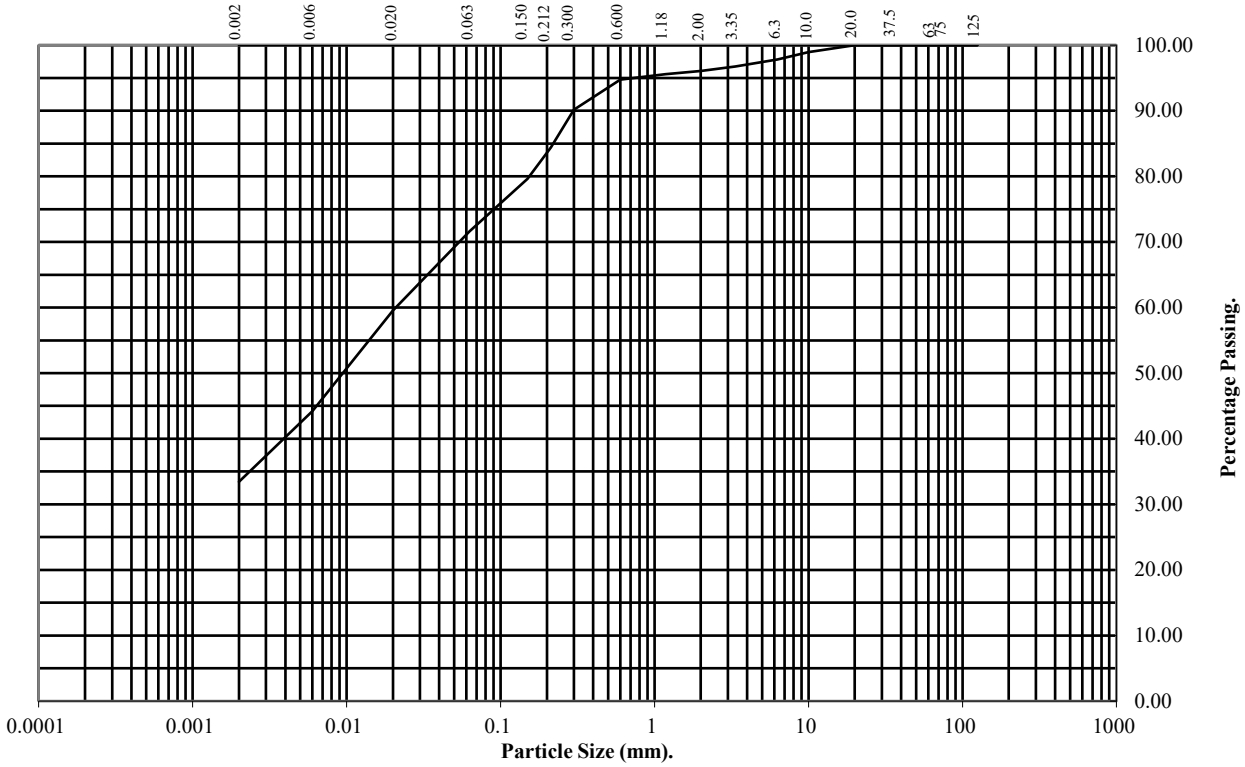
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number:	**CP207**	**Top Depth (m):**	**15.00**
Sample Number:		**Base Depth(m):**	**15.45**
Sample Type:	**U**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	98
3.35	97
2	96
1.18	96
0.6	95
0.3	90
0.212	84
0.15	80
0.063	72

Particle Diameter	Percentage Passing
0.02	60
0.006	44
0.002	33

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	24
Silt	39
Clay	33

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

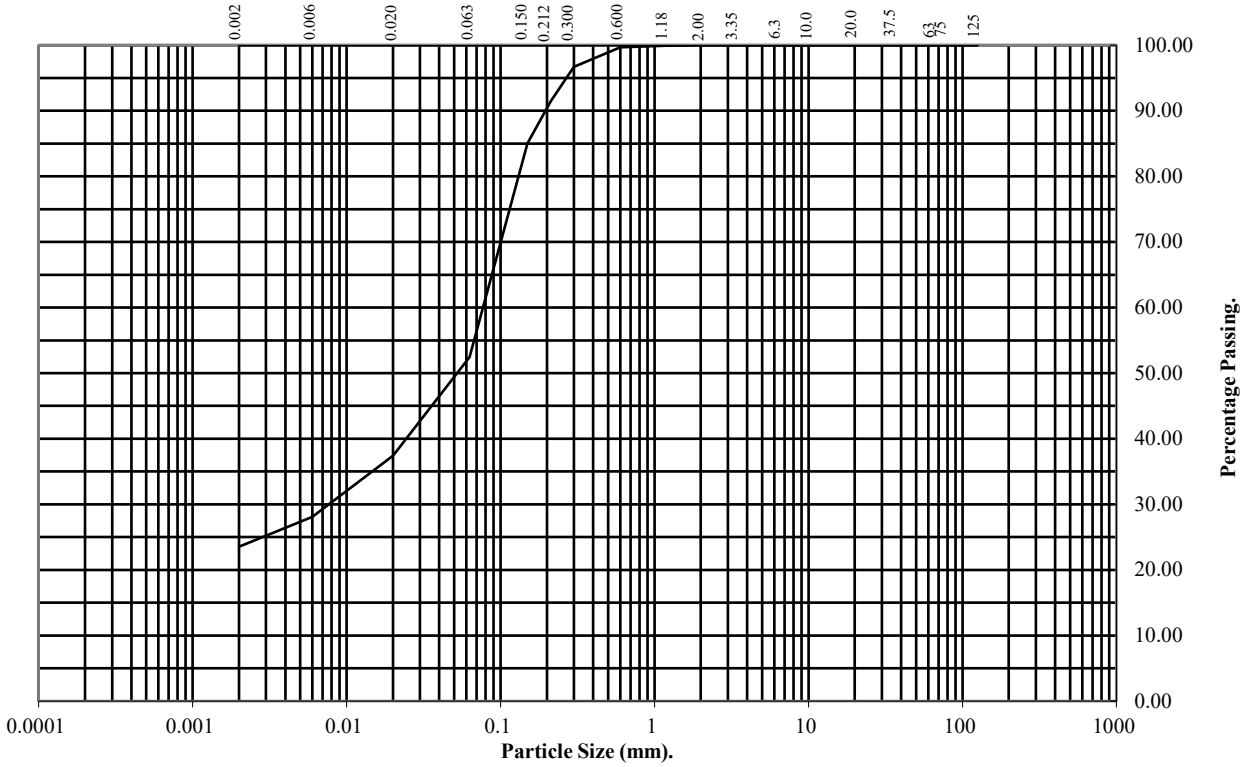
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **RH201** **Top Depth (m):** **15.80**

Sample Number: **Base Depth(m):** **16.00**

Sample Type: **CS**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.6	100
0.3	97
0.212	91
0.15	85
0.063	52

Particle Diameter	Percentage Passing
0.02	37
0.006	28
0.002	24

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	48
Silt	28
Clay	24

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

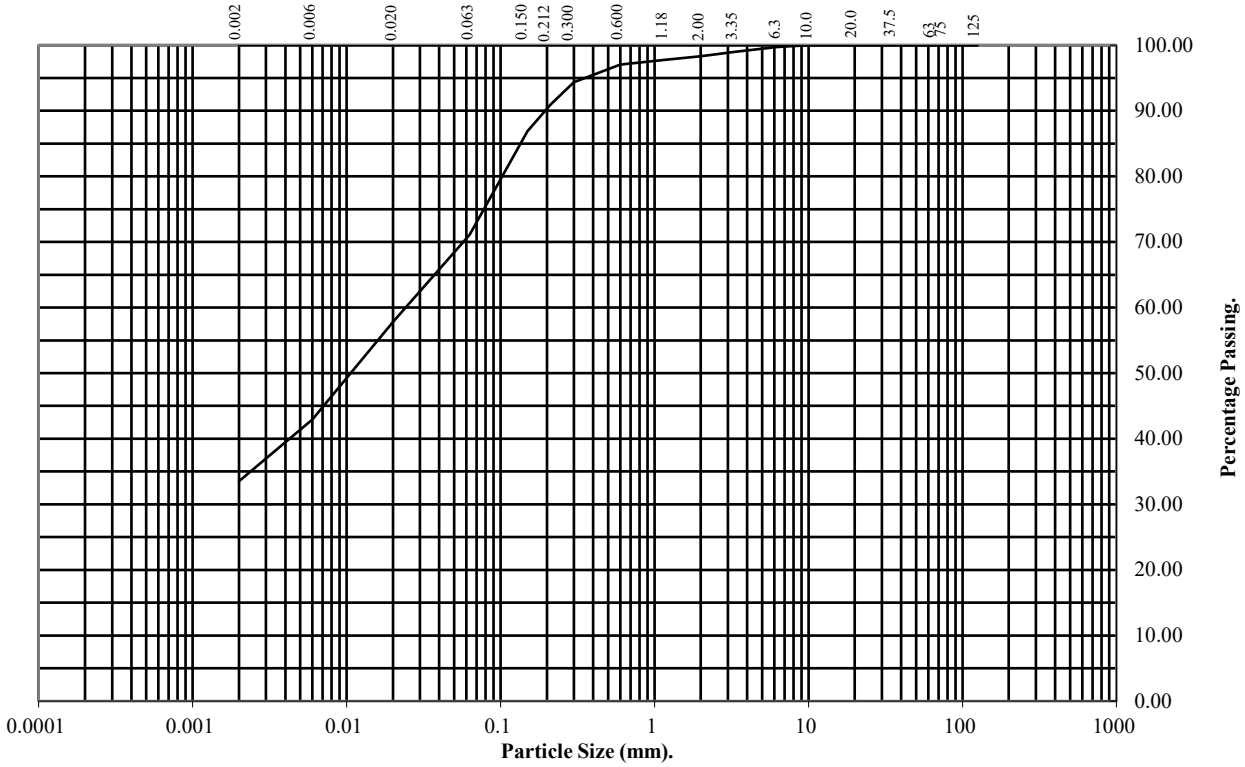
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **RH202** **Top Depth (m):** **13.10**

Sample Number: **Base Depth(m):** **13.50**

Sample Type: **CS**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	98
1.18	98
0.6	97
0.3	94
0.212	91
0.15	87
0.063	71

Particle Diameter	Percentage Passing
0.02	58
0.006	43
0.002	34

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	27
Silt	37
Clay	34

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3506
Client Ref:
LD10385

PARTICLE SIZE DISTRIBUTION TEST

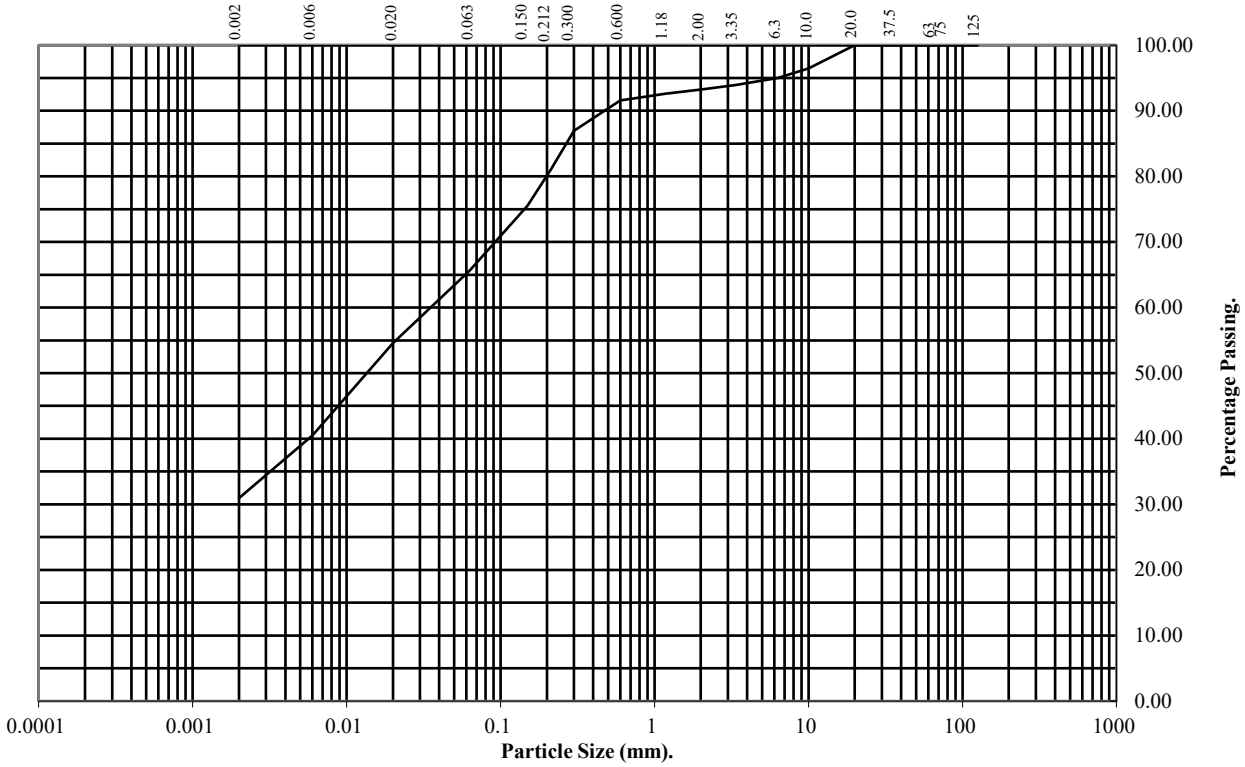
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **RH205** **Top Depth (m):** **12.50**

Sample Number: **Base Depth(m):** **12.80**

Sample Type: **CS**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	96
6.3	95
3.35	94
2	93
1.18	93
0.6	92
0.3	87
0.212	81
0.15	76
0.063	66

Particle Diameter	Percentage Passing
0.02	55
0.006	41
0.002	31

Soil Fraction	Total Percentage
Cobbles	0
Gravel	7
Sand	27
Silt	35
Clay	31

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3506
Client Ref:
LD10385

PARTICLE SIZE DISTRIBUTION TEST

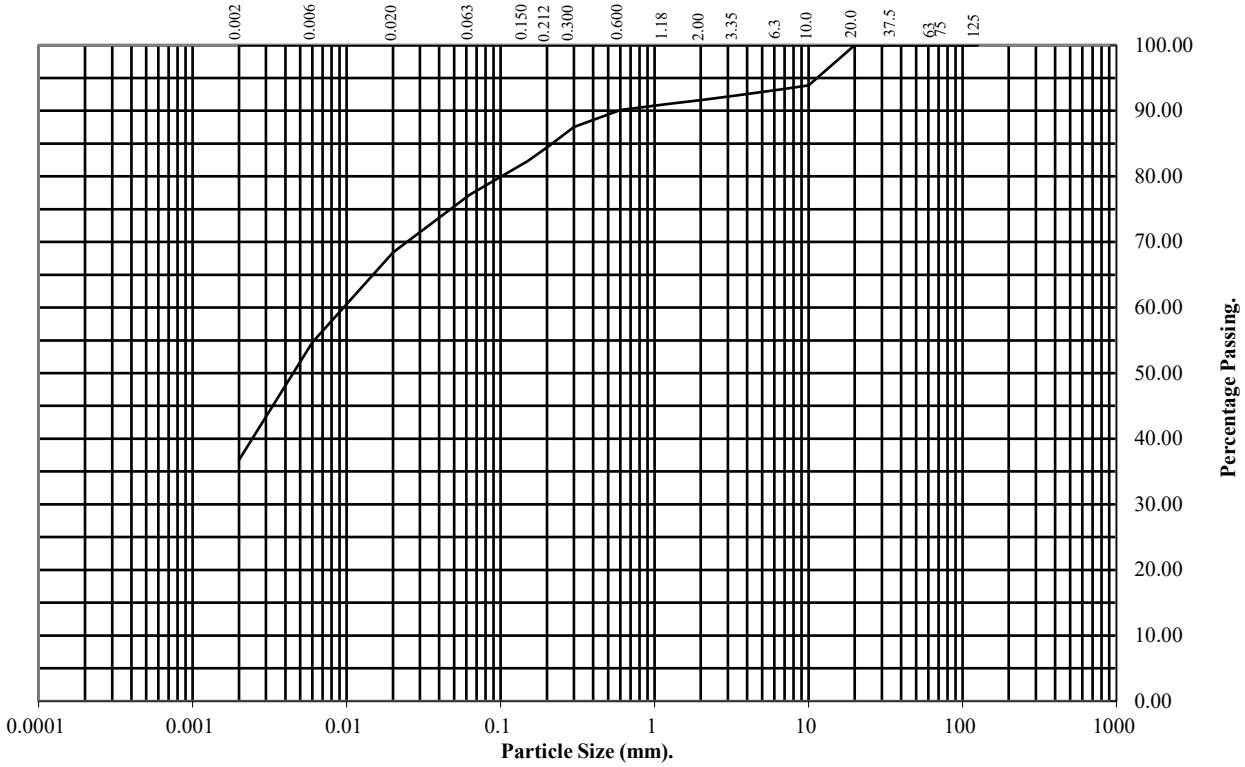
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **RH206** **Top Depth (m):** **6.00**

Sample Number: **Base Depth(m):** **6.45**

Sample Type: **CS**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	94
6.3	93
3.35	92
2	92
1.18	91
0.6	90
0.3	88
0.212	85
0.15	82
0.063	77

Particle Diameter	Percentage Passing
0.02	68
0.006	55
0.002	37

Soil Fraction	Total Percentage
Cobbles	0
Gravel	8
Sand	15
Silt	40
Clay	37

Remarks:
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

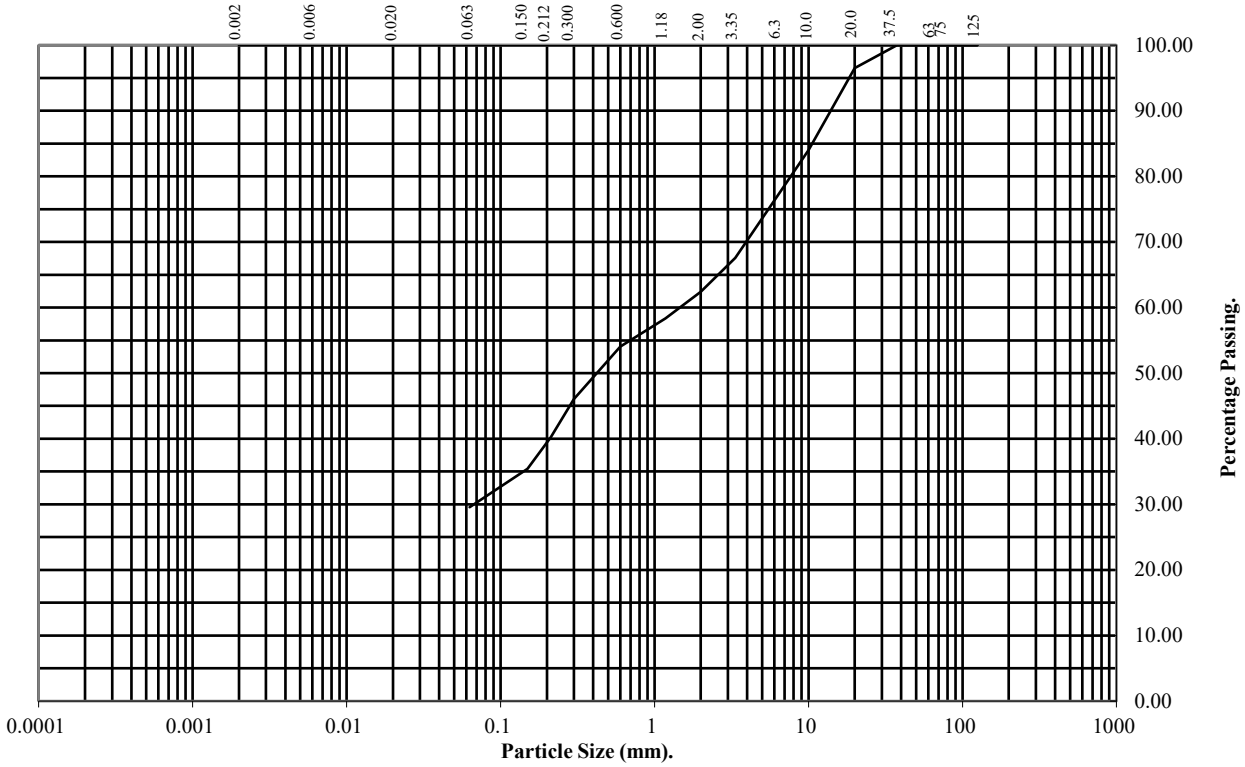
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP204 **Top Depth (m):** 4.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	96
10	84
6.3	77
3.35	68
2	62
1.18	58
0.6	54
0.3	46
0.212	40
0.15	35
0.063	30

Soil Fraction	Total Percentage
Cobbles	0
Gravel	38
Sand	32
Silt/Clay	30

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

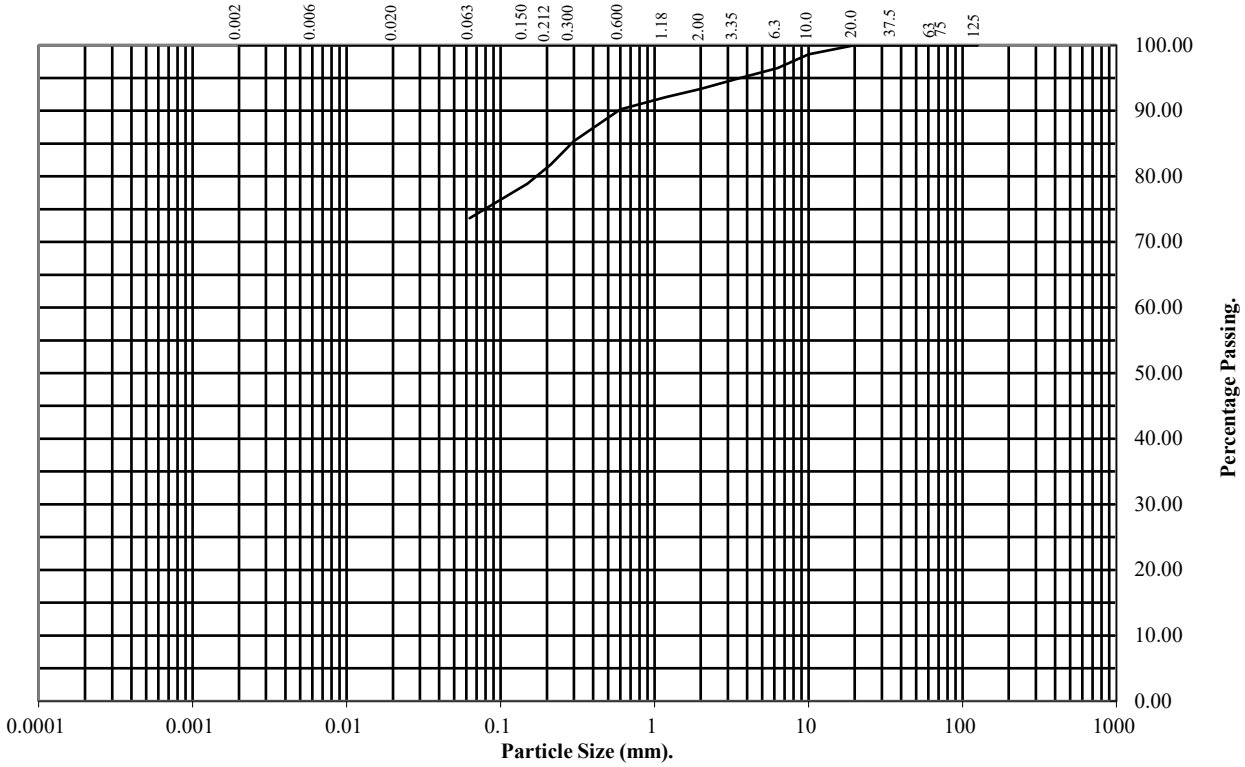
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP206 **Top Depth (m):** 4.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	97
3.35	95
2	93
1.18	92
0.6	90
0.3	85
0.212	82
0.15	79
0.063	74

Soil Fraction	Total Percentage
Cobbles	0
Gravel	7
Sand	19
Silt/Clay	74

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

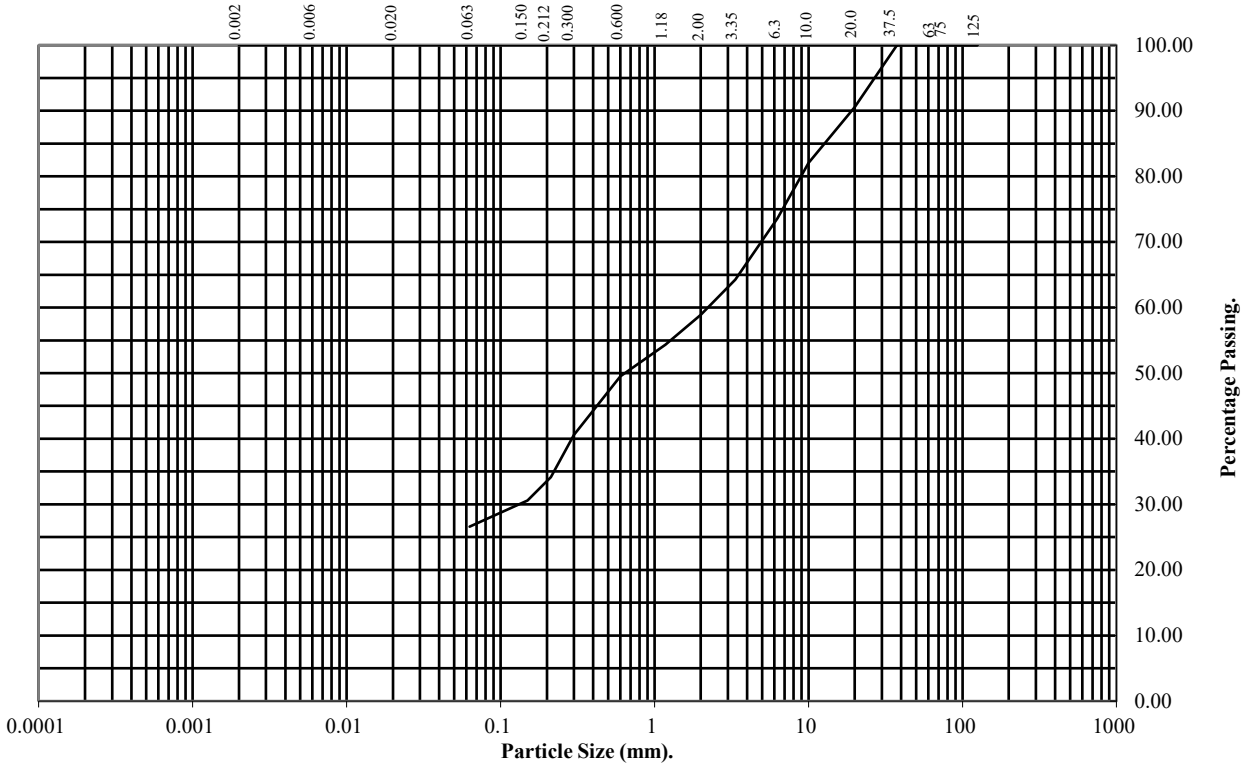
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: CP207 **Top Depth (m):** 10.00

Sample Number: **Base Depth(m):** 11.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	82
6.3	74
3.35	64
2	59
1.18	54
0.6	50
0.3	41
0.212	34
0.15	31
0.063	27

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	32
Silt/Clay	27

Remarks:

See Summary of Soil Descriptions

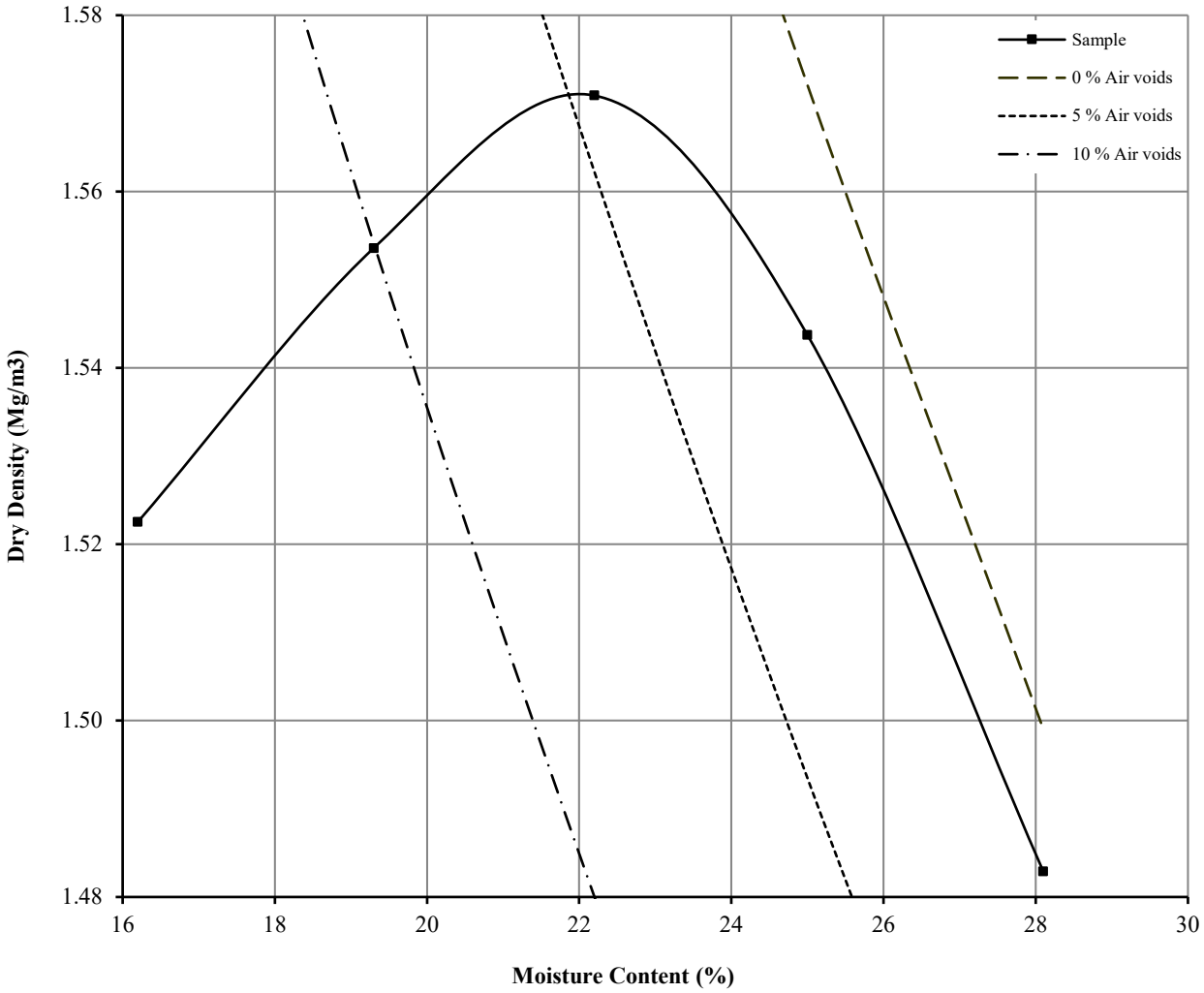
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP211 **Top Depth (m) :** 1.80

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		31	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.57	Material Retained on 20.0 mm Test Sieve (%):		1
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

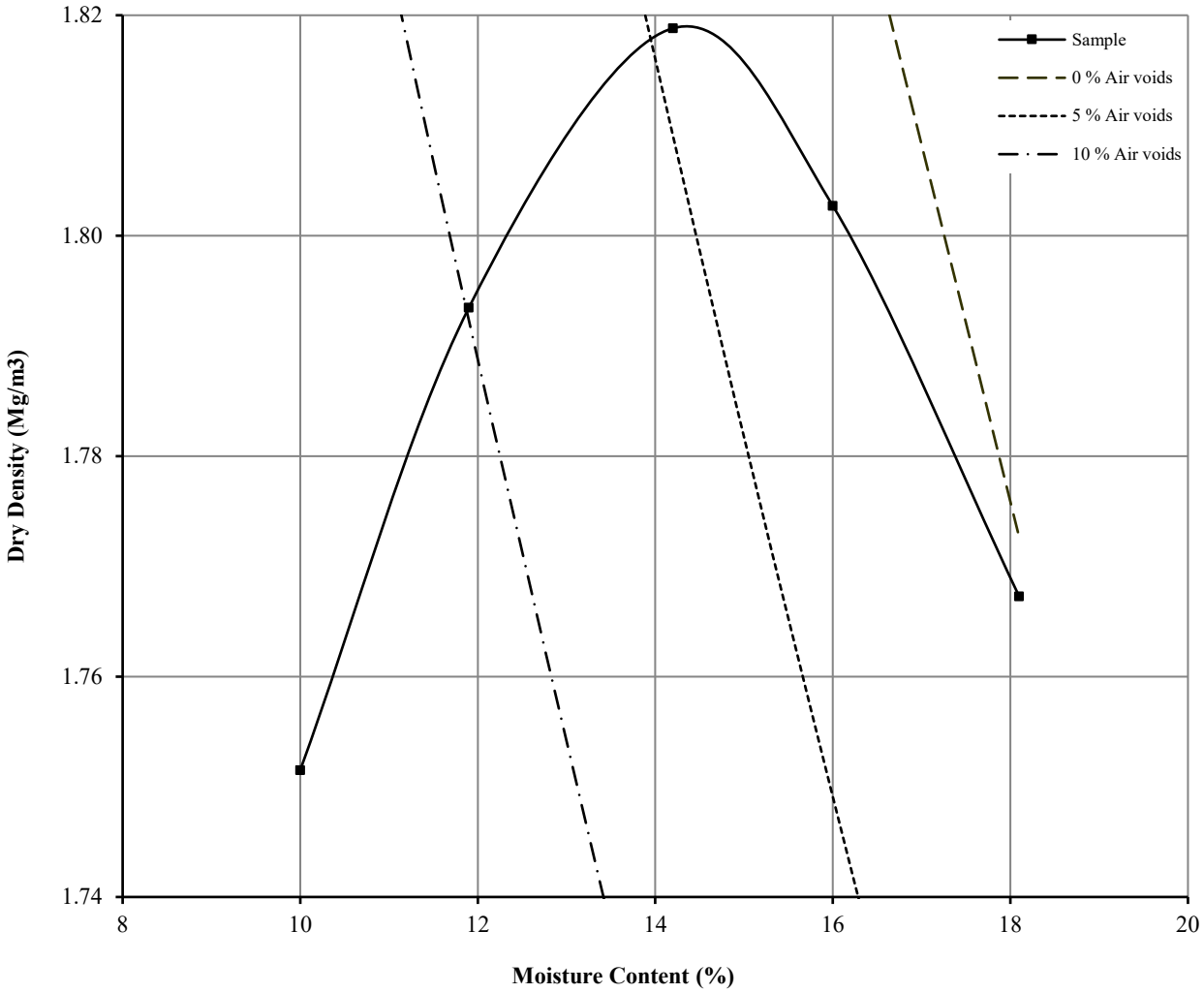
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP252 **Top Depth (m) :** 2.10

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.61	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.82	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		14			
Remarks See summary of soil descriptions					

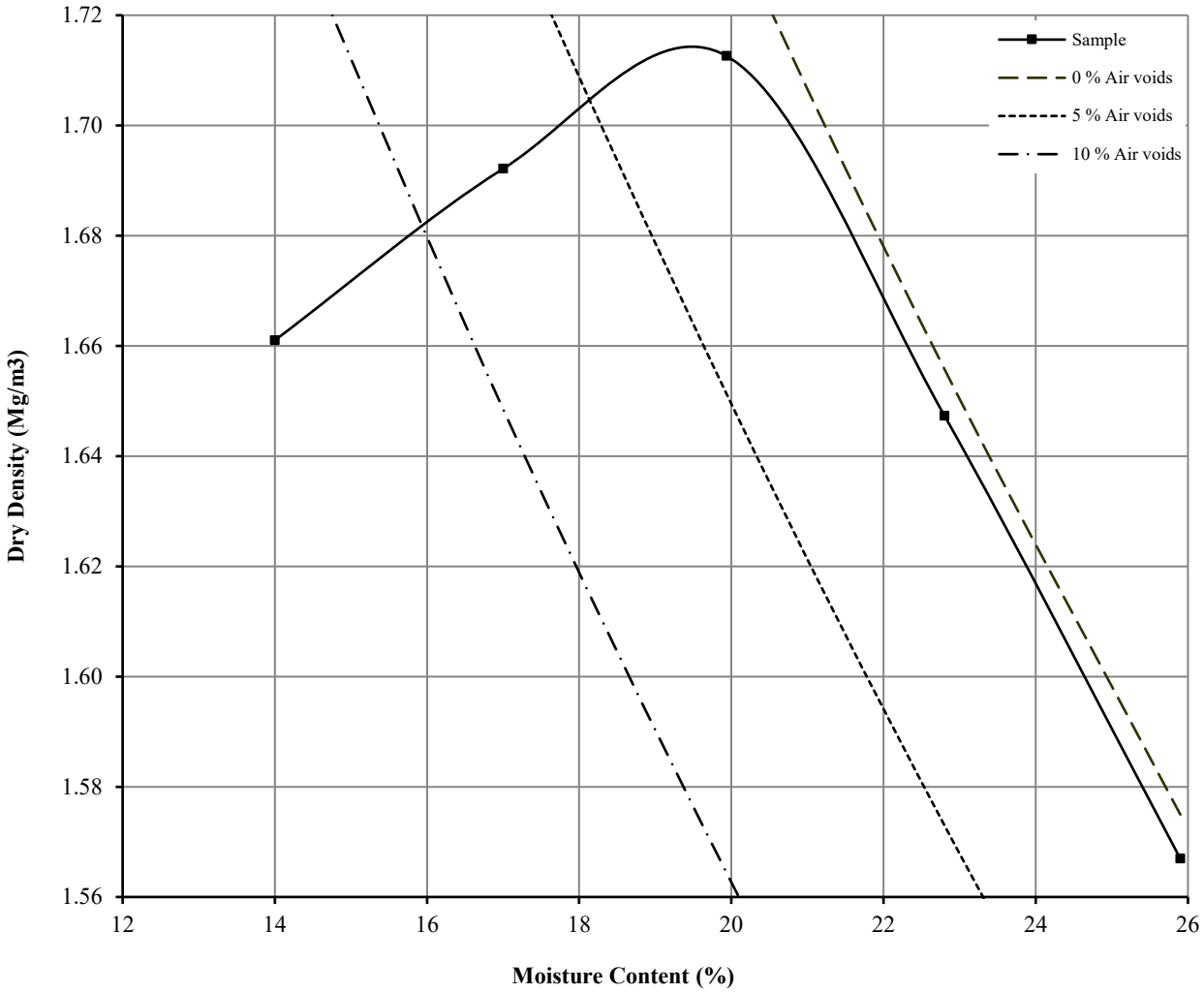
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP202 **Top Depth (m) :** 2.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.71	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		20			
Remarks See summary of soil descriptions					

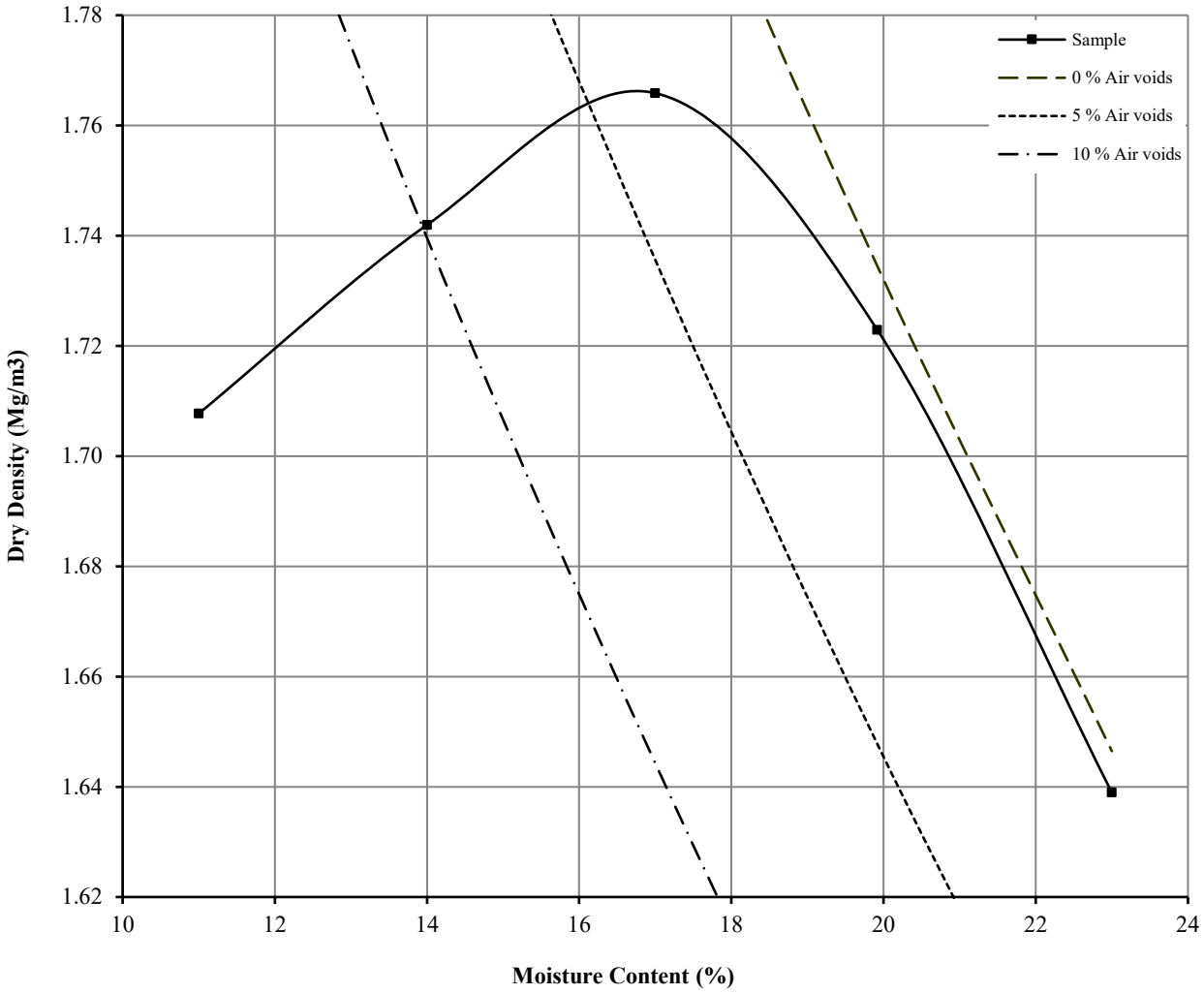
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP236 **Top Depth (m) :** 2.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.77	Material Retained on 20.0 mm Test Sieve (%):		2
Optimum Moisture Content (%):		17			
Remarks See summary of soil descriptions					

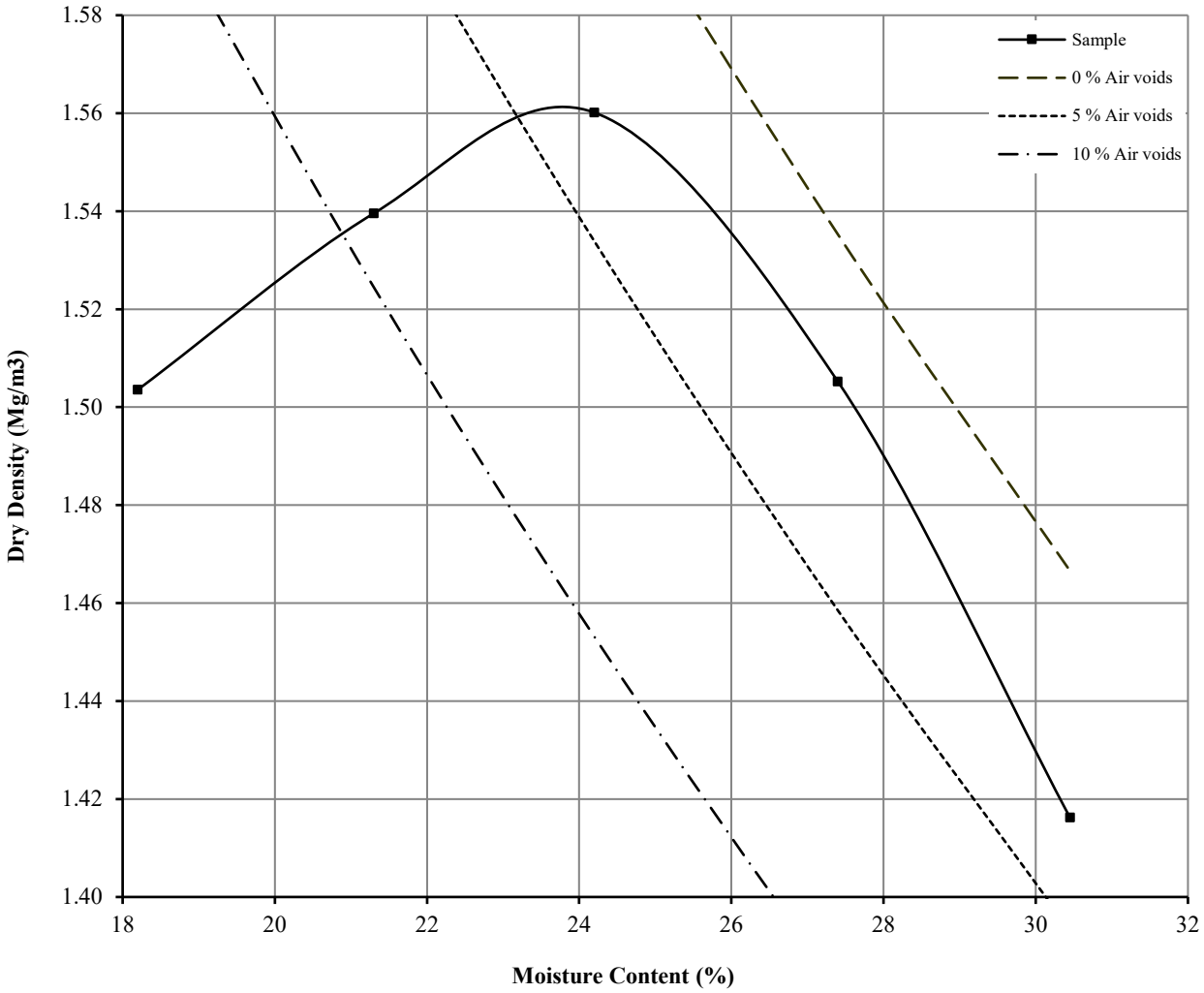
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP250 **Top Depth (m) :** 1.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		30	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.56	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		24			
Remarks See summary of soil descriptions					

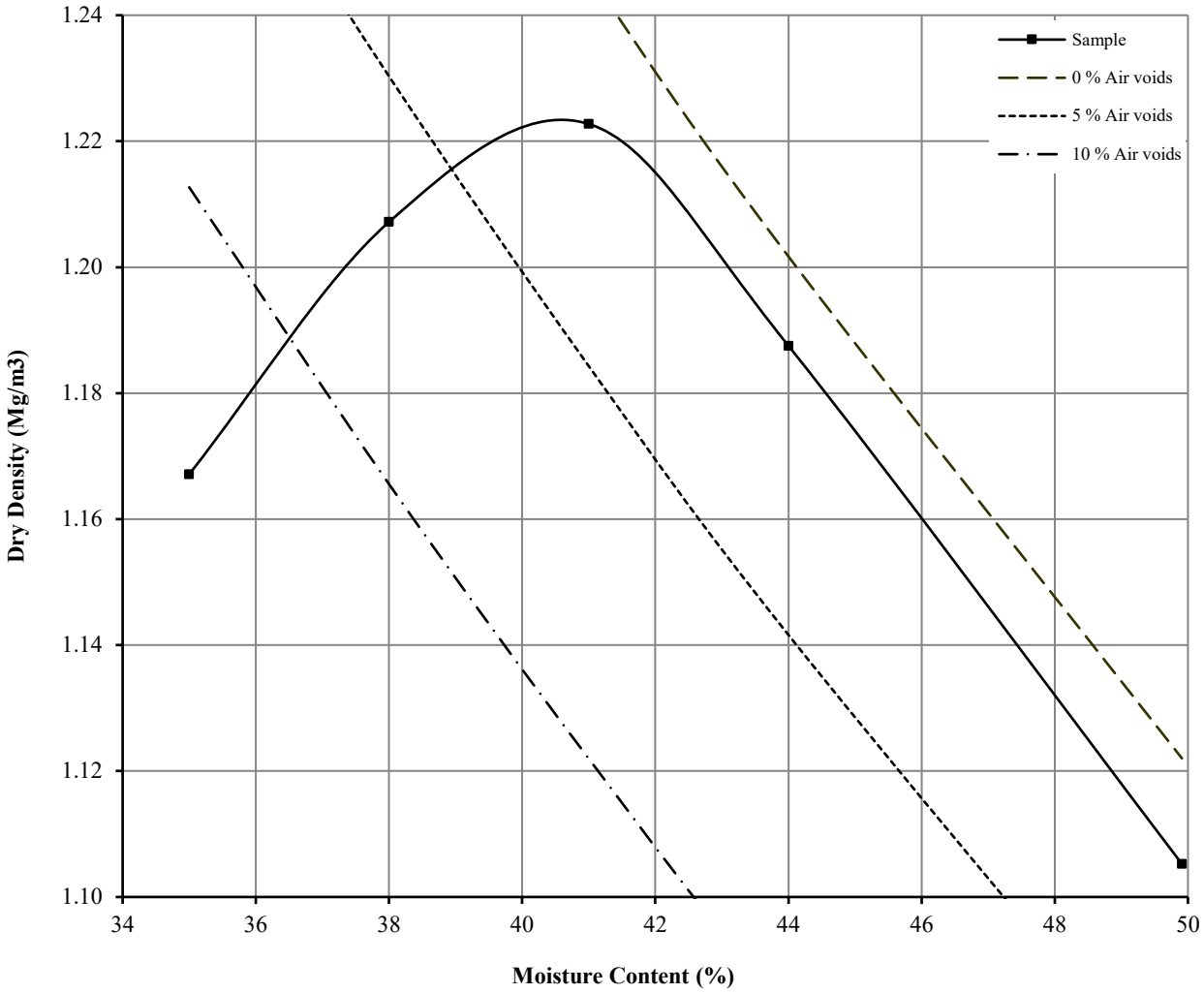
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP223 **Top Depth (m) :** 2.20

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		50	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.22	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		41			
Remarks See summary of soil descriptions					

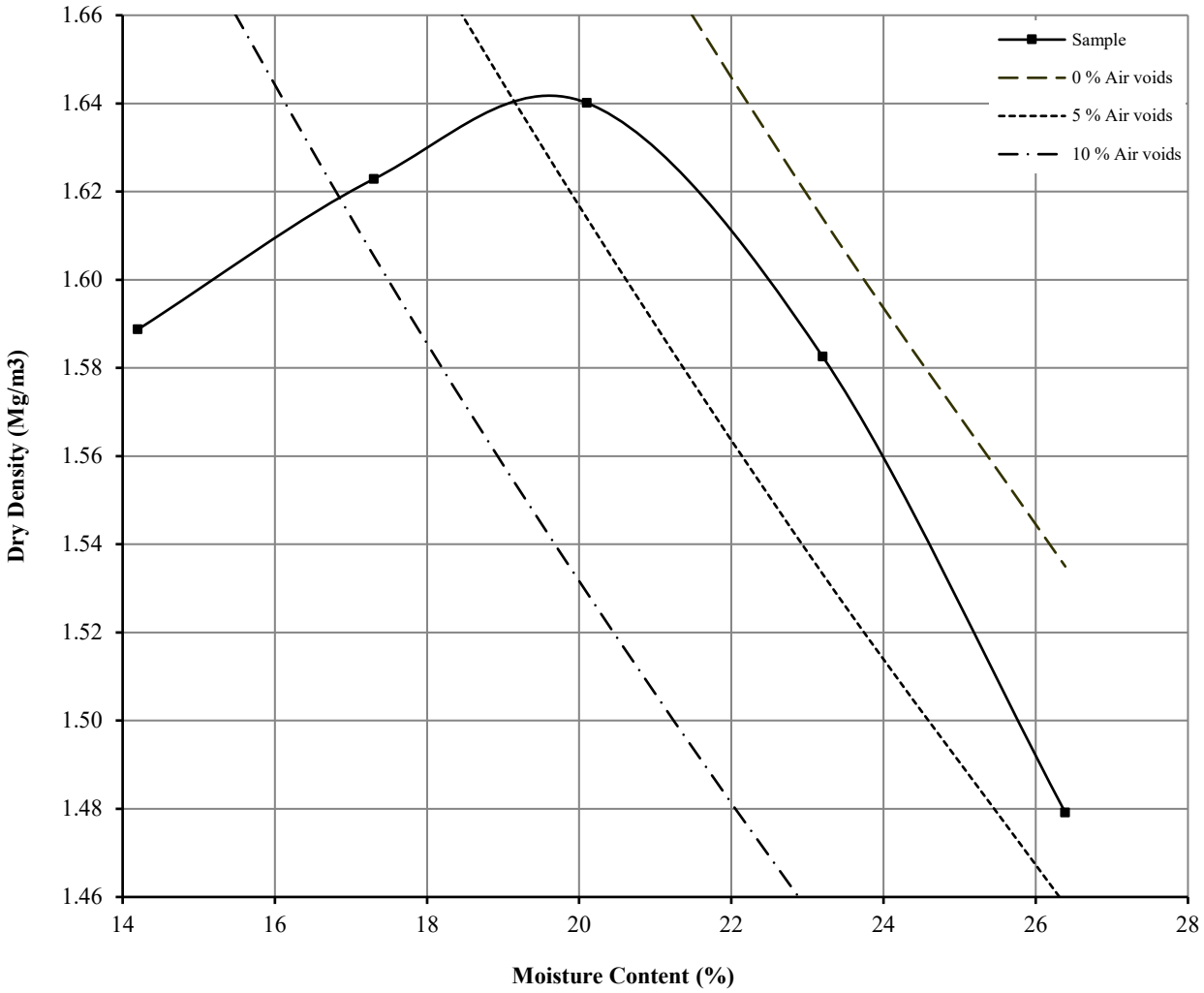
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP213 **Top Depth (m) :** 1.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		26	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.58	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.64	Material Retained on 20.0 mm Test Sieve (%):		1
Optimum Moisture Content (%):		20			
Remarks See summary of soil descriptions					

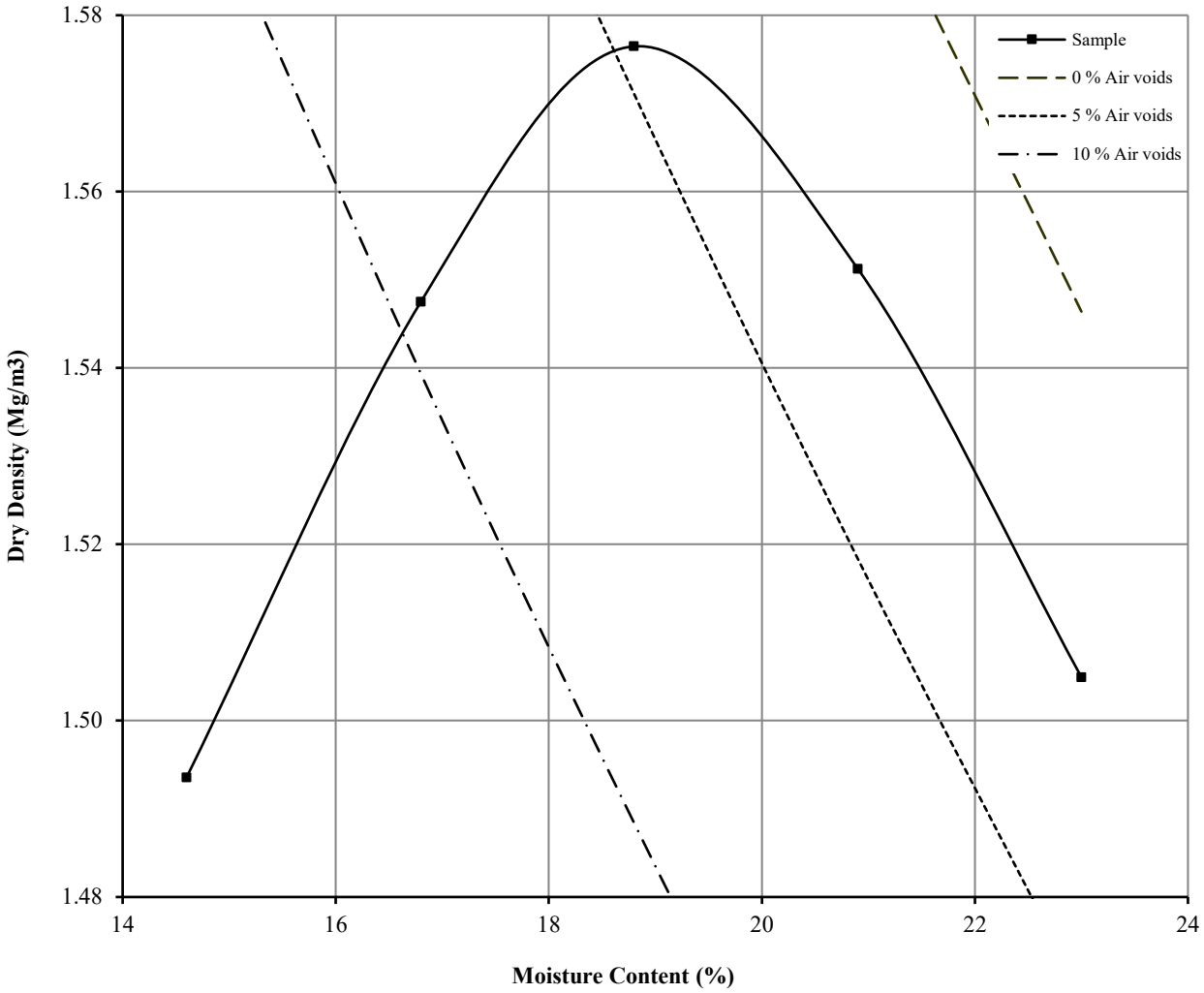
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP214 **Top Depth (m) :** 2.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		21	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.4	Measured	Material Retained on 37.5 mm Test Sieve (%):		19
Maximum Dry Density (Mg/m3):		1.58	Material Retained on 20.0 mm Test Sieve (%):		11
Optimum Moisture Content (%):		19			
Remarks See summary of soil descriptions					

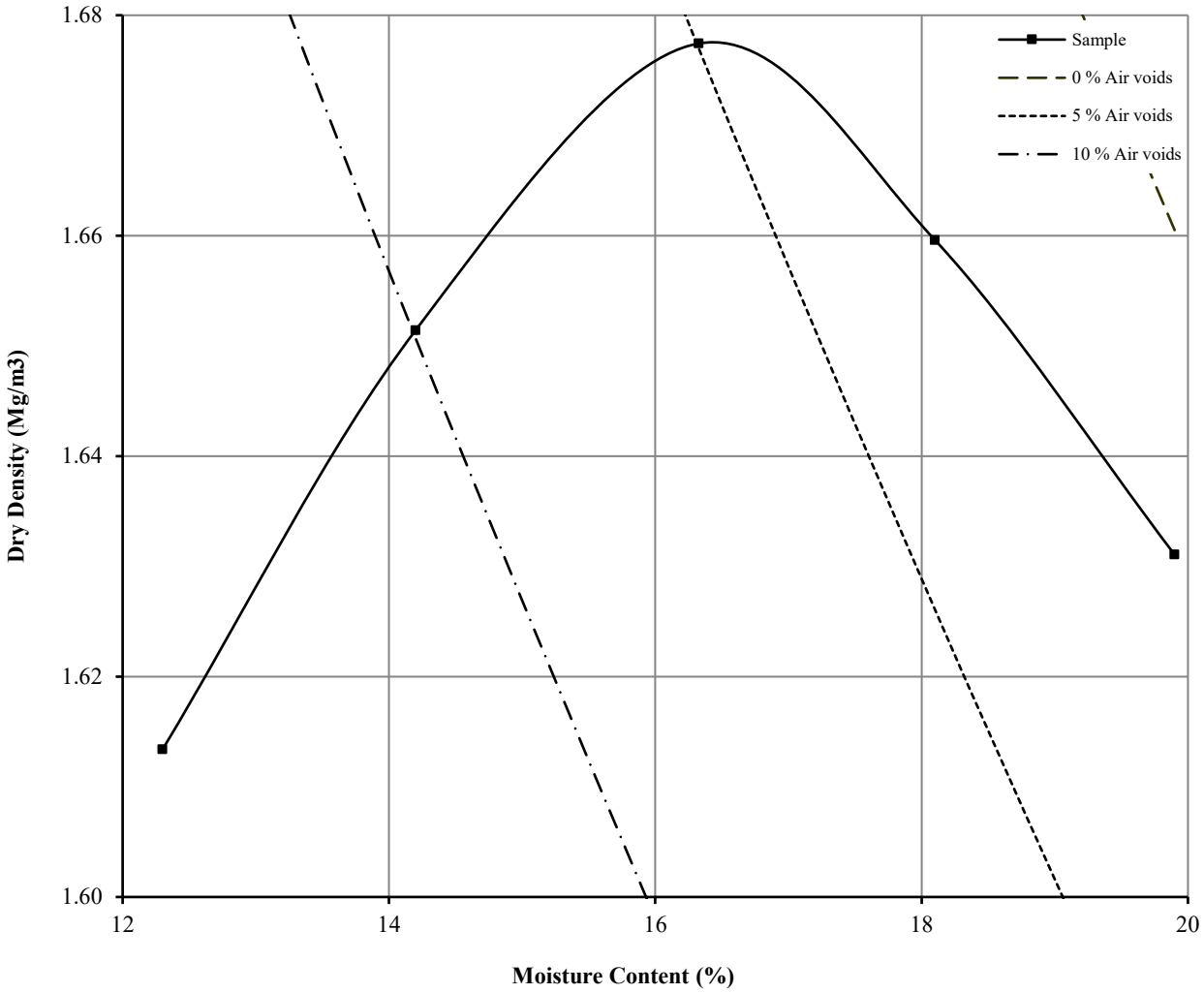
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP219 **Top Depth (m) :** 1.20

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		16	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.48	Measured	Material Retained on 37.5 mm Test Sieve (%):		43
Maximum Dry Density (Mg/m3):		1.68	Material Retained on 20.0 mm Test Sieve (%):		9
Optimum Moisture Content (%):		16			
Remarks See summary of soil descriptions					

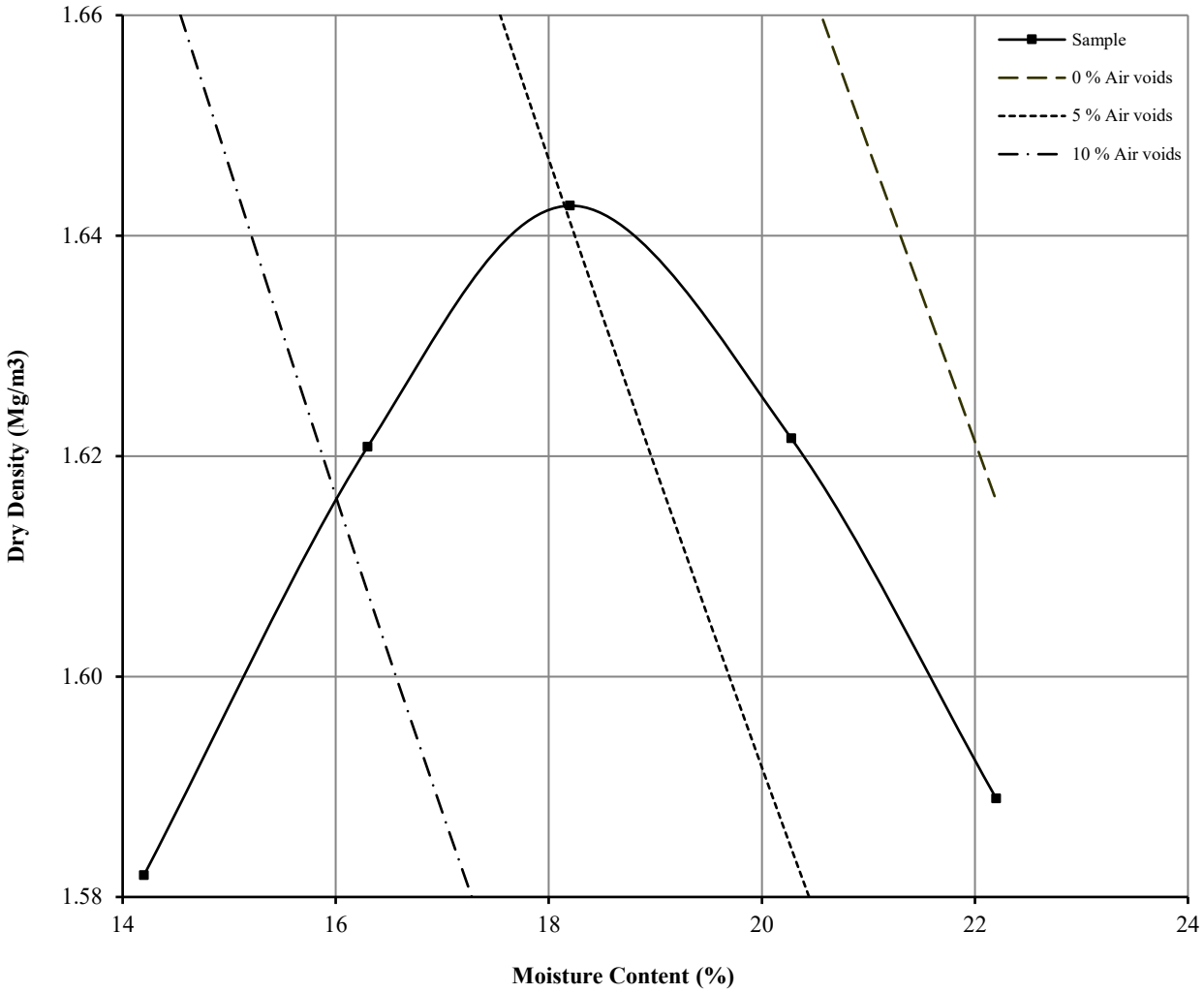
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP220 **Top Depth (m) :** 2.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.52	Assumed	Material Retained on 37.5 mm Test Sieve (%):		13
Maximum Dry Density (Mg/m3):		1.64	Material Retained on 20.0 mm Test Sieve (%):		11
Optimum Moisture Content (%):		18			
Remarks See summary of soil descriptions					

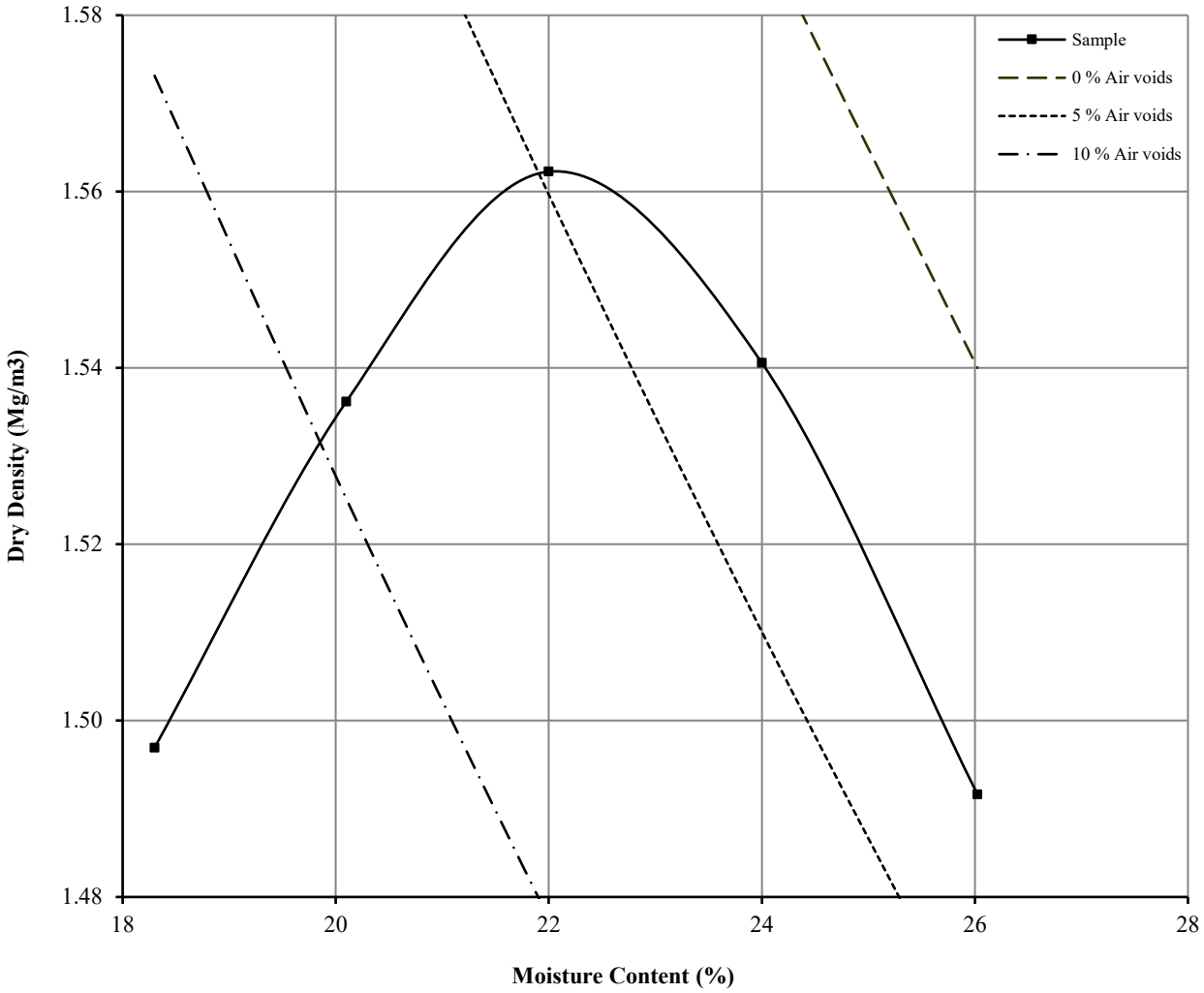
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP236 **Top Depth (m) :** 1.50

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		26	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.57	Assumed	Material Retained on 37.5 mm Test Sieve (%):		22
Maximum Dry Density (Mg/m3):		1.56	Material Retained on 20.0 mm Test Sieve (%):		6
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

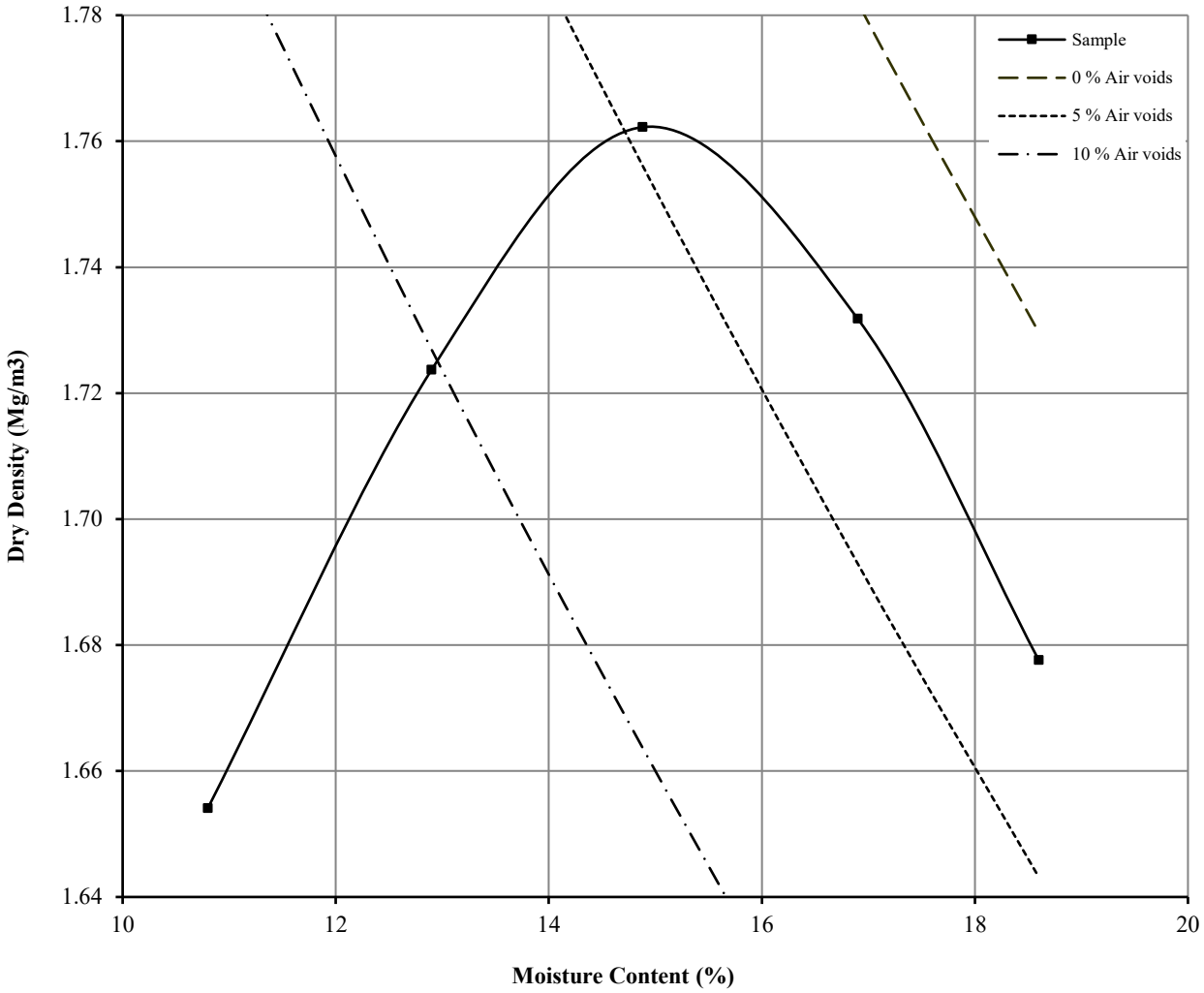
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.4 : 1990

Hole Number: TP252 **Top Depth (m) :** 1.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		15	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		38
Maximum Dry Density (Mg/m3):		1.76	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		15			
Remarks See summary of soil descriptions					

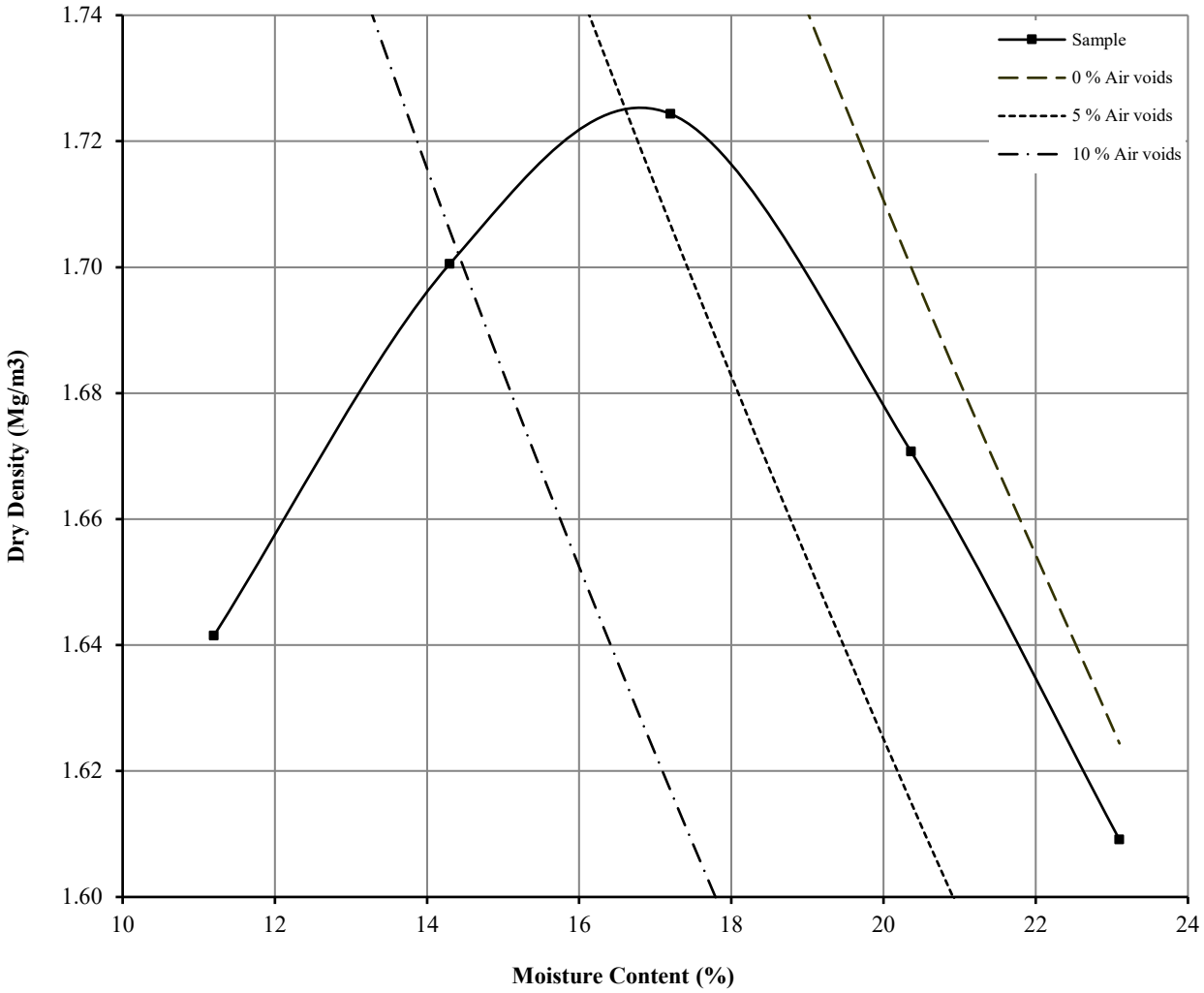
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: CP204 **Top Depth (m) :** 4.00

Sample Number: **Base Depth (m) :**

Sample Type: B



Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.6	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.72	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		17			
Remarks See summary of soil descriptions					

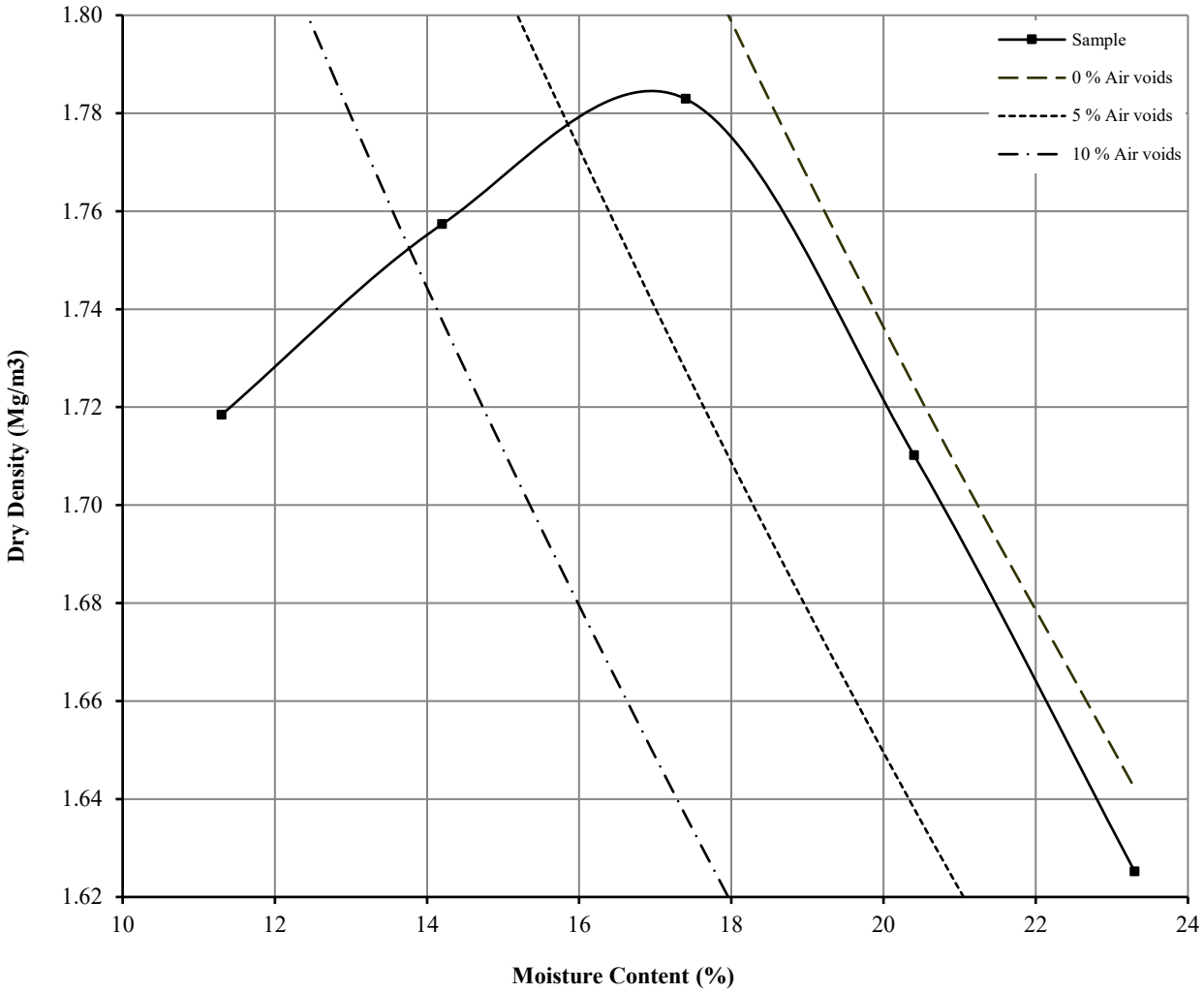
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: CP206 **Top Depth (m) :** 4.00

Sample Number: **Base Depth (m) :**

Sample Type: B



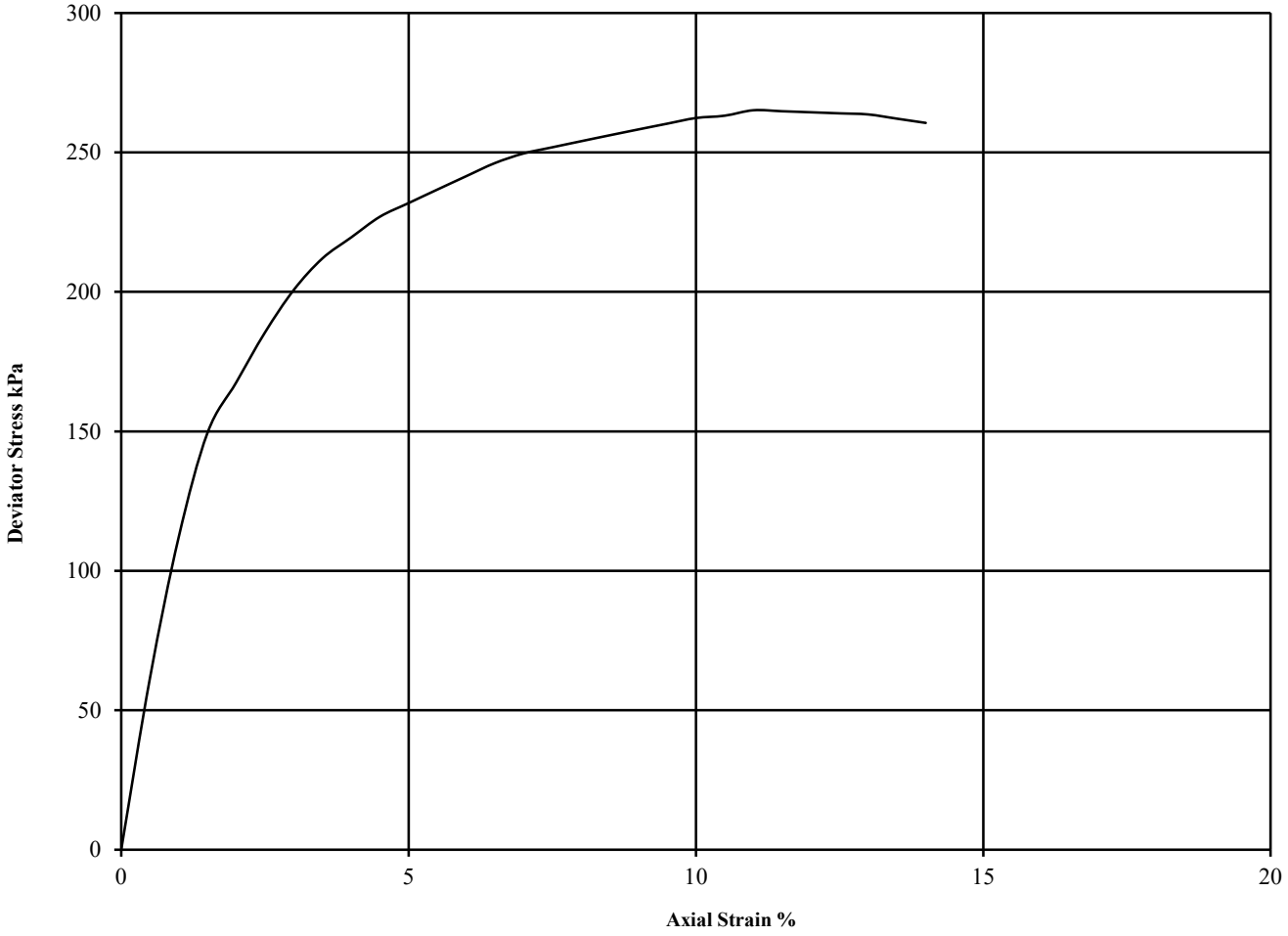
Initial Moisture Content:		20	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.78	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		17			
Remarks See summary of soil descriptions					

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number:	**RH201**	**Top Depth (m):**	**15.80**
Sample Number:		**Base Depth (m):**	**16.00**
Sample Type	**CS**		



Diameter (mm):		38	Height (mm):		76	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.84
1	14	2.04	1.80	200	265	133	11.0	Intermediate	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

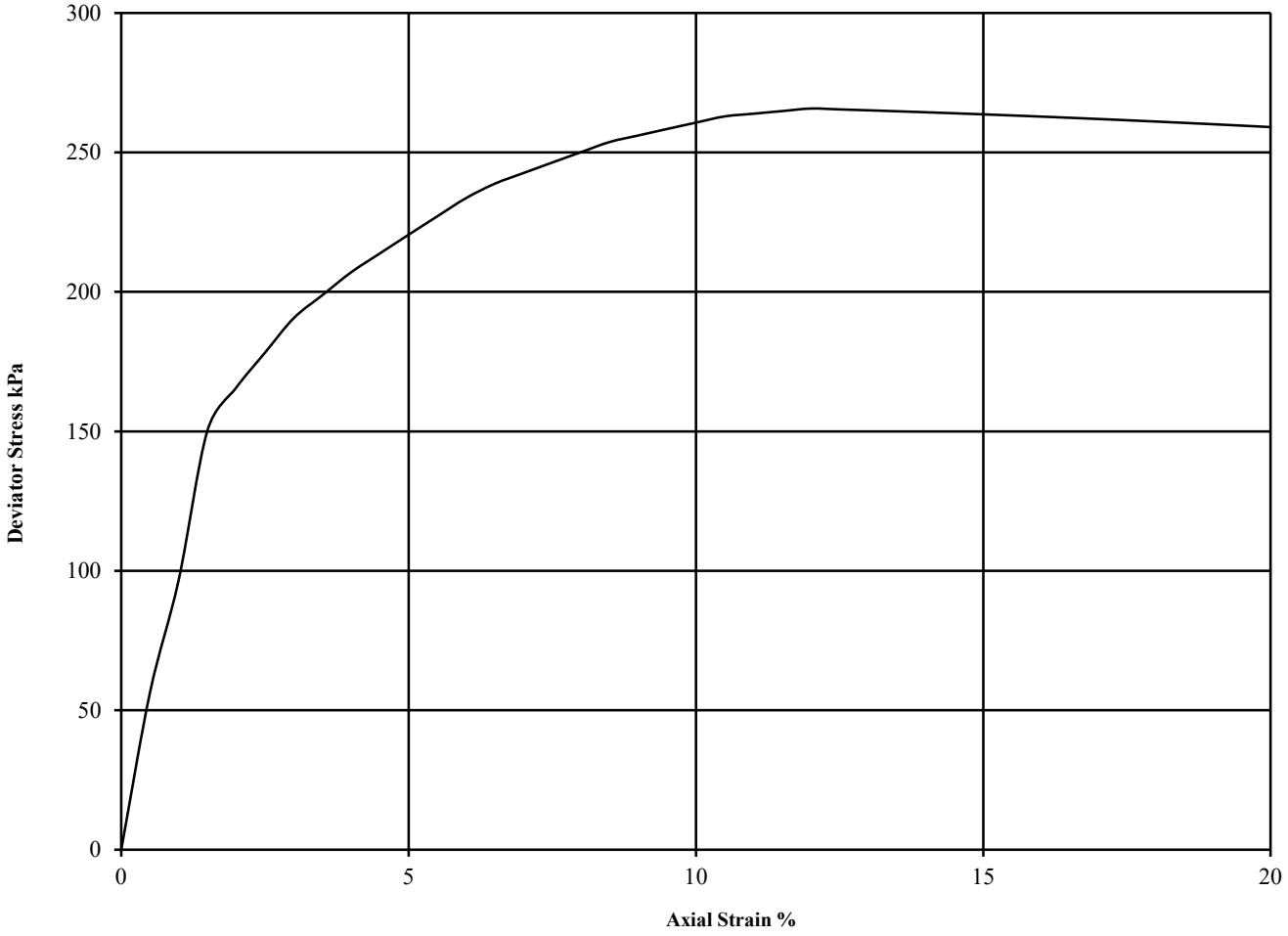
Contract No:
PSL22/3506
Client Ref:
LD10385

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number:	**RH202**	**Top Depth (m):**	**13.10**
Sample Number:		**Base Depth (m):**	**13.50**
Sample Type	**CS**		



Diameter (mm):		38	Height (mm):		76	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.83
1	15	2.12	1.84	180	266	133	12.0	Intermediate	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No:
PSL22/3506
Client Ref:
LD10385

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

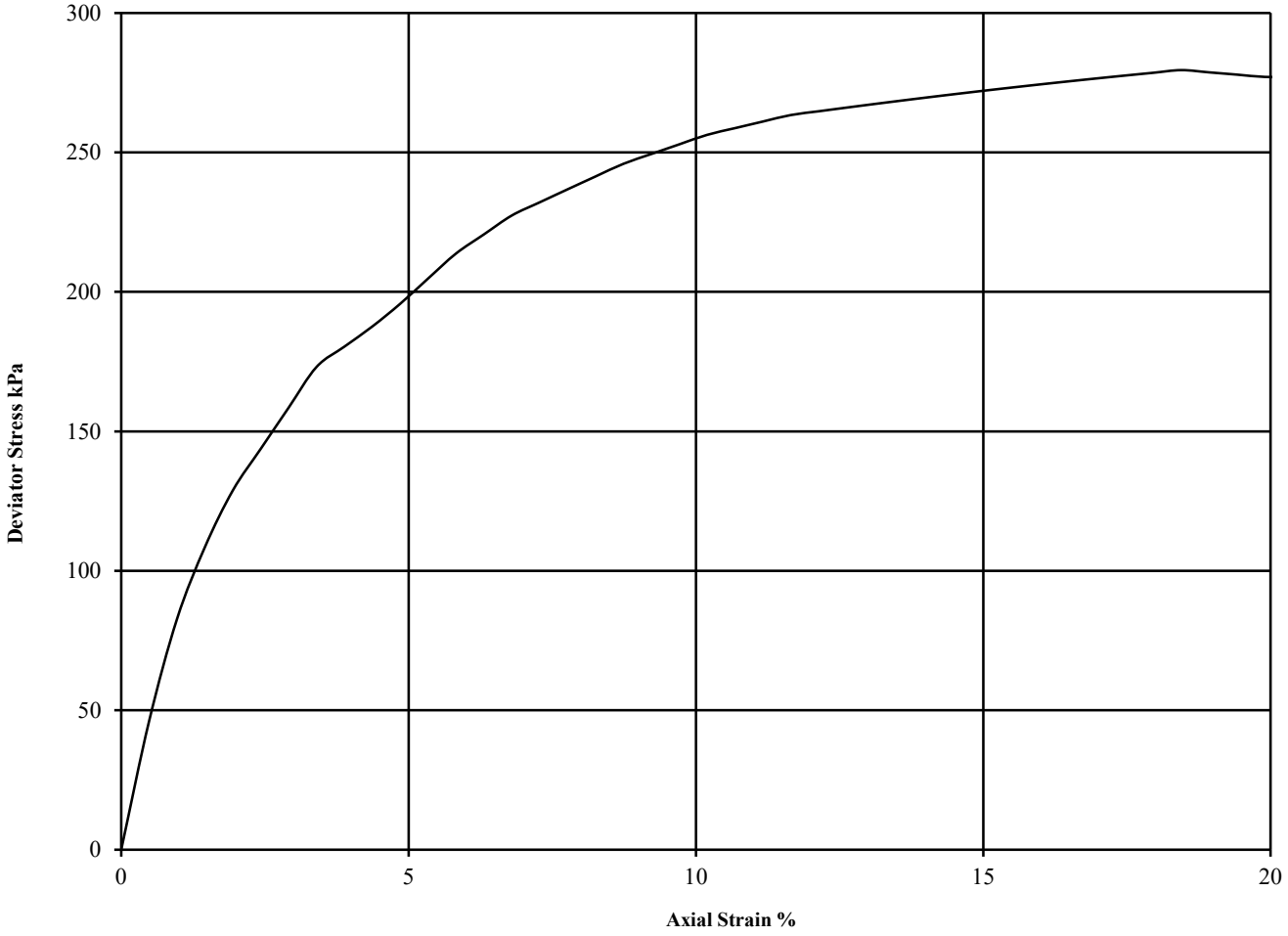
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **RH205** **Top Depth (m):** **12.50**

Sample Number: **Base Depth (m):** **12.80**

Sample Type **CS**



Diameter (mm):		100	Height (mm):		206	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.34
1	15	2.20	1.91	130	280	140	18.4	Intermediate	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No: PSL22/3506

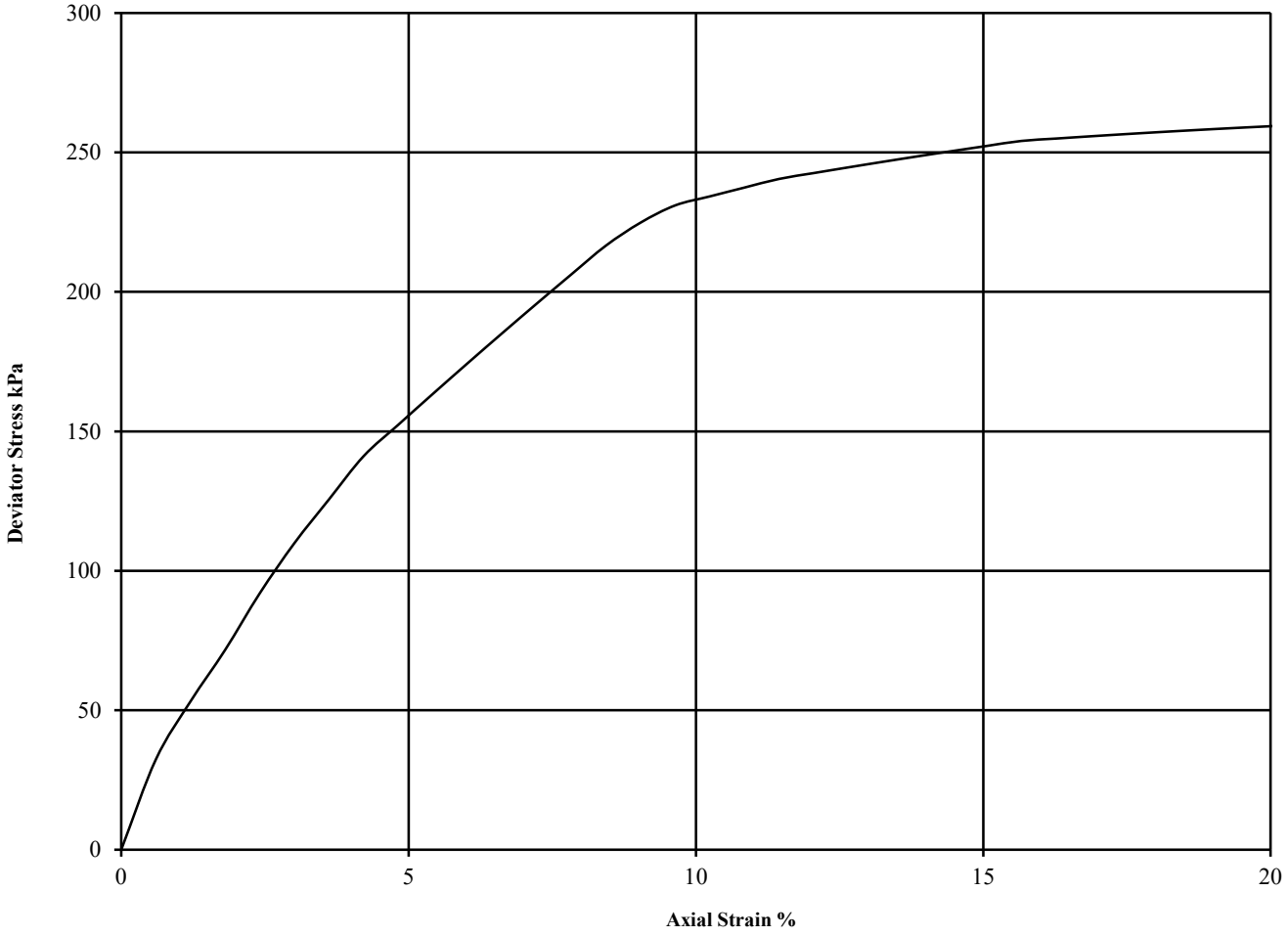
Client Ref: LD10385

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number:	**RH206**	**Top Depth (m):**	**6.00**
Sample Number:		**Base Depth (m):**	**6.45**
Sample Type	**CS**		



Diameter (mm):		100	Height (mm):		166	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.34 See summary of soil descriptions
1	17	2.15	1.84	100	261	130	21.7	Brittle	

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Ten Acres Lane**	**Contract No:** PSL22/3506 **Client Ref:** LD10385

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

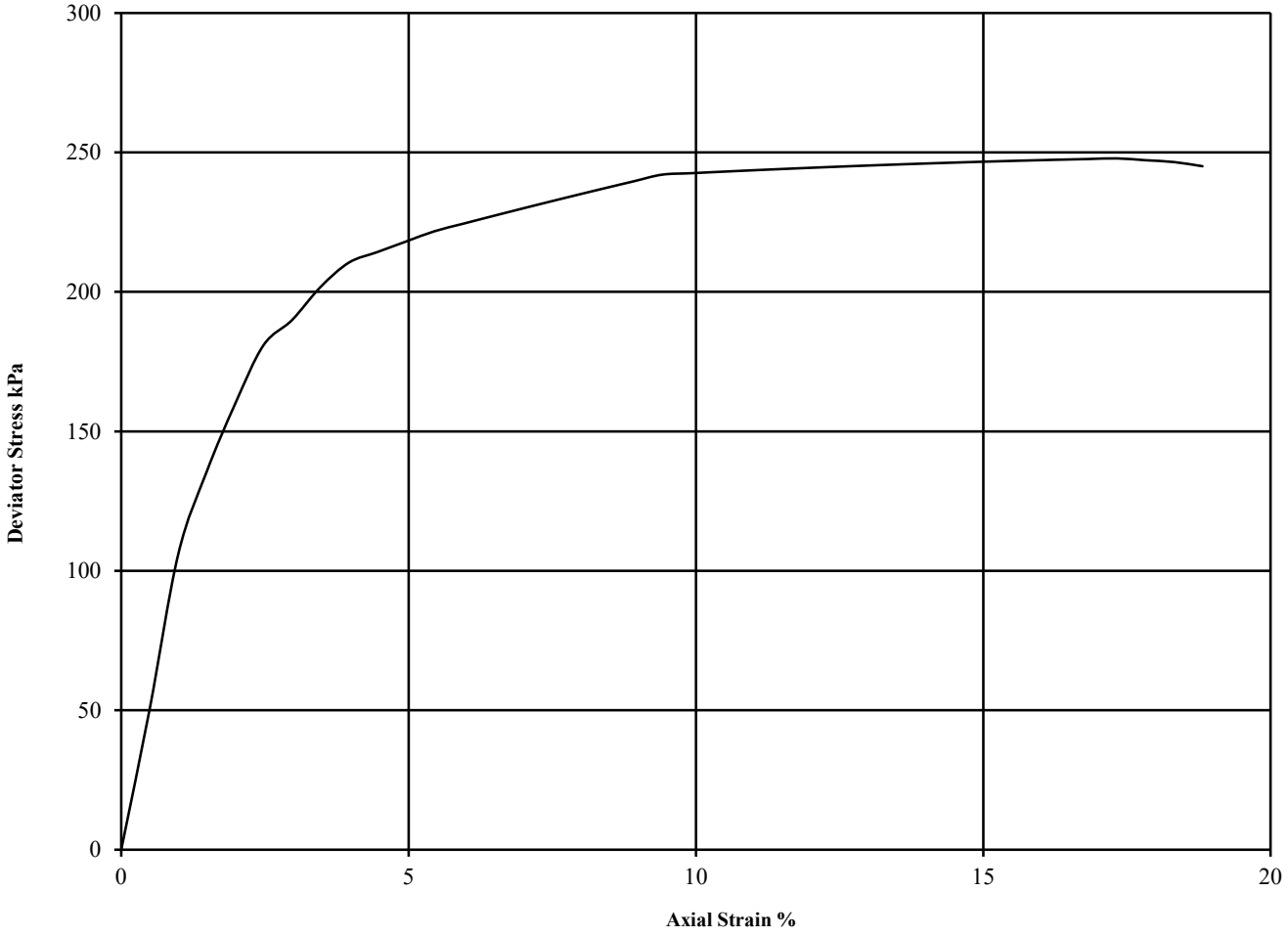
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP207 **Top Depth (m):** 15.00

Sample Number: **Base Depth (m):** 15.45

Sample Type U



Diameter (mm):		102	Height (mm):		206	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.34
1	14	2.22	1.94	180	248	124	17.3	Intermediate	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

Ten Acres Lane

Contract No: PSL22/3506

Client Ref: LD10385

ONE DIMENSIONAL CONSOLIDATION TEST

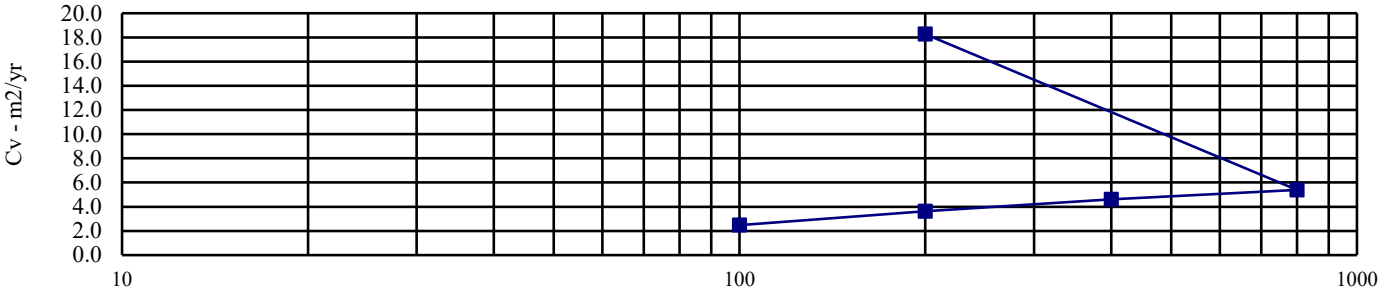
BS 1377: Part 5: 1990: Clause 3

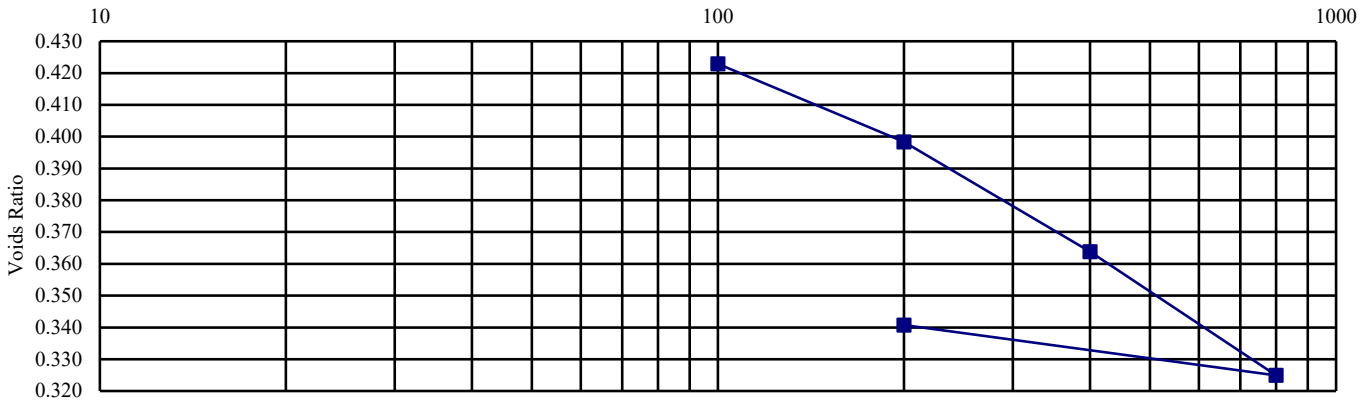
Hole Number: **RH201** **Top Depth (m):** **15.80**

Sample Number: **Base Depth (m) :** **16.00**

Sample Type: **CS**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	15						
Bulk Density (Mg/m3):	2.06	0	100	0.375	2.478	Method used to	
Dry Density (Mg/m3):	1.79	100	200	0.173	3.613	determine CV:	T90
Voids Ratio:	0.478	200	400	0.123	4.620	Nominal temperature	
Degree of saturation:	84.4	400	800	0.071	5.381	during test ' C:	20
Height (mm):	20.052	800	200	0.020	18.269	Remarks:	
Diameter (mm)	75.058					See summary of soil descriptions	
Particle Density (Mg/m3): Measured	2.64						





UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506
			Client Ref: LD10385

ONE DIMENSIONAL CONSOLIDATION TEST

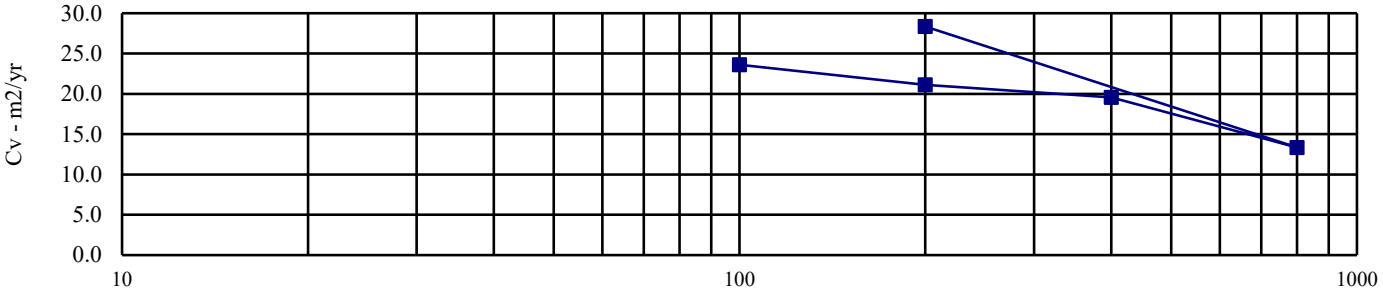
BS 1377: Part 5: 1990: Clause 3

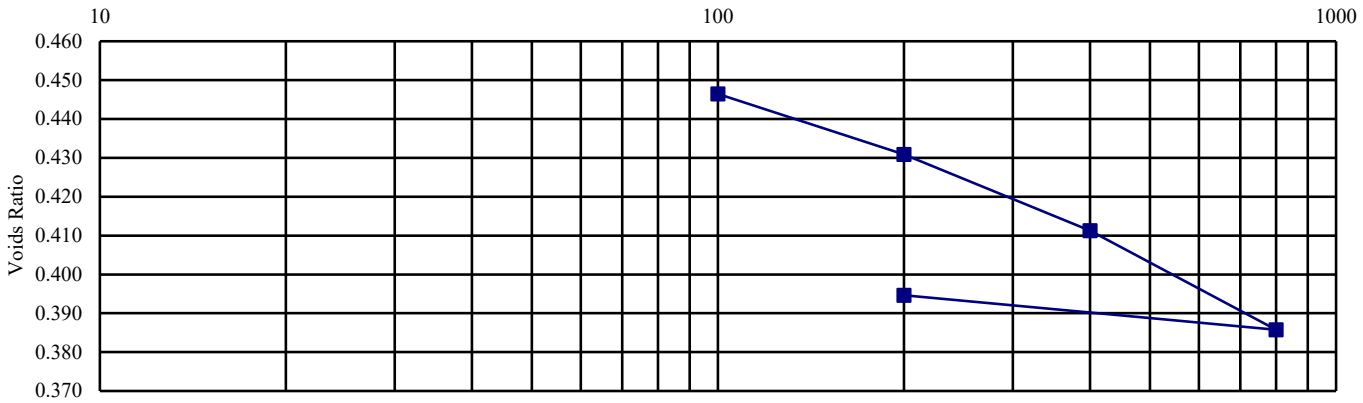
Hole Number: **RH202** **Top Depth (m):** **13.10**

Sample Number: **Base Depth (m) :** **13.50**

Sample Type: **CS**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	15						
Bulk Density (Mg/m3):	2.06	0	100	0.229	23.613	Method used to	
Dry Density (Mg/m3):	1.79	100	200	0.108	21.106	determine CV:	T90
Voids Ratio:	0.480	200	400	0.068	19.575	Nominal temperature	
Degree of saturation:	83.3	400	800	0.045	13.348	during test ' C:	20
Height (mm):	20.052	800	200	0.011	28.355	Remarks:	
Diameter (mm)	75.108					See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	**Ten Acres Lane**	**Contract No:** PSL22/3506 **Client Ref:** LD10385

ONE DIMENSIONAL CONSOLIDATION TEST

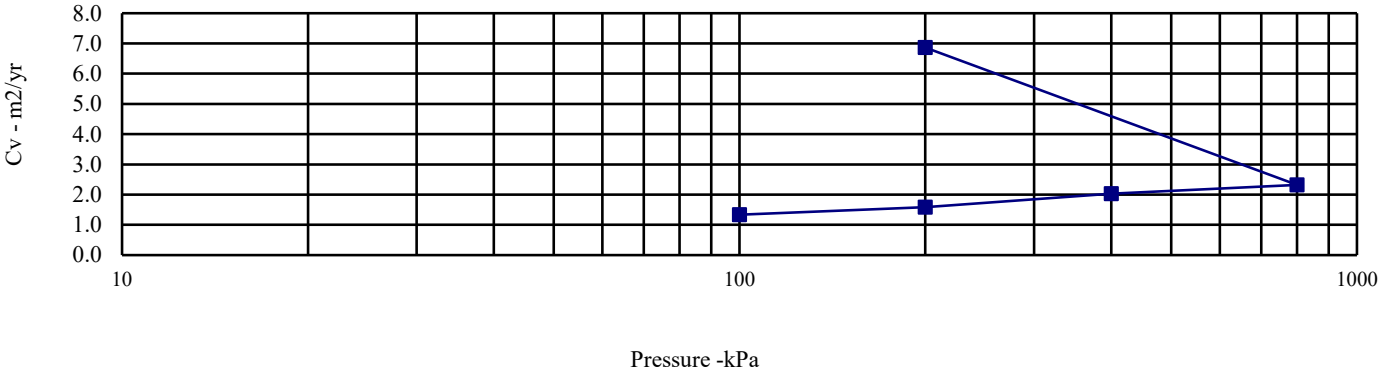
BS 1377: Part 5: 1990: Clause 3

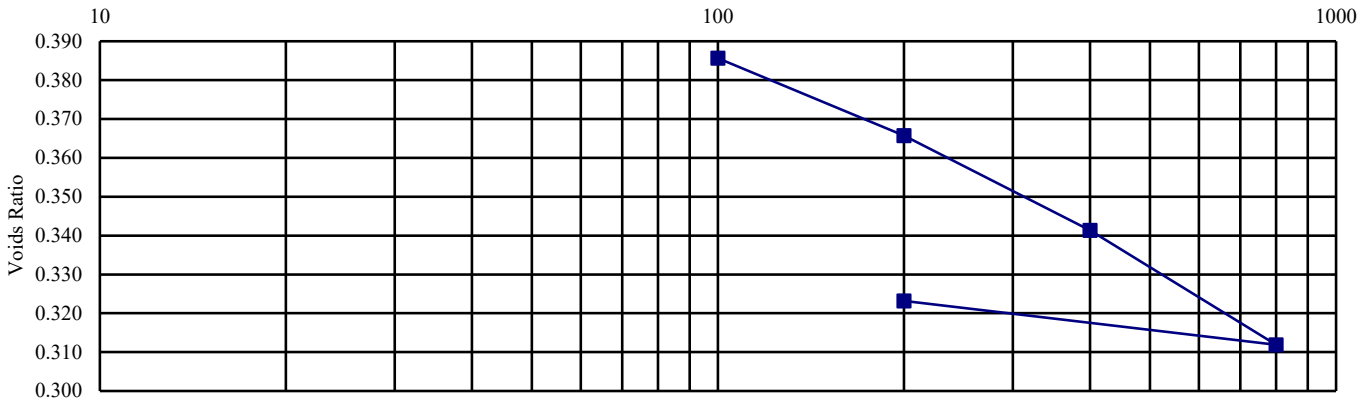
Hole Number: **RH205** **Top Depth (m):** **12.50**

Sample Number: **Base Depth (m) :** **12.80**

Sample Type: **CS**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	16						
Bulk Density (Mg/m3):	2.15	0	100	0.299	1.336	Method used to	
Dry Density (Mg/m3):	1.86	100	200	0.144	1.582	determine CV:	T90
Voids Ratio:	0.428	200	400	0.089	2.027	Nominal temperature	
Degree of saturation:	97.8	400	800	0.055	2.317	during test ' C:	20
Height (mm):	20.108	800	200	0.014	6.865	Remarks:	
Diameter (mm)	75.055					See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506
			Client Ref: LD10385

ONE DIMENSIONAL CONSOLIDATION TEST

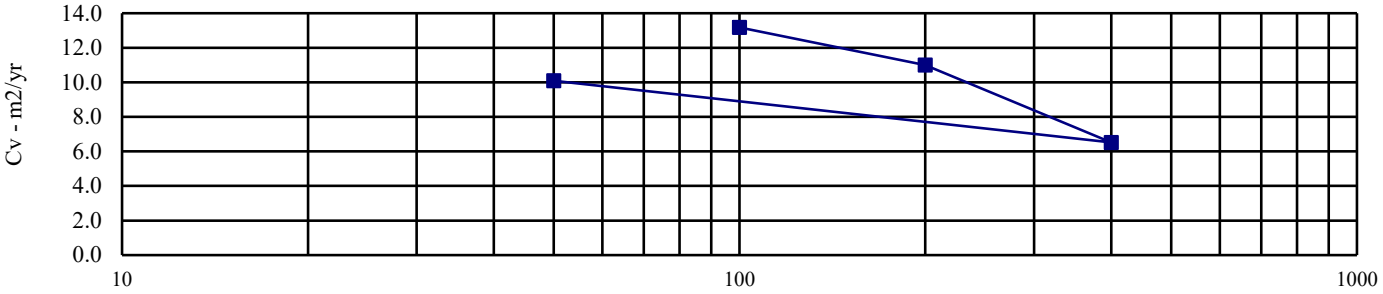
BS 1377: Part 5: 1990: Clause 3

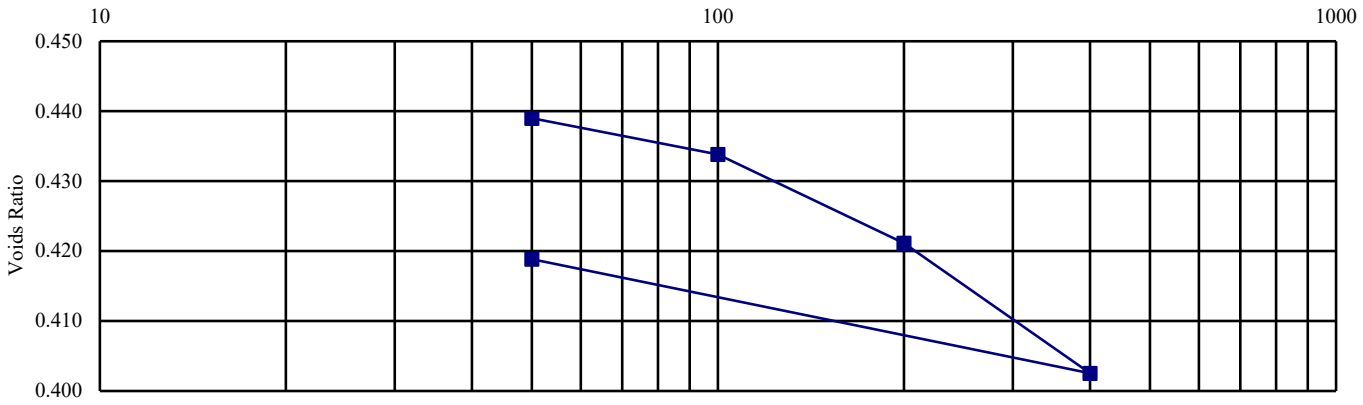
Hole Number: **RH206** **Top Depth (m):** **6.00**

Sample Number: **Base Depth (m) :** **6.45**

Sample Type: **CS**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	16						
Bulk Density (Mg/m3):	2.13	0	50	Swelling	Swelling	Method used to	
Dry Density (Mg/m3):	1.83	50	100	0.072	13.178	determine CV:	T90
Voids Ratio:	0.439	100	200	0.089	10.997	Nominal temperature	
Degree of saturation:	97.7	200	400	0.065	6.522	during test ' C:	20
Height (mm):	20.05	400	50	0.033	10.086	Remarks:	
Diameter (mm)	75.06					See summary of soil descriptions	
Particle Density (Mg/m3): Measured	2.63						





UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506
			Client Ref: LD10385

ONE DIMENSIONAL CONSOLIDATION TEST

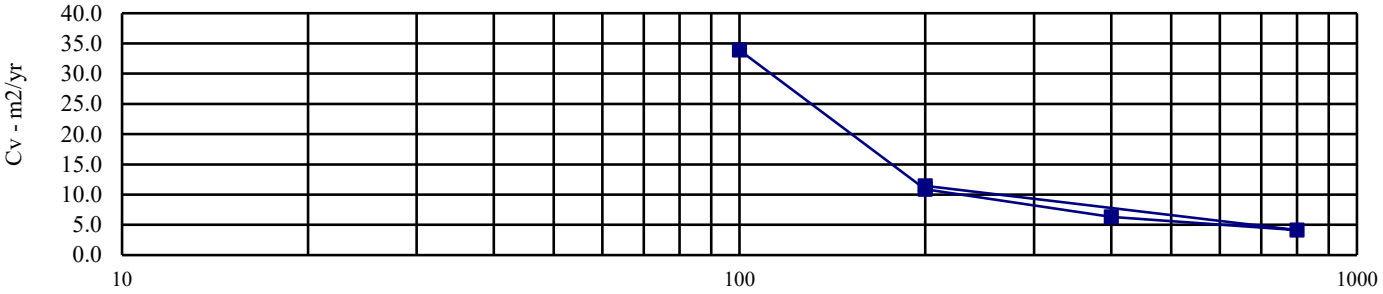
BS 1377: Part 5: 1990: Clause 3

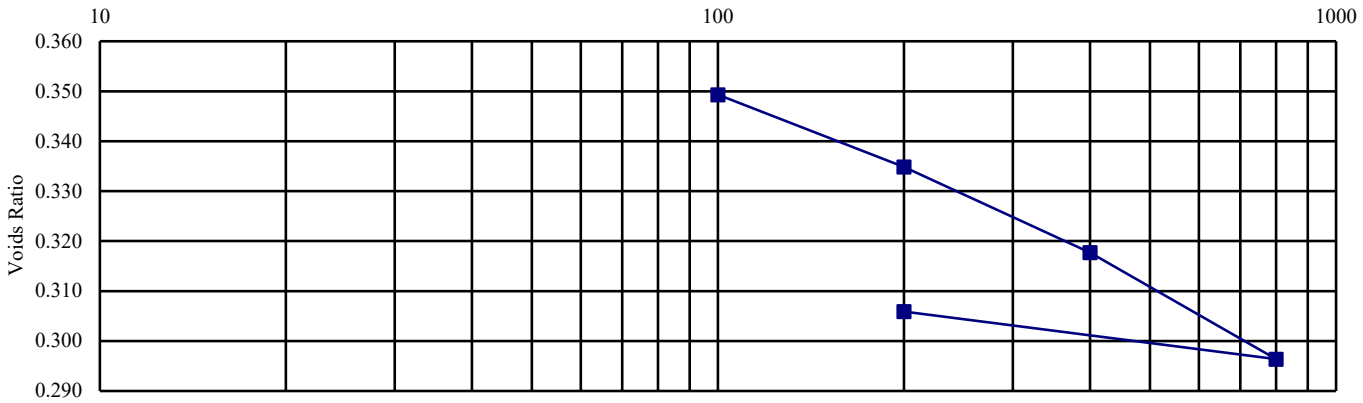
Hole Number: CP207 **Top Depth (m):** 15.00

Sample Number: **Base Depth (m) :** 15.45

Sample Type: U

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	14						
Bulk Density (Mg/m3):	2.19	0	100	0.172	33.893	Method used to	
Dry Density (Mg/m3):	1.93	100	200	0.107	10.880	determine CV:	T90
Voids Ratio:	0.373	200	400	0.064	6.326	Nominal temperature	
Degree of saturation:	97.0	400	800	0.040	4.136	during test ' C:	20
Height (mm):	20.104	800	200	0.012	11.431	Remarks:	
Diameter (mm)	75.033					See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	Ten Acres Lane	Contract No: PSL22/3506 Client Ref: LD10385

UKAS TESTING
2531

CHEMTECH environmental part of Cawood

ANALYTICAL TEST REPORT

Contract no: 110069

Contract name: Ten Acres Lane

Client reference: PSL22/3506

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road
Doncaster
DN4 0AR

Samples received: 07 June 2022

Analysis started: 07 June 2022

Analysis completed: 16 June 2022

Report issued: 16 June 2022

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing

Approved by:

Rachael Burton
Reporting Team Lead

Chemtech Environmental Limited

SOILS

Lab number			110069-1	110069-2	110069-3	110069-4	110069-5	110069-6
Sample id			CP202	CP203	CP204	CP205	CP206	CP207
Depth (m)			11.00-12.00	7.00	4.00	8.00	4.00	10.00-11.00
Sample Type			B	B	B	B	B	B
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	9.6	8.8	8.2	8.4	8.2	8.7
Magnesium (2:1 water soluble)	CE061	mg/l Mg	1.1	7.9	22	12	10	2.6
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	29	6.7	8.3	6.3	4.4	12
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	<1	<1	1.0	<1	4.6	<1
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	517	132	534	154	118	316
Sulphate (total)	CE062 [U]	mg/kg SO_4	2101	547	1914	690	561	1281
Sulphur (total)	CE119	mg/kg S	2036	1004	1114	1355	605	1418
Sulphur (total)	CE119	% w/w S	0.20	0.10	0.11	0.14	0.06	0.14
Total Organic Carbon (TOC)	CE197	% w/w C	0.9	-	3.6	-	1.4	1.9
Estimate of OMC (calculated from TOC)	CE197	% w/w	1.6	-	6.1	-	2.4	3.2

Chemtech Environmental Limited

SOILS

Lab number			110069-7	110069-8	110069-9	110069-10	110069-11	110069-12
Sample id			CP208	CP209	CP210	TP202	TP211	TP213
Depth (m)			15.00-15.45	18.00	10.00	2.00	1.80	1.00
Sample Type			U	B	B	B	B	B
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	8.5	8.6	8.8	7.6	7.6	7.9
Magnesium (2:1 water soluble)	CE061	mg/l Mg	4.3	4.5	2.8	9.7	16	3.9
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	4.1	9.1	6.9	4.4	4.3	6.7
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	<1	1.0	<1	<1	<1	3.4
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	114	86	23	74	570	209
Sulphate (total)	CE062 [U]	mg/kg SO_4	462	439	141	376	2692	1433
Sulphur (total)	CE119	mg/kg S	795	791	141	164	2077	942
Sulphur (total)	CE119	% w/w S	0.08	0.08	0.01	0.02	0.21	0.09
Total Organic Carbon (TOC)	CE197	% w/w C	-	-	-	0.9	6.3	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	-	-	-	1.6	10.8	-

Chemtech Environmental Limited

SOILS

Lab number			110069-13	110069-14	110069-15	110069-16	110069-17	110069-18
Sample id			TP214	TP219	TP220	TP223	TP236	TP237
Depth (m)			2.00	1.20	2.00	2.20	1.50	4.50
Sample Type			B	B	B	B	B	B
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	7.7	9.4	-	-	-	8.8
Magnesium (2:1 water soluble)	CE061	mg/l Mg	13	2.3	6.1	-	-	6.1
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	9.0	14	-	-	-	4.2
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	2.0	3.0	-	-	-	1.7
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	1443	989	-	-	-	340
Sulphate (total)	CE062 [U]	mg/kg SO_4	5497	4377	-	-	-	630
Sulphur (total)	CE119	mg/kg S	2420	2139	-	-	-	454
Sulphur (total)	CE119	% w/w S	0.24	0.21	-	-	-	0.05
Total Organic Carbon (TOC)	CE197	% w/w C	0.6	2.4	4.5	3.5	0.4	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	1.0	4.1	7.8	6.0	0.7	-

Chemtech Environmental Limited

SOILS

Lab number			110069-19	110069-20	110069-21	110069-22	110069-23	110069-24
Sample id			TP250	TP252	TP252	RH201	RH205	RH206
Depth (m)			1.00	1.00	2.10	15.80-16.00	12.50-12.80	6.00-6.45
Sample Type			B	B	B	CS	CS	CS
Date sampled			-	-	-	-	-	-
Test	**Method**	**Units**						
pH	CE004 [U]	units	6.9	8.3	8.6	8.4	8.5	8.6
Magnesium (2:1 water soluble)	CE061	mg/l Mg	22	4.4	1.5	13	9.2	9.9
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	3.9	9.3	6.1	7.5	8.2	4.7
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	2.0	6.9	<1	1.3	<1	<1
Sulphate (2:1 water soluble)	CE061 [U]	mg/l SO_4	597	142	36	165	82	50
Sulphate (total)	CE062 [U]	mg/kg SO_4	1883	1051	216	639	447	418
Sulphur (total)	CE119	mg/kg S	1598	654	<100	516	739	522
Sulphur (total)	CE119	% w/w S	0.16	0.07	<0.01	0.05	0.07	0.05
Total Organic Carbon (TOC)	CE197	% w/w C	4.7	4.5	0.6	-	-	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	8.1	7.7	1.0	-	-	-

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry		1	mg/l Mg
CE049	Chloride (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l Cl
CE049	Nitrate (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l NO_3
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO_4
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	U	100	mg/kg SO_4
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		0.01	% w/w S
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
110069-1	CP202	11.00-12.00	Y	All (NSD)
110069-2	CP203	7.00	Y	All (NSD)
110069-3	CP204	4.00	Y	All (NSD)
110069-4	CP205	8.00	Y	All (NSD)
110069-5	CP206	4.00	Y	All (NSD)
110069-6	CP207	10.00-11.00	Y	All (NSD)
110069-7	CP208	15.00-15.45	Y	All (NSD)
110069-8	CP209	18.00	Y	All (NSD)
110069-9	CP210	10.00	Y	All (NSD)
110069-10	TP202	2.00	Y	All (NSD)
110069-11	TP211	1.80	Y	All (NSD)
110069-12	TP213	1.00	Y	All (NSD)
110069-13	TP214	2.00	Y	All (NSD)
110069-14	TP219	1.20	Y	All (NSD)
110069-18	TP237	4.50	Y	All (NSD)
110069-19	TP250	1.00	Y	All (NSD)
110069-20	TP252	1.00	Y	All (NSD)
110069-21	TP252	2.10	Y	All (NSD)
110069-22	RH201	15.80-16.00	Y	All (NSD)
110069-23	RH205	12.50-12.80	Y	All (NSD)
110069-24	RH206	6.00-6.45	Y	All (NSD)

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.

A P P E N D I X N

Geological Cross Sections

ABBREVIATIONS

TF = Topsoil Fill

CONC = Concrete

CMG = Cohesive Made Ground

CMG = Granular Made Ground

DW = Suspected Construction and Demolition Waste

CW = Suspected Combustion Waste

CS = Suspected Colliery Spoil

HW = Suspected Household Waste

RNG = Suspected Reworked Natural Ground

CGT = Cohesive Glacial Till

GGT = Granular Glacial Till

CF = Chester Formation

CSF = Collyhurst Sandstone Formation

Project Id:	LD10385	Title:	Site Plan
Project Title:	Ten Acres Lane	Scale:	1:3500
Location:	Newton Heath	Engineer:	Wardell Armstrong LLP
Client:	NUVU Developments Ltd	Contractor:	Geotron

Legend Key

- Sections - Section line 1
- Sections - Section line 2
- Sections - Section line 3
- Sections - Section line 4
- Sections - Section line 5
- Sections - Section line 6
- Sections - Section line 7
- Sections - Section line 8
- Sections - Section line 9
- Sections - Section line 10
- Sections - Section line 11
- Sections - Section line 12
- Sections - Section line 13
- Sections - Section line 14
- Sections - Section line 15
- Sections - Section line 16
- Sections - Section line 17
- Sections - Section line 18
- Sections - Section line 19
- Locations By Type - CP
- Locations By Type - CP+RC
- Locations By Type - CP+RO
- Locations By Type - RC
- Locations By Type - RO

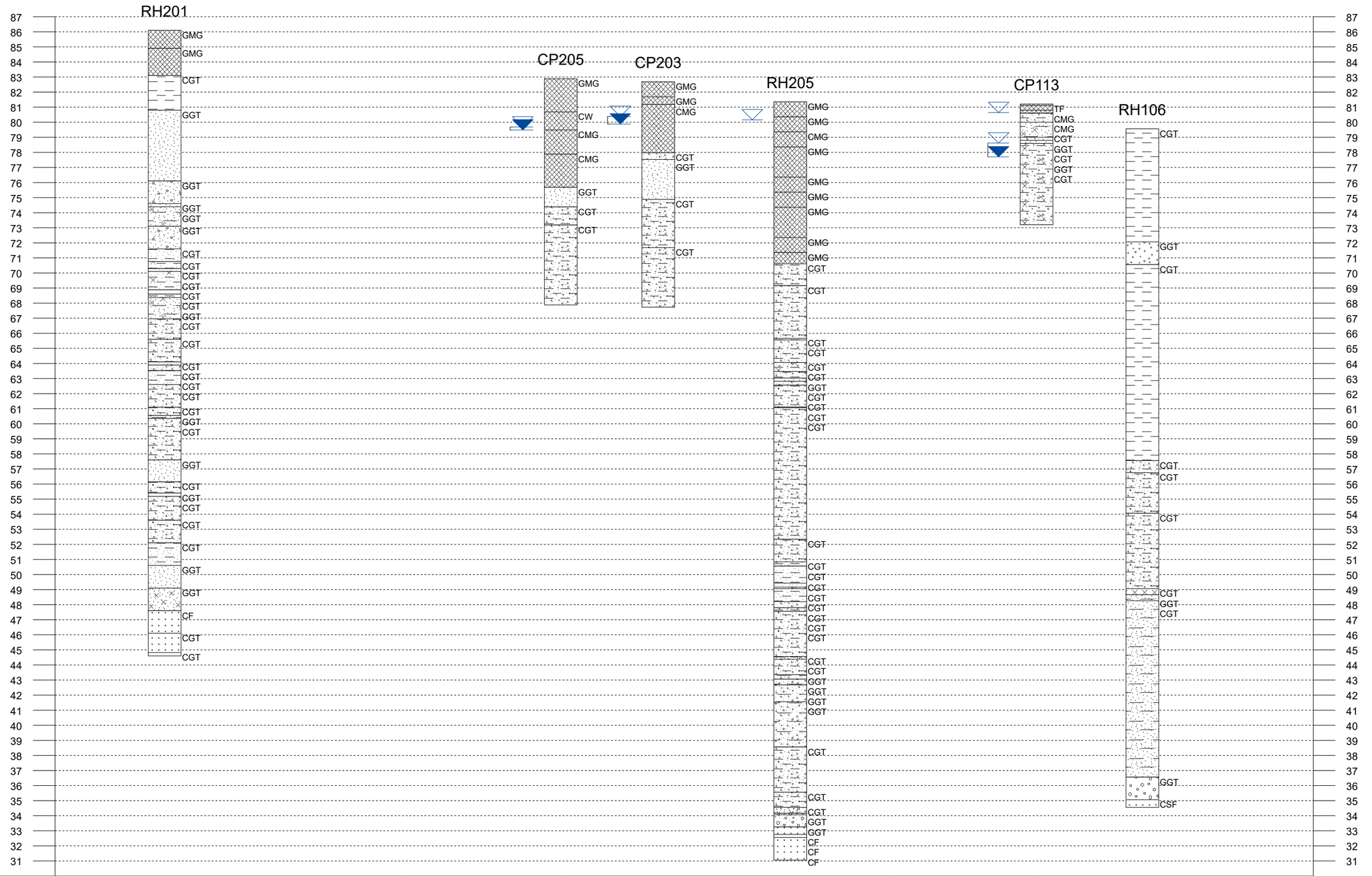
bing
Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Project Id: LD10385	Title: Section line 1
Project Title: Ten Acres Lane	Vertical Scale: 1:260
Location: Newton Heath	Horizontal Scale: 1:2000
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong

Legend Key

- MADE GROUND
- CLAY
- SAND
- Sandy gravelly CLAY
- Clayey silty SAND
- Silty sandy gravelly CLAY
- Cobbly SAND
- GRAVEL
- Sandy CLAY
- Silty sandy CLAY
- Silty gravelly CLAY
- Clayey gravelly SAND
- Silty SAND
- Clay/Silt
- Clayey SAND
- SANDSTONE
- Sandy gravelly cobbly CLAY
- Clayey sandy GRAVEL
- COBBLES

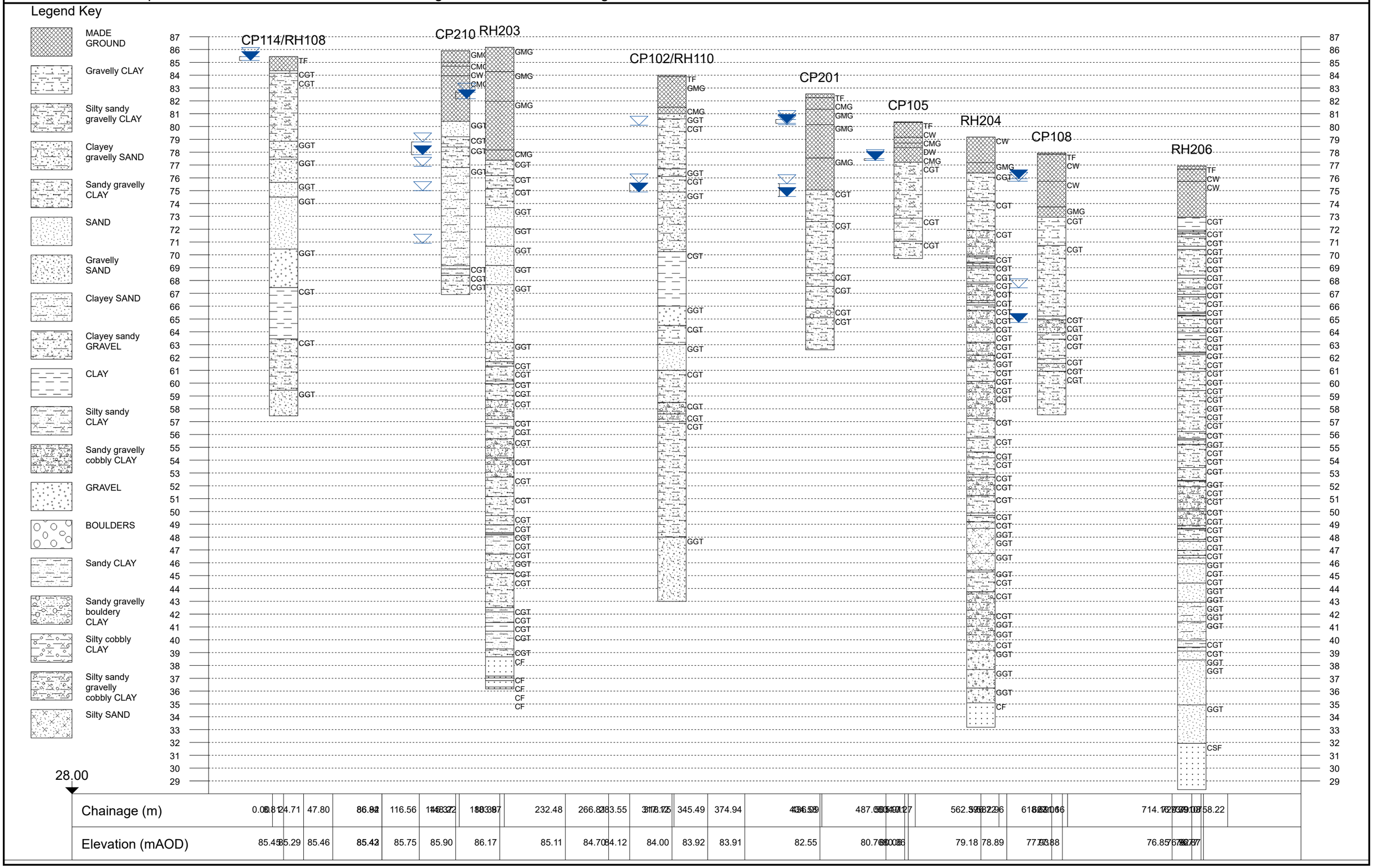


30.00

Chainage (m)	0.00	18.38	138.94	220.62	232.49	244.28	270.42	282.98	337.78	352.36	362.04	389.15	391.84	416.81	463.52	475.72	517.52	526.94	543.09
Elevation (mAOD)	86.10		83.28	82.88		82.50	82.68		81.36	81.34		81.11	81.25	81.29	81.20		79.56	79.24	

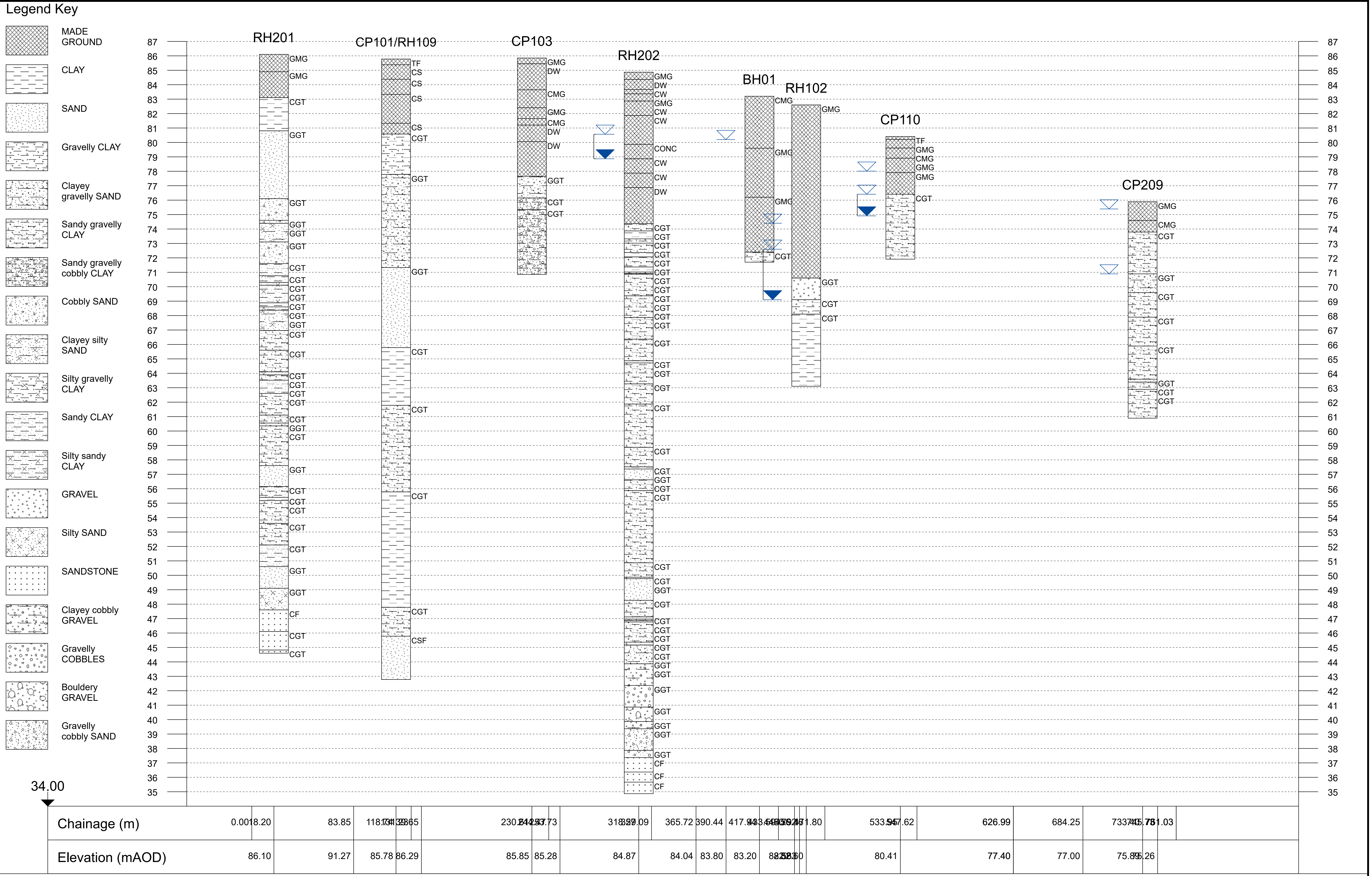
Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

Title: Section line 2
Vertical Scale: 1:265
Horizontal Scale: 1:2700
Engineer: Wardell Armstrong LLP



Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

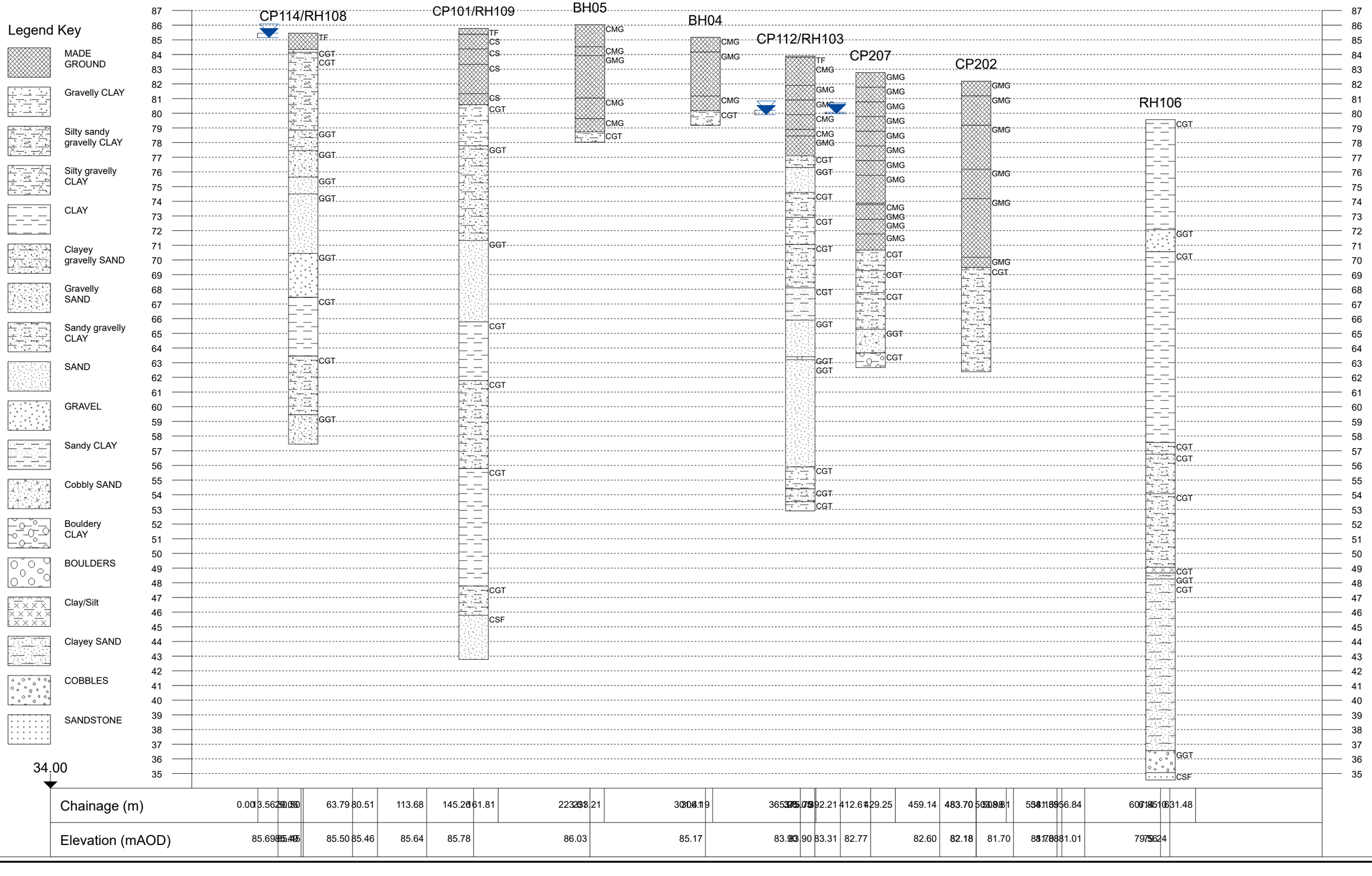
Title: Section line 3
Vertical Scale: 1:240
Horizontal Scale: 1:2850
Engineer: Wardell Armstrong LLP



Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

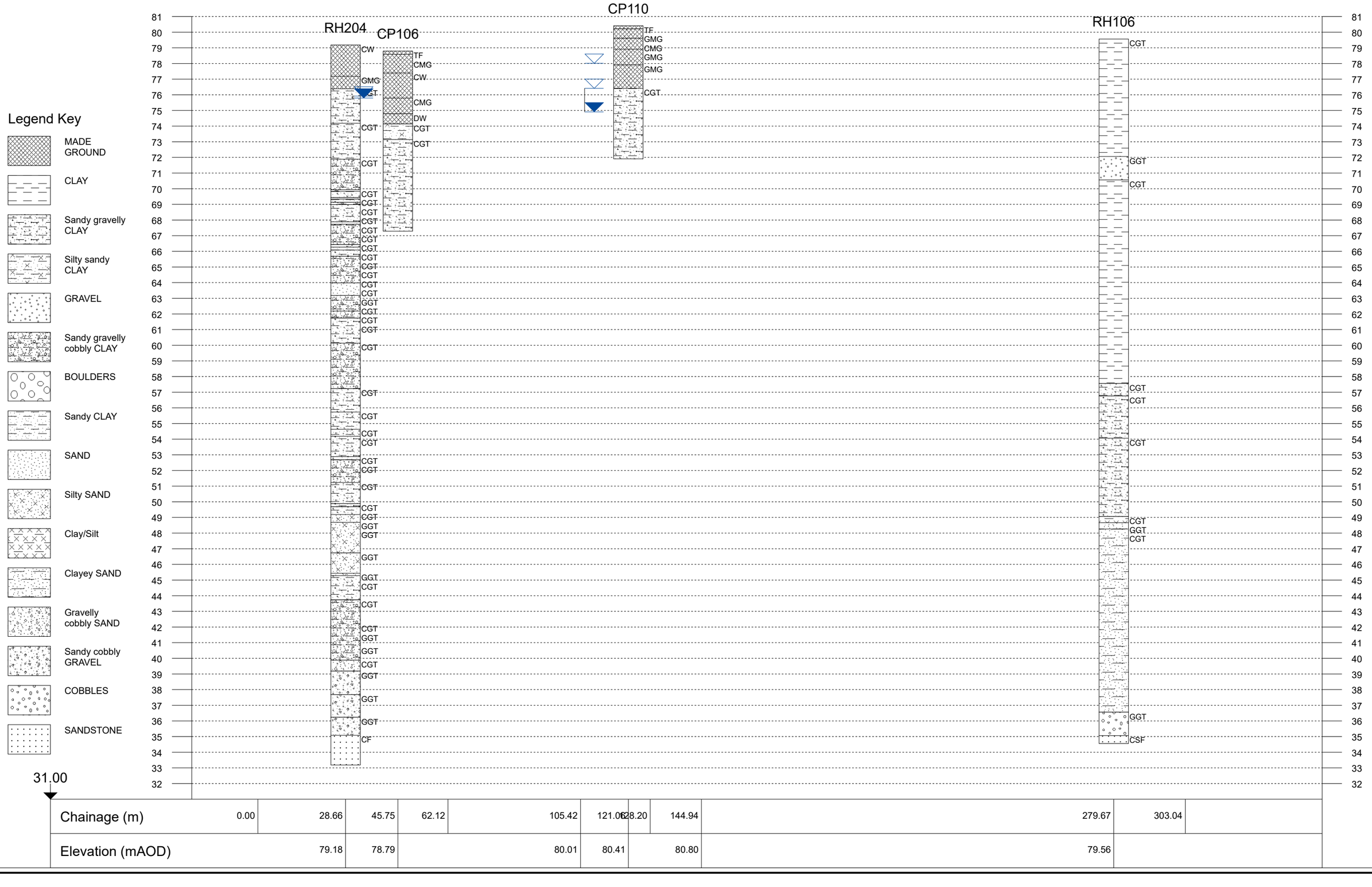
Title: Section line 4
Vertical Scale: 1:240
Horizontal Scale: 1:2370
Engineer: Wardell Armstrong LLP

wardell armstrong

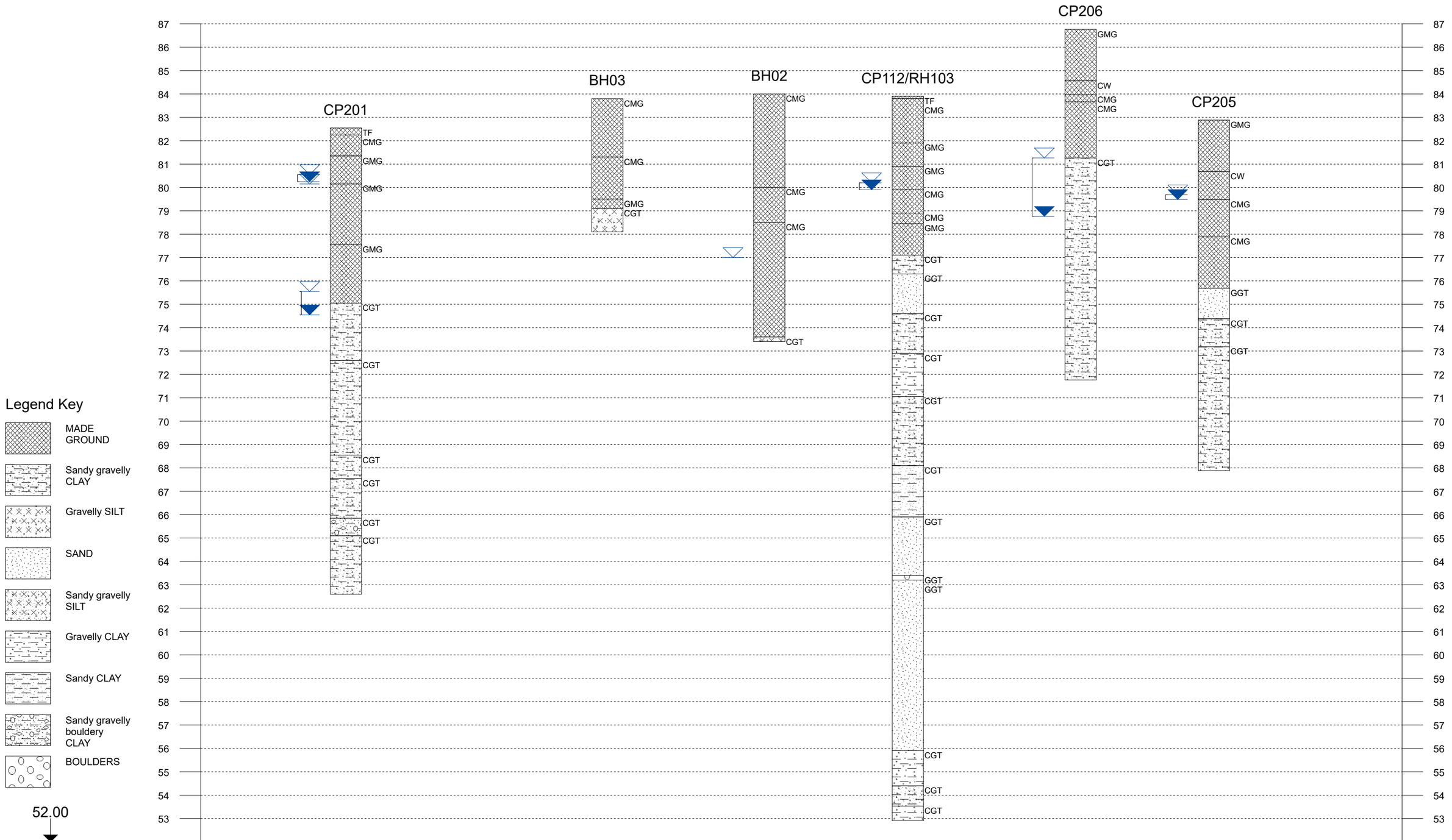


Project Id: LD10385	Title: Section line 5
Project Title: Ten Acres Lane	Vertical Scale: 1:225
Location: Newton Heath	Horizontal Scale: 1:1150
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong



Project Id: LD10385	Title: Section line 6
Project Title: Ten Acres Lane	Vertical Scale: 1:160
Location: Newton Heath	Horizontal Scale: 1:1200
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



Legend Key

- MADE GROUND
- Sandy gravelly CLAY
- Gravelly SILT
- SAND
- Sandy gravelly SILT
- Gravelly CLAY
- Sandy CLAY
- Sandy gravelly bouldery CLAY
- BOULDERS

52.00

Chainage (m)	0.00	24.03	32.63	107.92	116.35	159.67	164.83	204.32	211.54	259.75	269.49	302.54	321.46
Elevation (mAOD)		82.55		83.80		84.00		83.90		86.76		82.88	

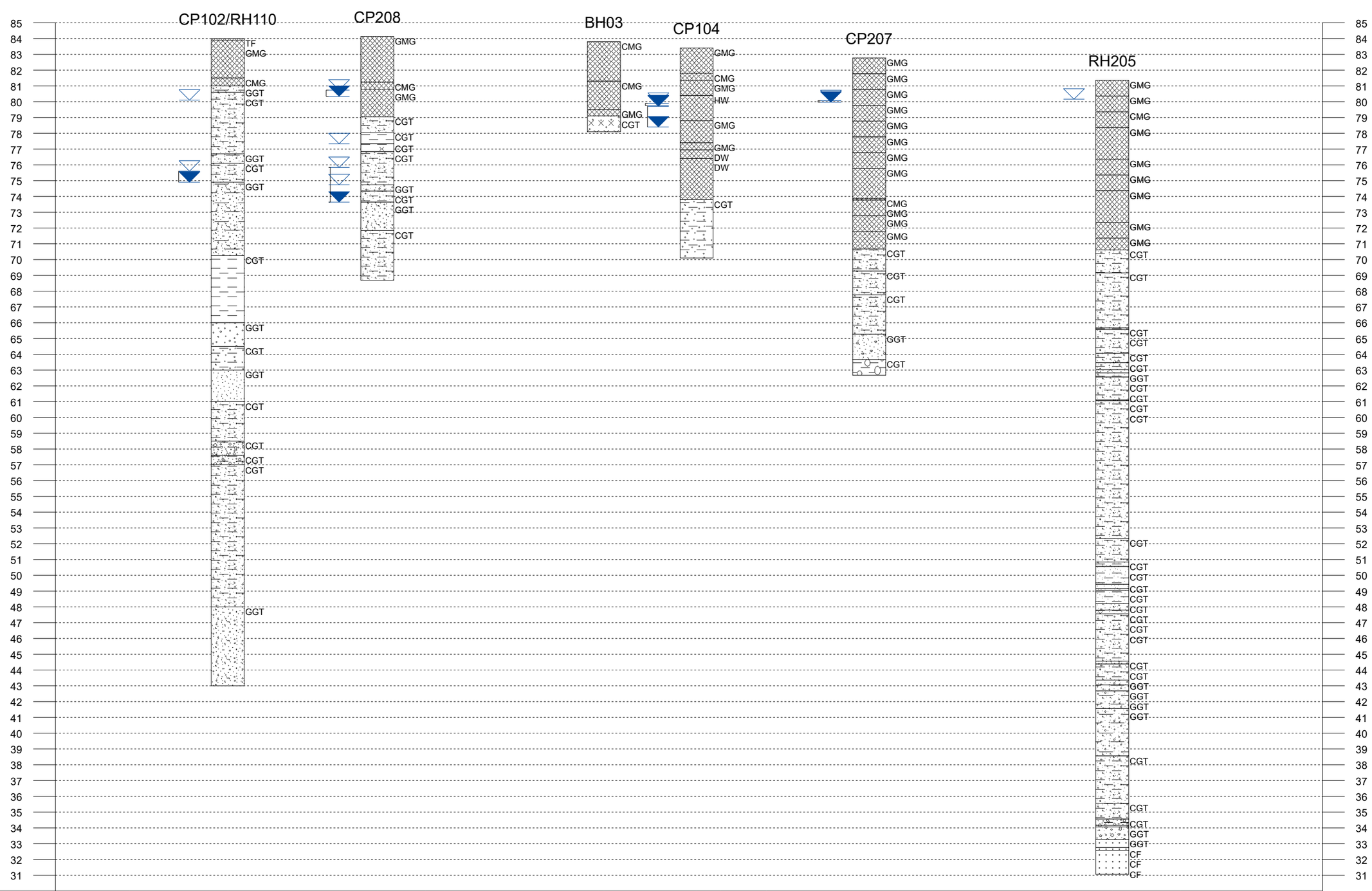
Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

Title: Section line 7
Vertical Scale: 1:250
Horizontal Scale: 1:1200
Engineer: Wardell Armstrong LLP

wardell armstrong

Legend Key

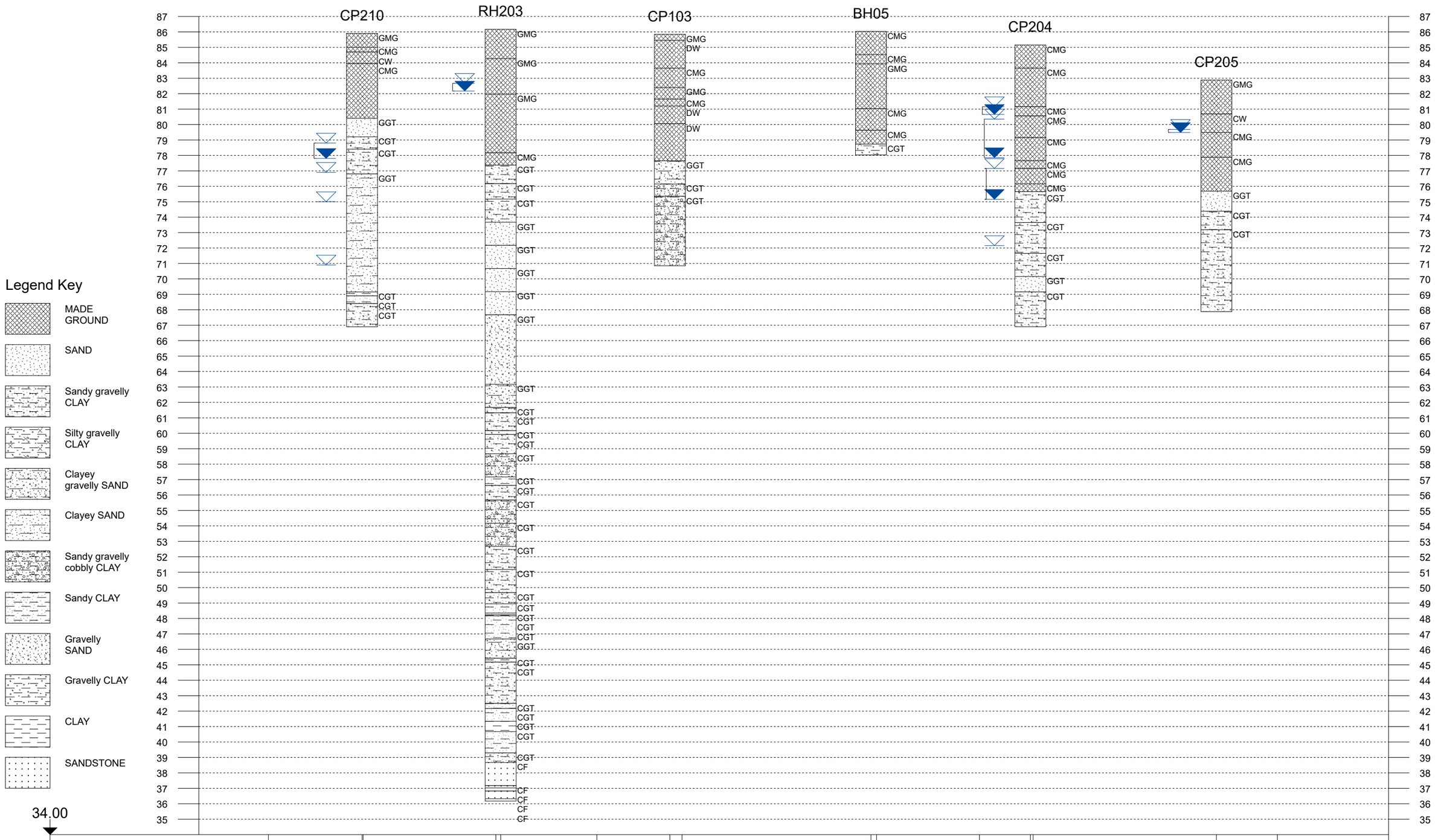
- MADE GROUND
- Clayey gravelly SAND
- Sandy gravelly CLAY
- Gravelly SILT
- CLAY
- Silty CLAY
- Clayey sandy GRAVEL
- Sandy GRAVEL
- Gravelly CLAY
- Gravelly SAND
- GRAVEL
- Silty gravelly CLAY
- Cobbly SAND
- Silty sandy gravelly CLAY
- Bouldery CLAY
- Clayey silty SAND
- SAND
- Sandy gravelly cobbly CLAY
- Sandy CLAY



30.00

Chainage (m)	0.00	29.87	75.38	90.09	95.65	144.31	172.45	179.75	193.69	224.98	233.75	298.91	319.71
Elevation (mAOD)		84.00	84.14	84.40		83.80	83.40		83.18	82.77		81.36	

Project Id: LD10385	Title: Section line 8
Project Title: Ten Acres Lane	Vertical Scale: 1:240
Location: Newton Heath	Horizontal Scale: 1:1000
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



34.00

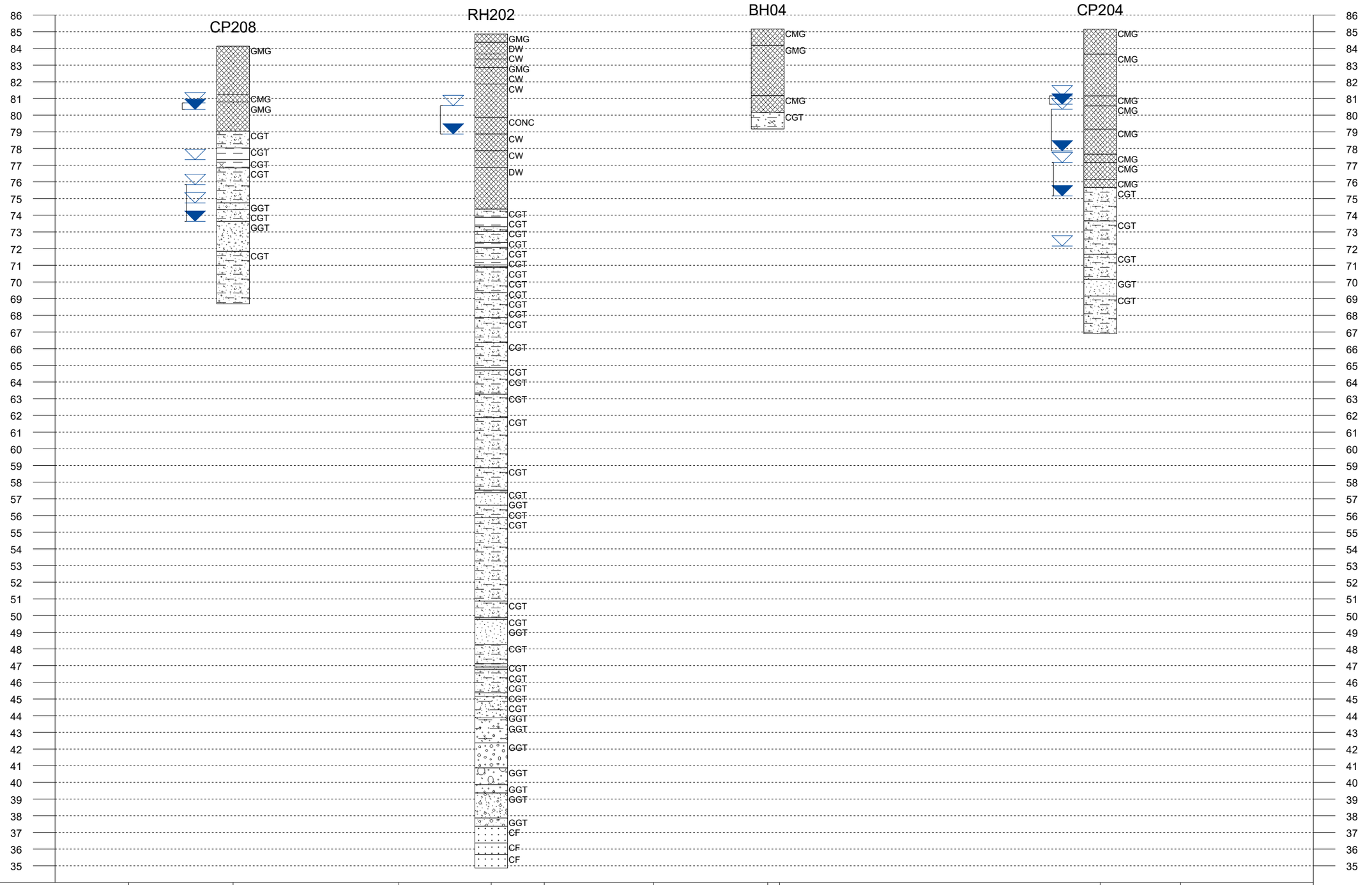
Chainage (m)	0.00	25.28	62.90	88.67	108.65	164.77	191.96	206.74	255.94	272.39
Elevation (mAOD)	85.90		86.17	86.10	85.85	86.03	88.57	85.16	82.88	

Project Id: LD10385	Title: Section line 9
Project Title: Ten Acres Lane	Vertical Scale: 1:235
Location: Newton Heath	Horizontal Scale: 1:800
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong

Legend Key

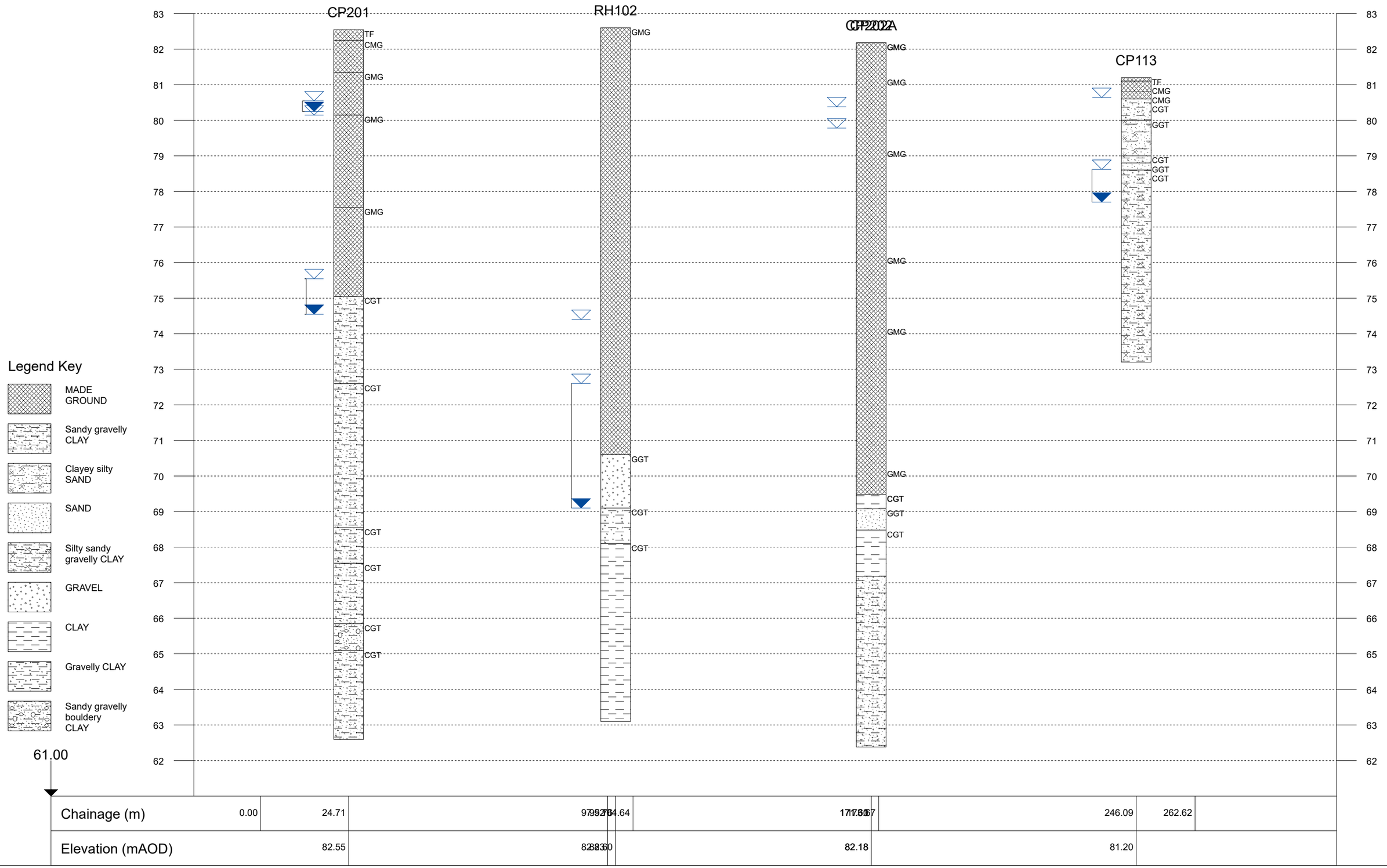
- MADE GROUND
- Silty gravelly CLAY
- Sandy gravelly CLAY
- CLAY
- Silty CLAY
- Sandy GRAVEL
- Gravelly SAND
- SAND
- Sandy CLAY
- Clayey gravelly SAND
- Clayey cobbly GRAVEL
- Gravelly COBBLES
- Bouldery GRAVEL
- Gravelly cobbly SAND
- Sandy COBBLES
- SANDSTONE



34.00

Chainage (m)	0.00	21.33	55.17	74.04	84.87	107.18	130.52	135.91	198.40	214.82	
Elevation (mAOD)		84.14	84.83	84.87		85.11	85.17		85.16		

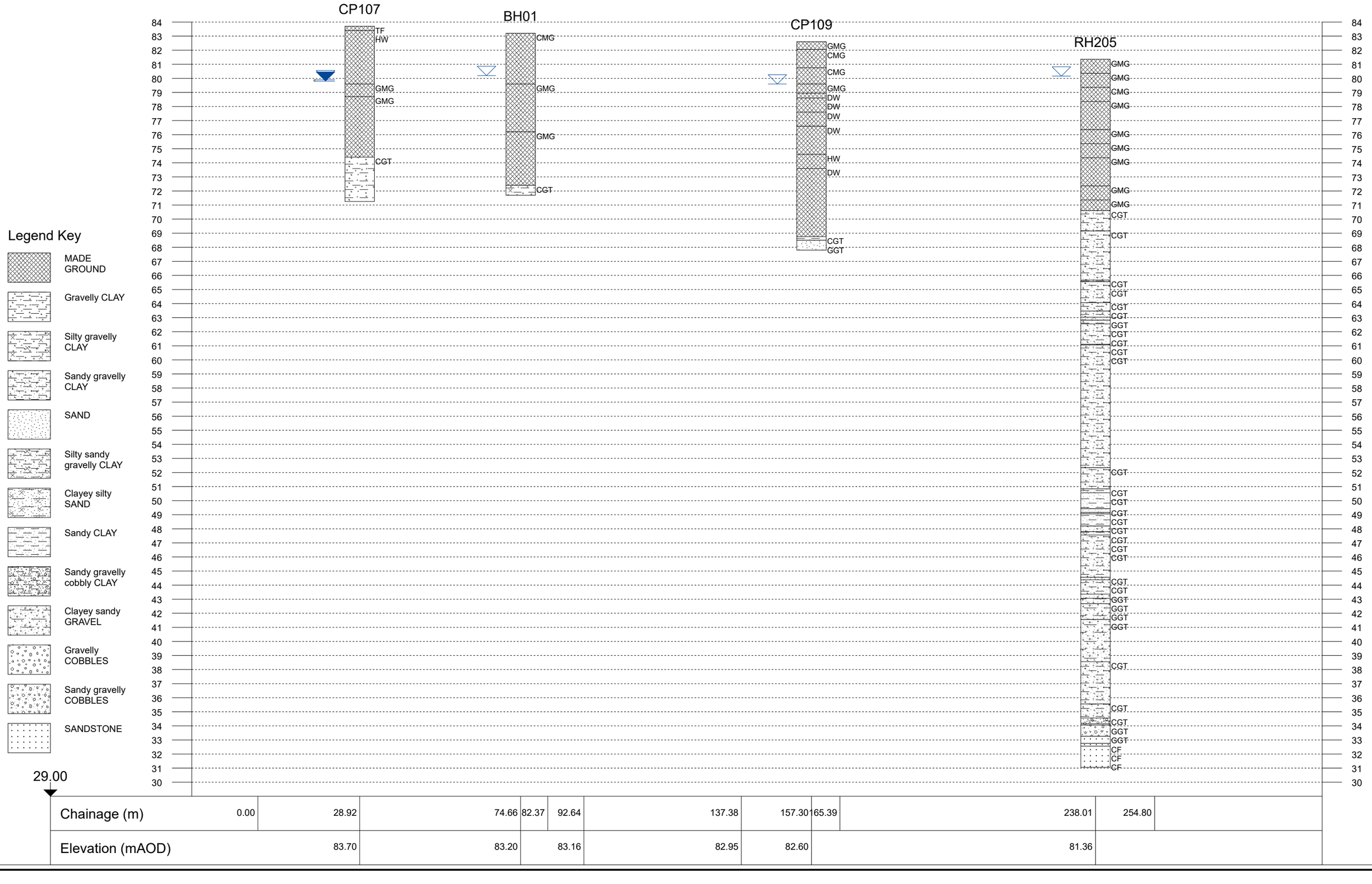
Project Id: LD10385	Title: Section line 10
Project Title: Ten Acres Lane	Vertical Scale: 1:100
Location: Newton Heath	Horizontal Scale: 1:1000
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



Chainage (m)	0.00	24.71	97.92	104.64	171.66	177.67	246.09	262.62
Elevation (mAOD)		82.55	82.30		82.18		81.20	

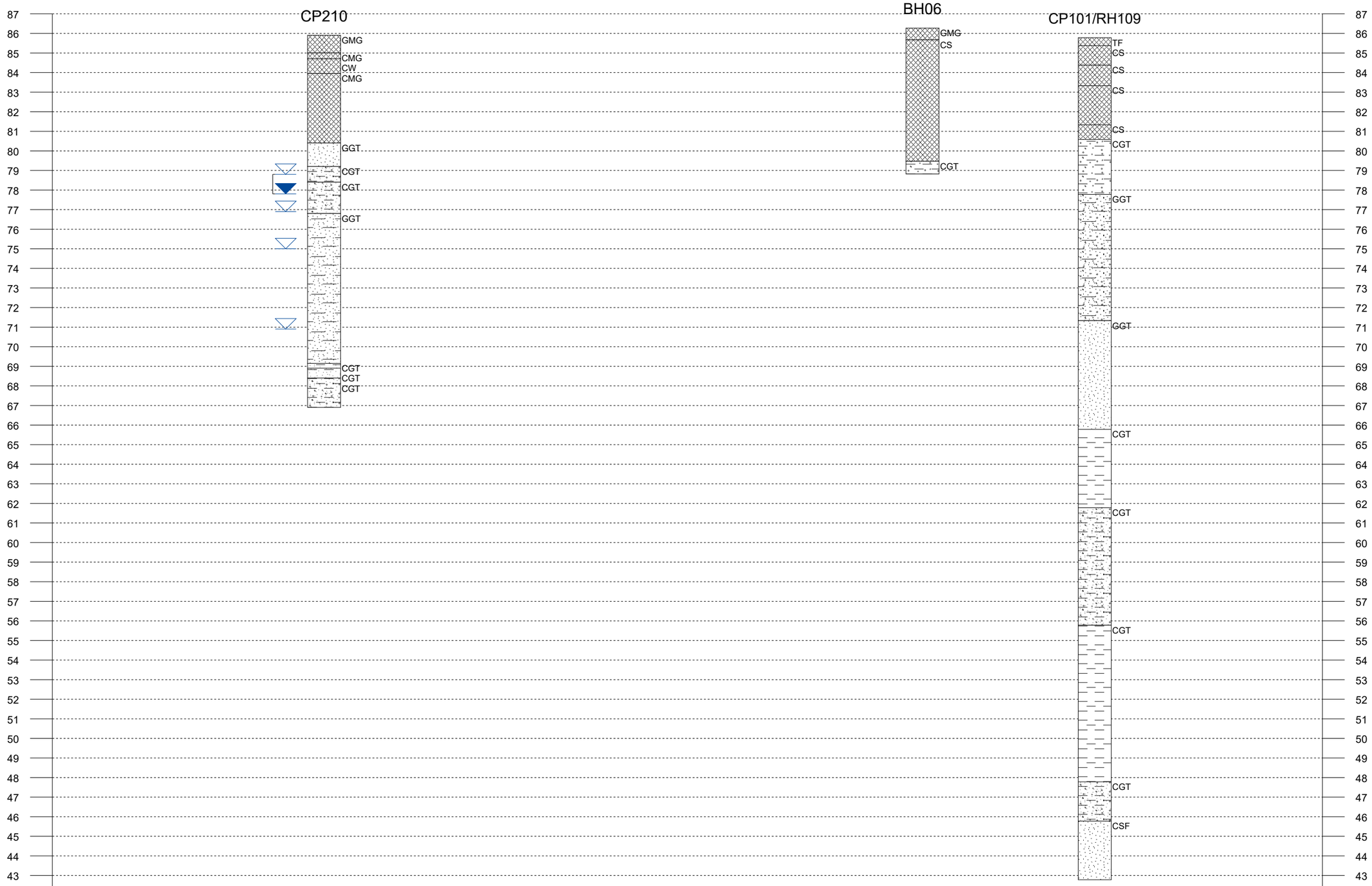
Project Id: LD10385	Title: Section line 11
Project Title: Ten Acres Lane	Vertical Scale: 1:250
Location: Newton Heath	Horizontal Scale: 1:1000
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong



Chainage (m)	0.00	28.92	74.66	82.37	92.64	137.38	157.30	165.39	238.01	254.80
Elevation (mAOD)		83.70	83.20		83.16	82.95	82.60		81.36	

Project Id: LD10385	Title: Section line 12
Project Title: Ten Acres Lane	Vertical Scale: 1:202
Location: Newton Heath	Horizontal Scale: 1:600
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



Legend Key

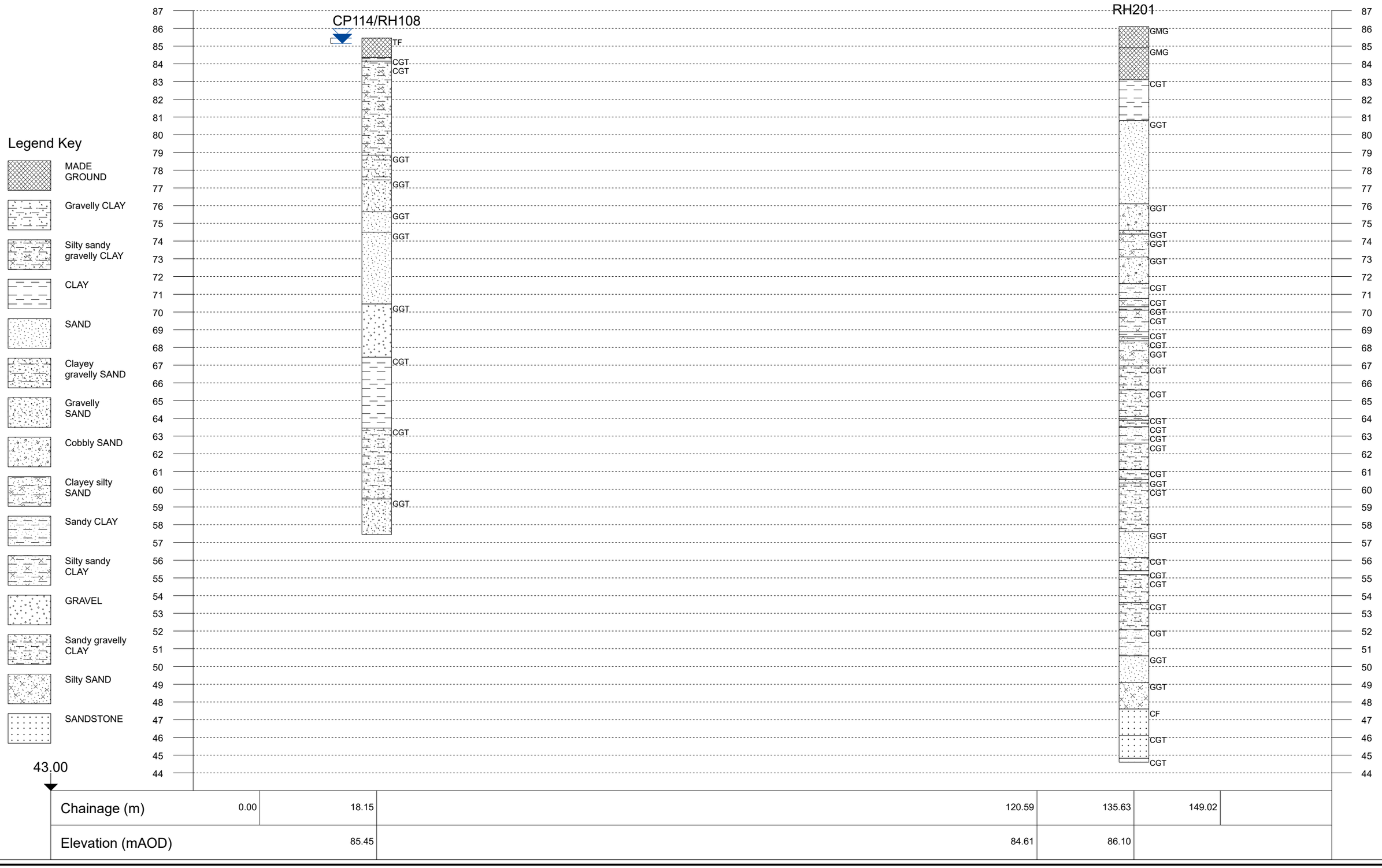
- MADE GROUND
- Gravelly CLAY
- SAND
- Sandy gravelly CLAY
- Clayey gravelly SAND
- Clayey SAND
- Sandy CLAY
- CLAY

42.00

Chainage (m)	0.00	29.96	79.34	120.75	146.89	162.77	
Elevation (mAOD)		85.90	86.36	86.27	85.78		

Project Id: LD10385	Title: Section line 13
Project Title: Ten Acres Lane	Vertical Scale: 1:200
Location: Newton Heath	Horizontal Scale: 1:550
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong



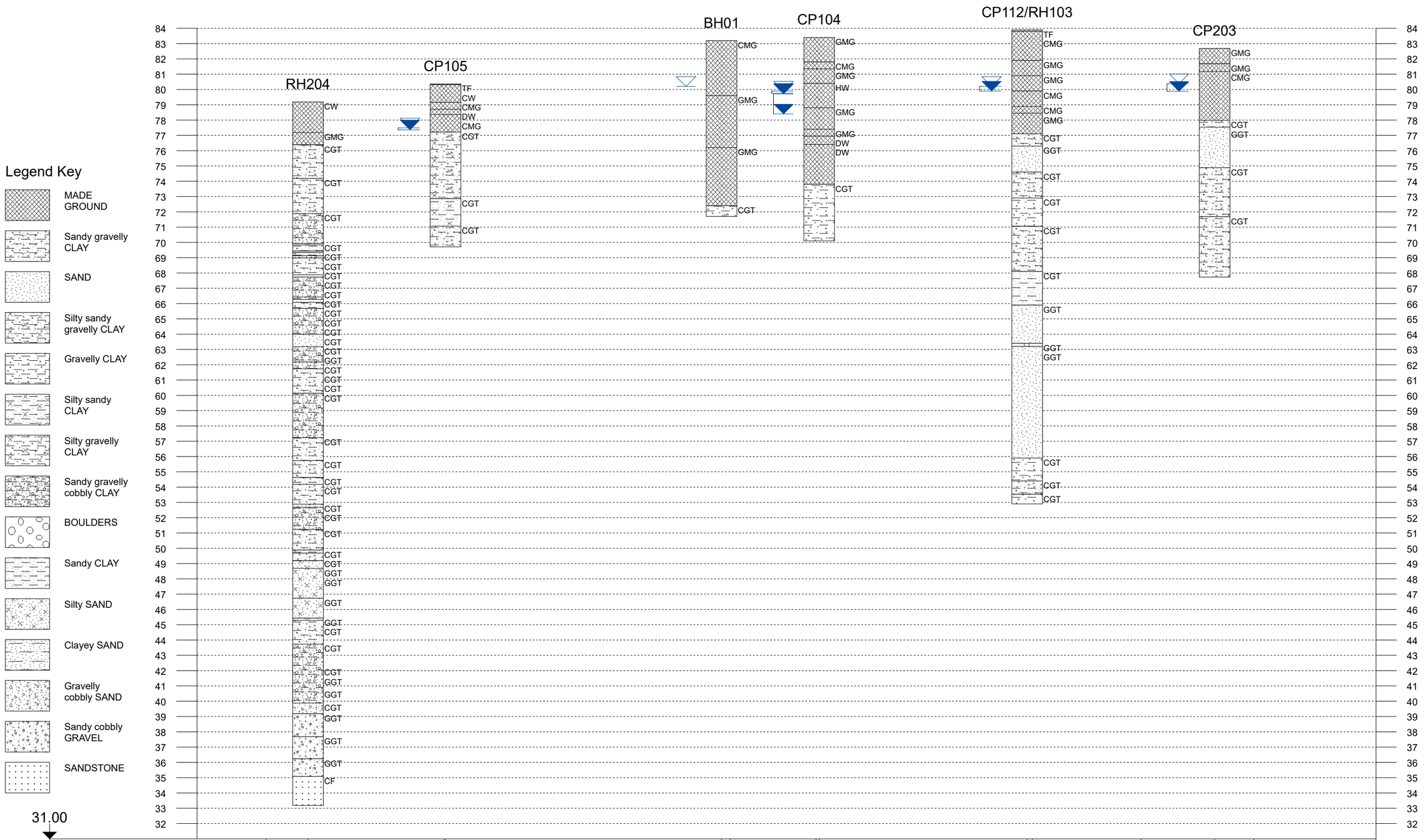
Chainage (m)	0.00	18.15	120.59	135.63	149.02
Elevation (mAOD)		85.45	84.61	86.10	

Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

Title: Section line 14
Vertical Scale: 1:240
Horizontal Scale: 1:1350
Engineer: Wardell Armstrong LLP

Project Id: LD10385	Title: Section line 15
Project Title: Ten Acres Lane	Vertical Scale: 1:240
Location: Newton Heath	Horizontal Scale: 1:1450
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP

wardell armstrong



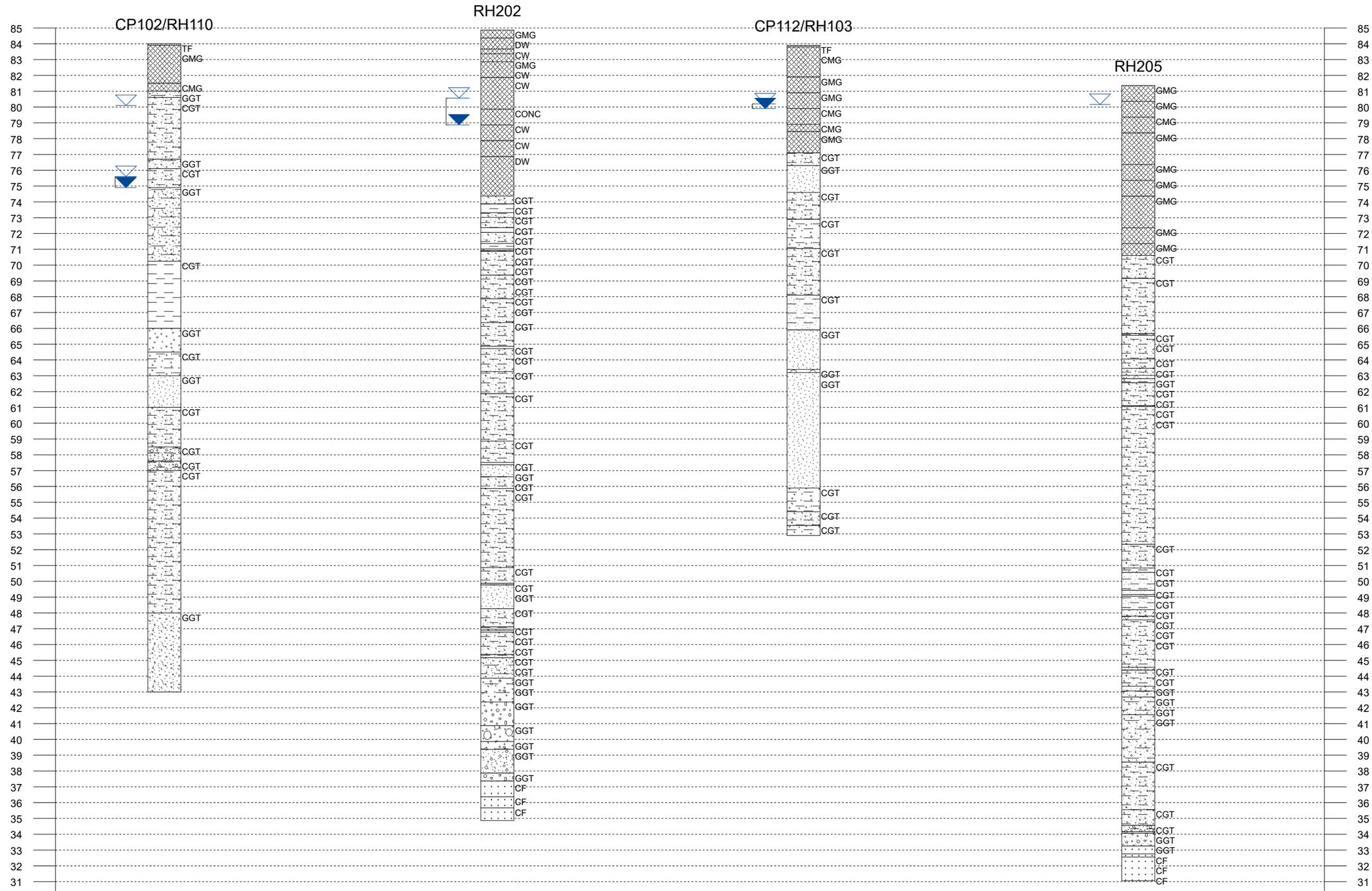
Project Id: LD10385
Project Title: Ten Acres Lane
Location: Newton Heath
Client: NUVU Developments Ltd

Title: Section line 16
Vertical Scale: 1:250
Horizontal Scale: 1:1000
Engineer: Wardell Armstrong LLP

wardell armstrong

Legend Key

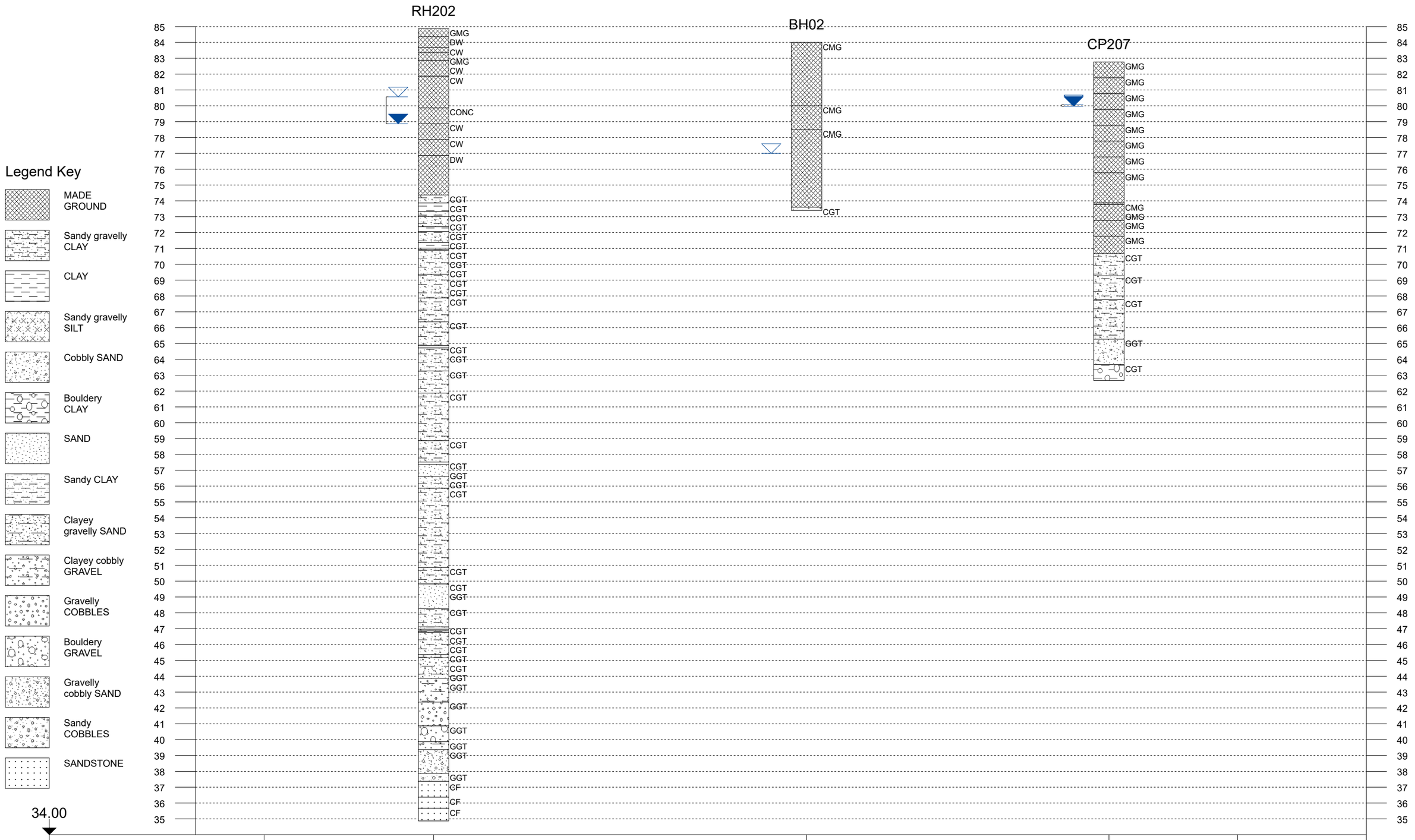
- MADE GROUND
- Clayey gravelly SAND
- Sandy gravelly CLAY
- Clayey sandy GRAVEL
- SAND
- CLAY
- Gravelly CLAY
- Sandy CLAY
- GRAVEL
- Silty gravelly CLAY
- Silty sandy gravelly CLAY
- BOULDERS
- Clayey silty SAND
- Sandy gravelly cobbly CLAY
- Gravelly SAND
- Clayey cobbly GRAVEL
- Gravelly COBBLES
- Bouldery GRAVEL
- Gravelly cobbly SAND



30.00

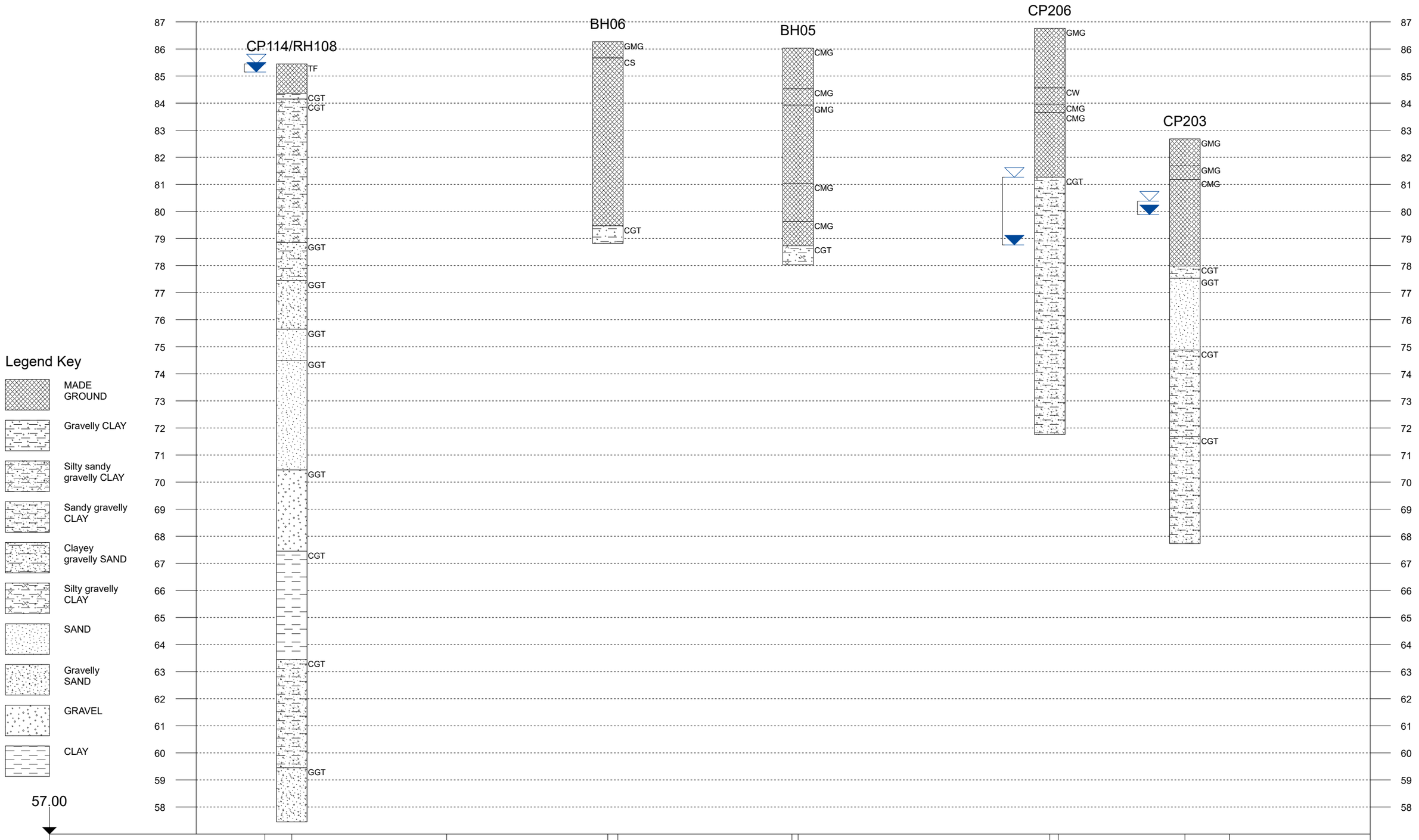
Chainage (m)	0.00	8.76	32.06	93.95	111.24	170.84	183.47	255.30	272.08
Elevation (mAOD)	84.00		84.33	84.87	84.81	83.90	83.90	81.36	

Project Id: LD10385	Title: Section line 17
Project Title: Ten Acres Lane	Vertical Scale: 1:230
Location: Newton Heath	Horizontal Scale: 1:500
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



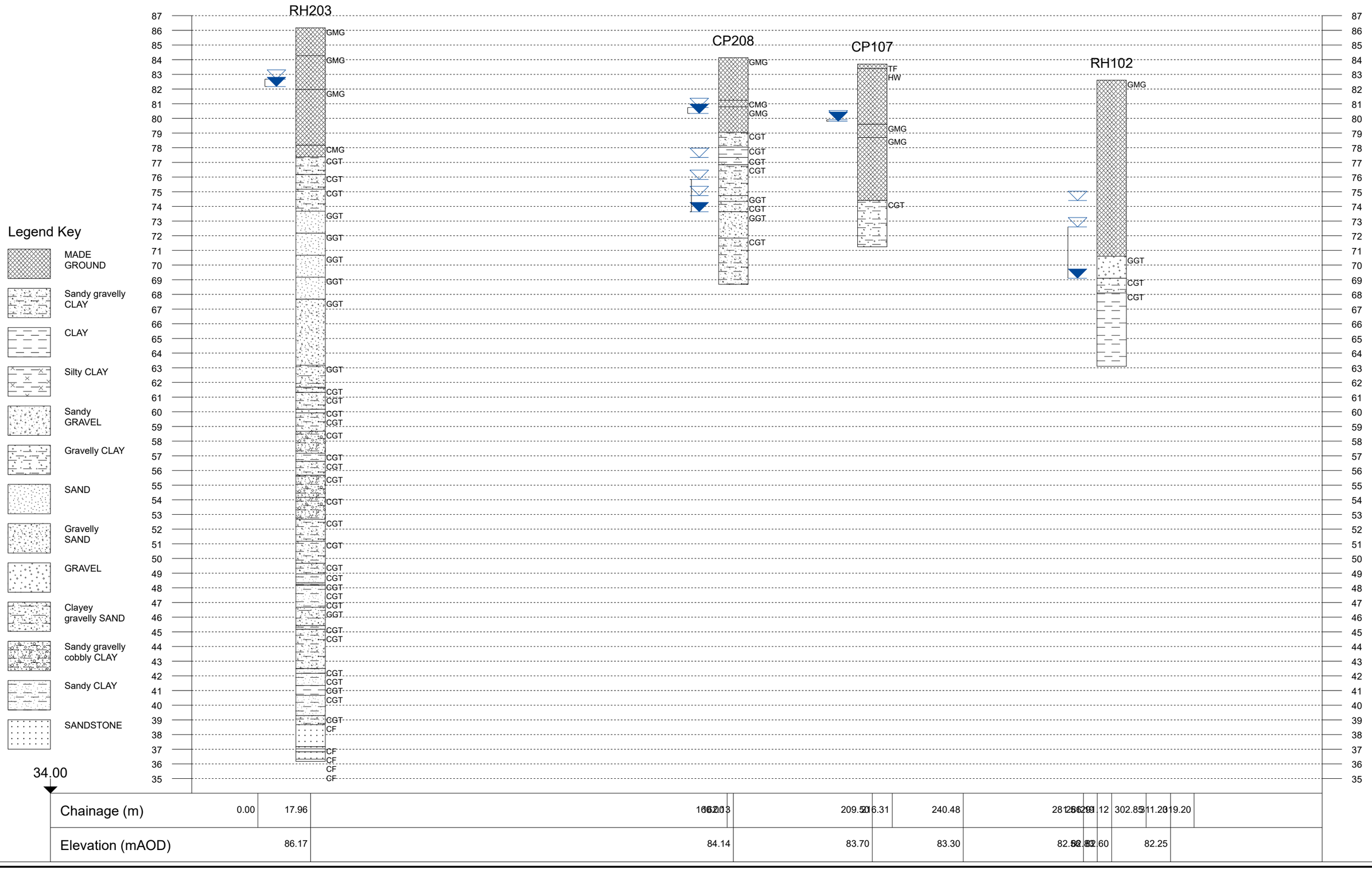
Chainage (m)	0.00	23.25	74.41	115.89	133.54	
Elevation (mAOD)		84.87	84.00	82.77		

Project Id: LD10385	Title: Section line 18
Project Title: Ten Acres Lane	Vertical Scale: 1:135
Location: Newton Heath	Horizontal Scale: 1:1250
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



Chainage (m)	0.00	9.20	62.21	117.29	188.35	265.32	314.64	329.92
Elevation (mAOD)	85.45		85.35	86.27	86.03	86.76	82.68	

Project Id: LD10385	Title: Section line 19
Project Title: Ten Acres Lane	Vertical Scale: 1:240
Location: Newton Heath	Horizontal Scale: 1:1200
Client: NUVU Developments Ltd	Engineer: Wardell Armstrong LLP



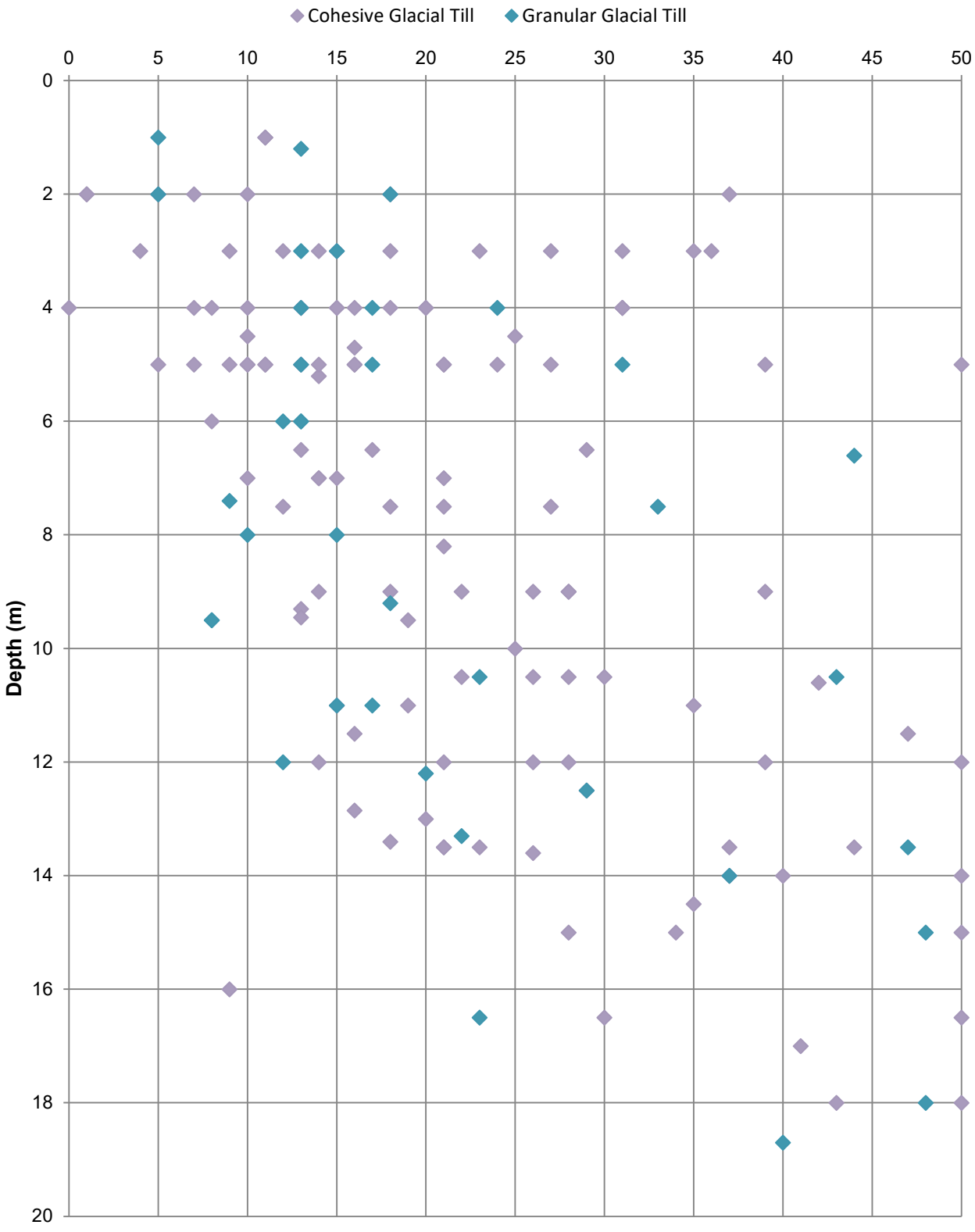
A P P E N D I X O

SPT Plots

SPT N Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



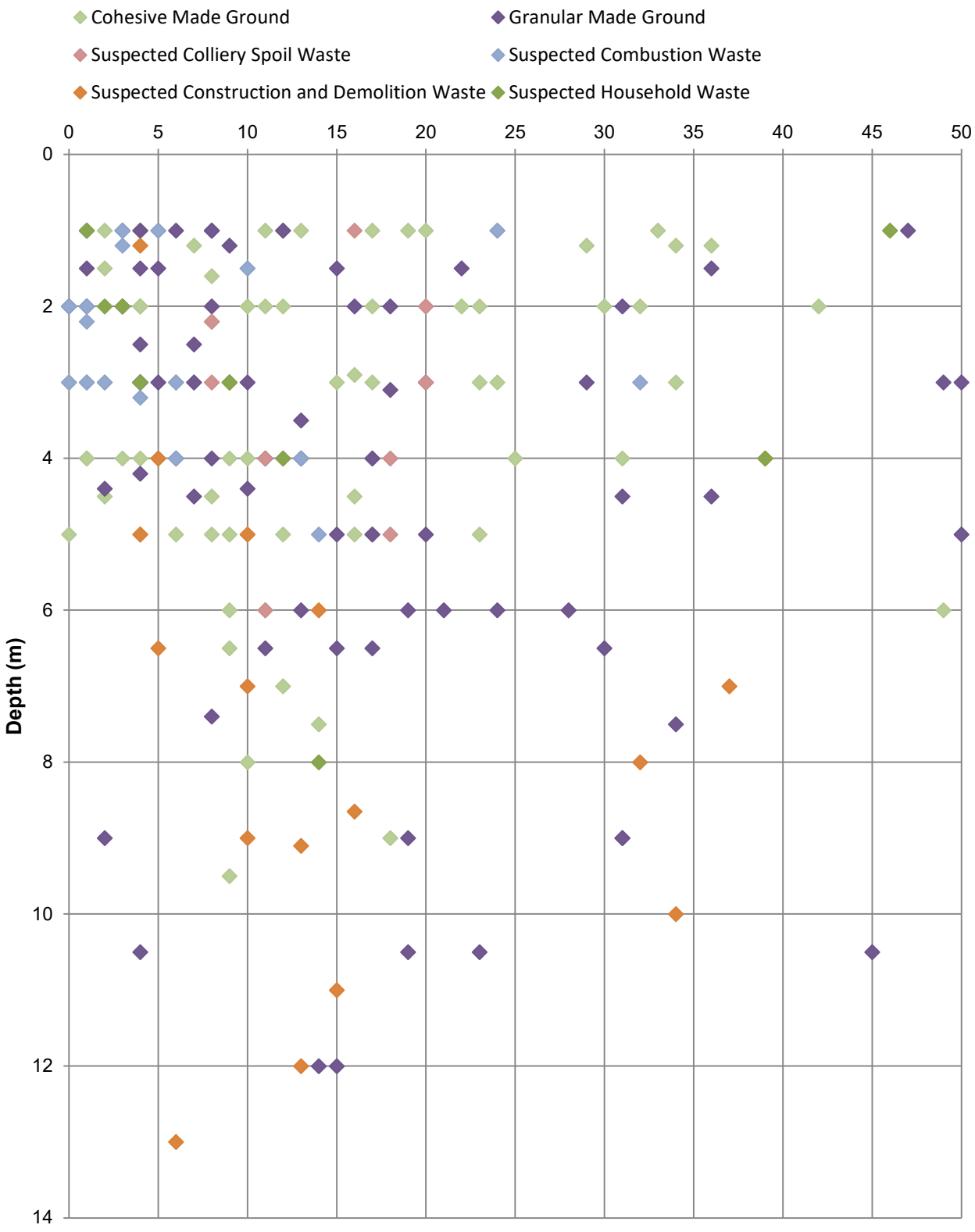
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



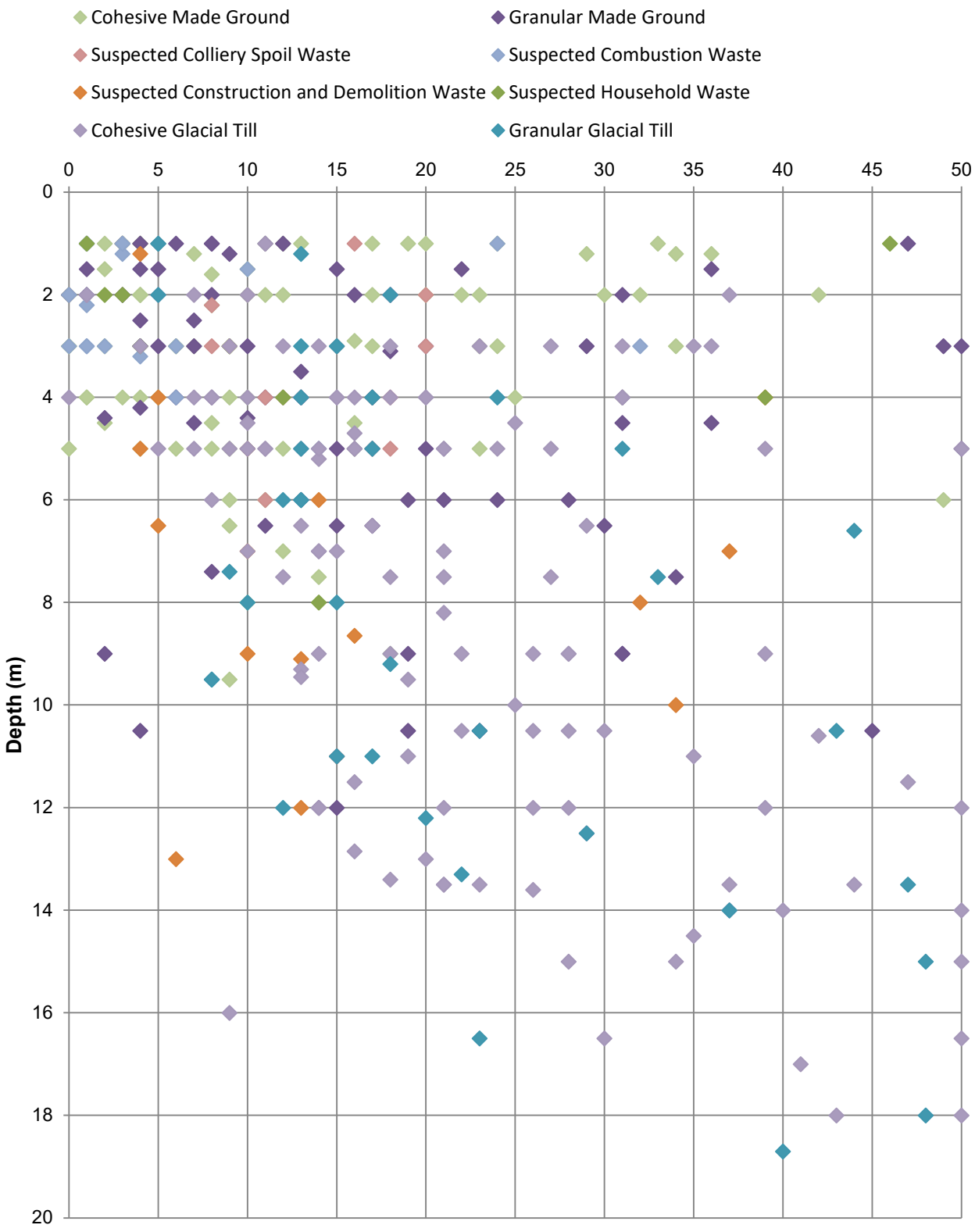
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



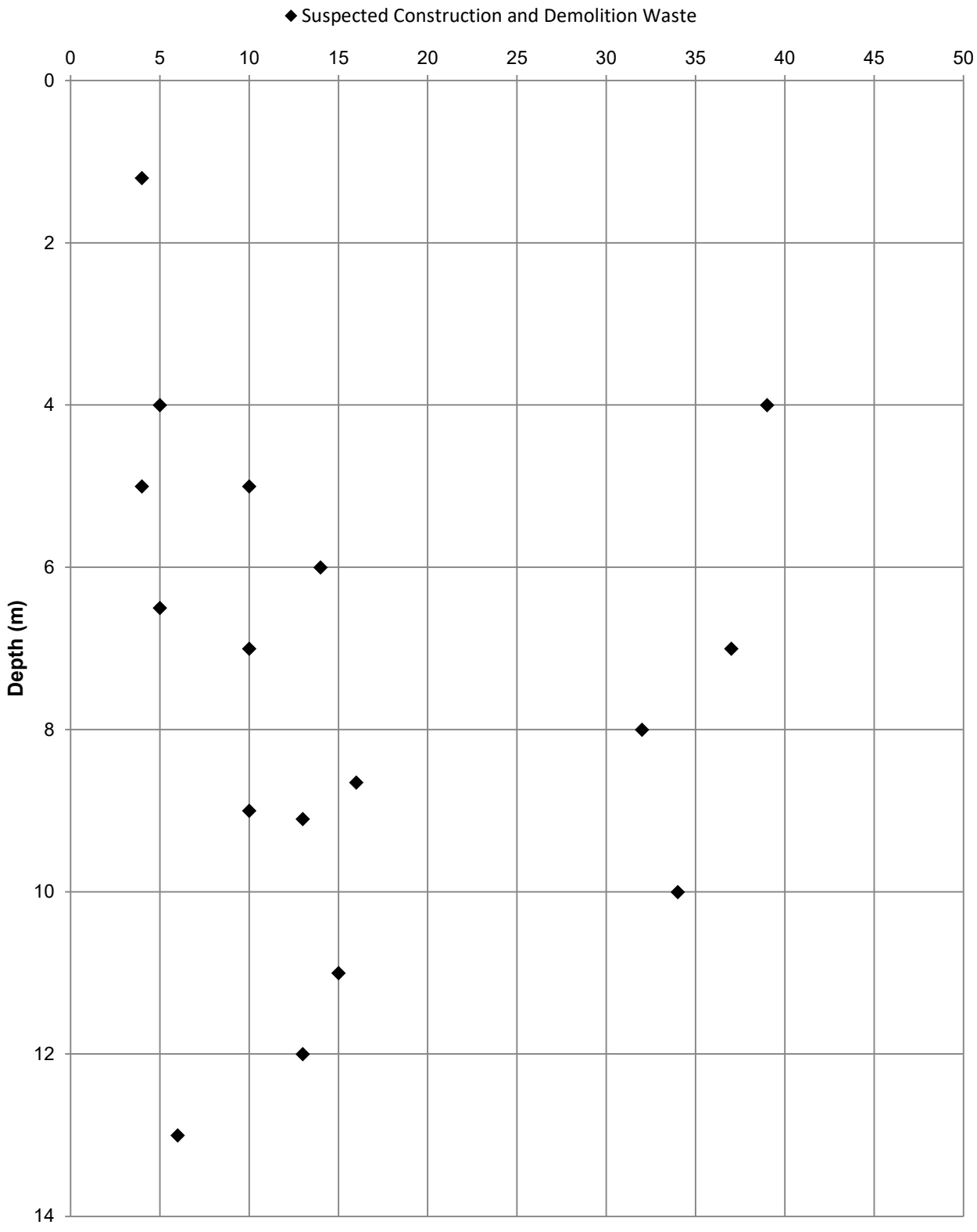
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N Value v Depth

Borehole No.
All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



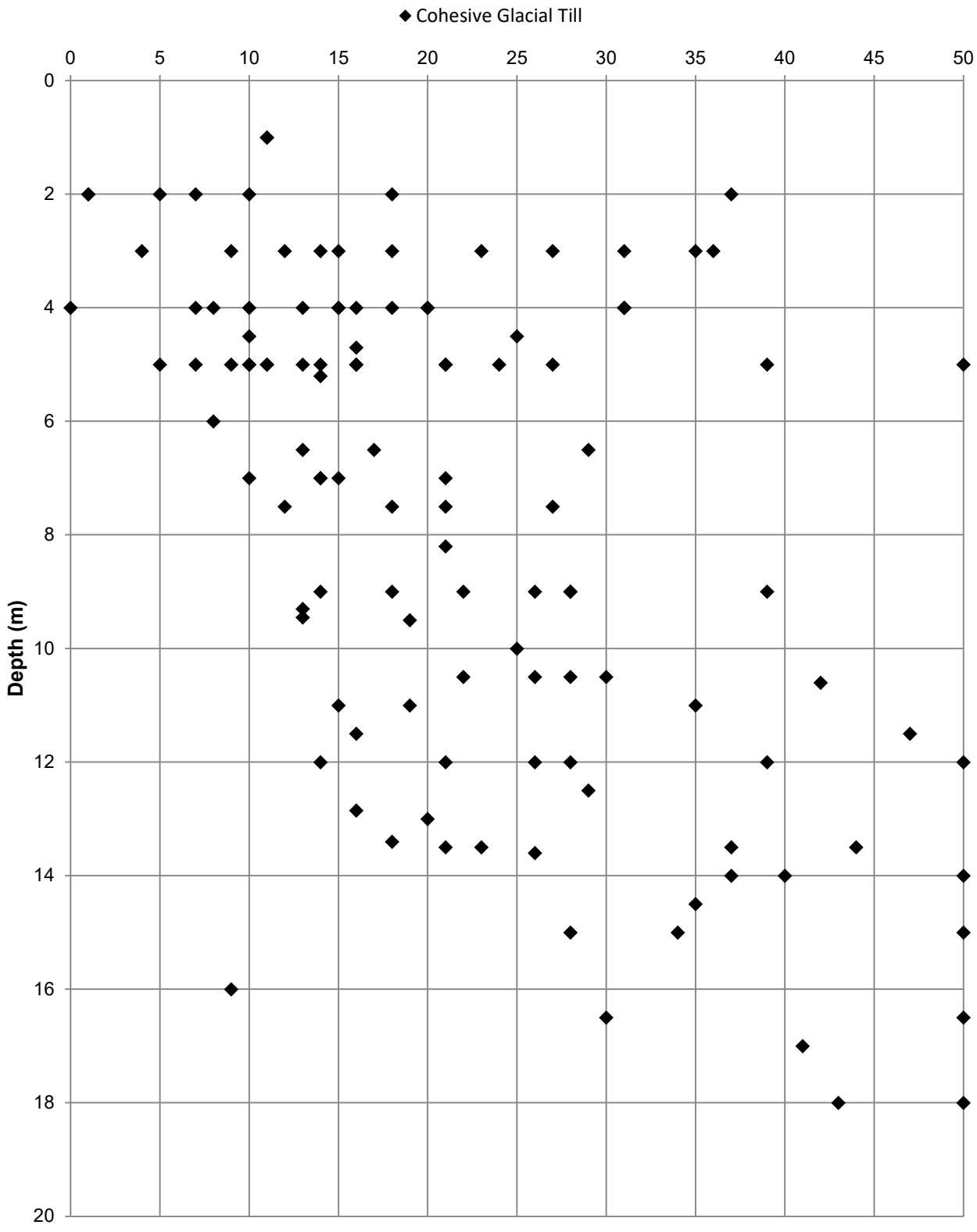
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



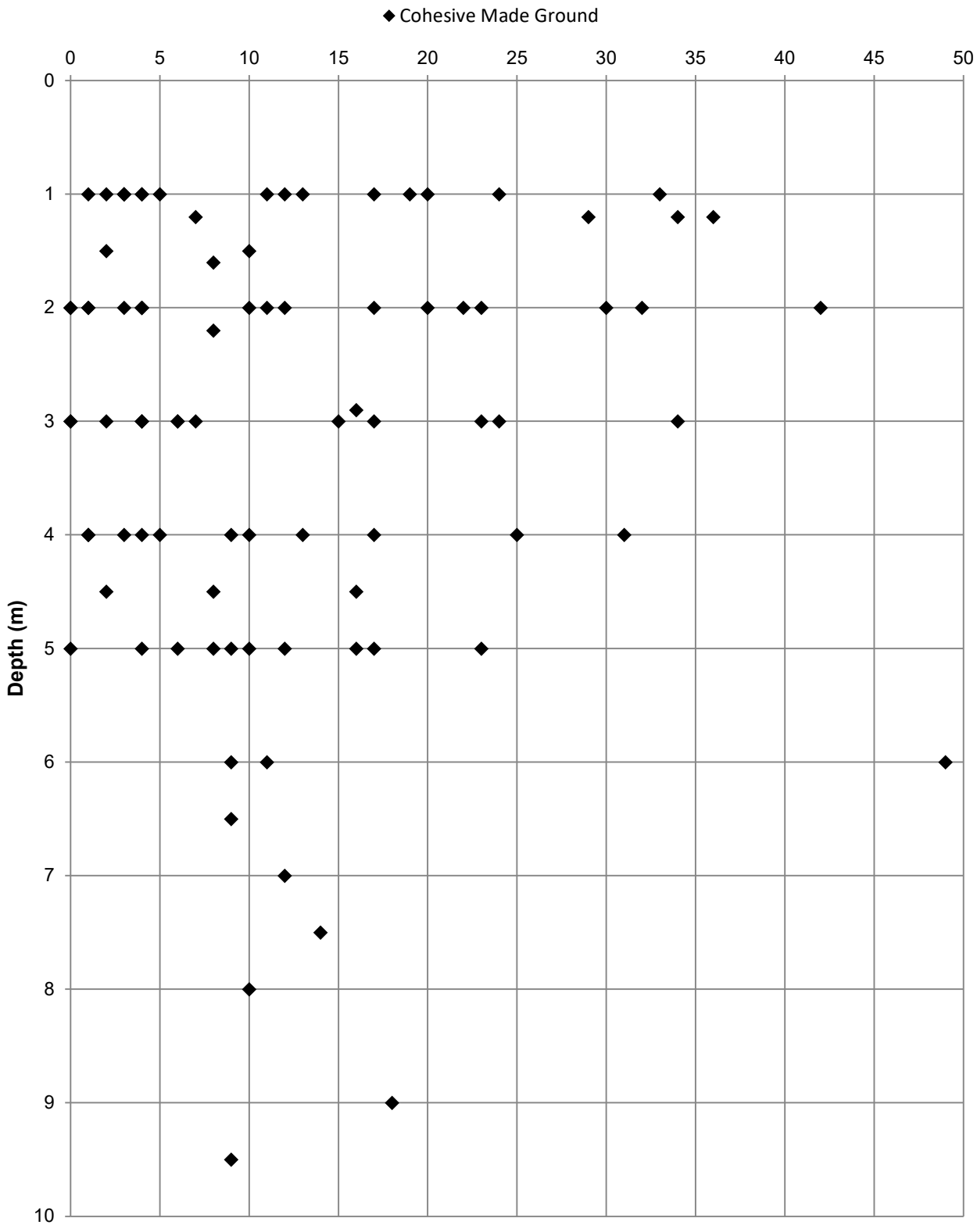
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



Date Reported: **24/08/2022**

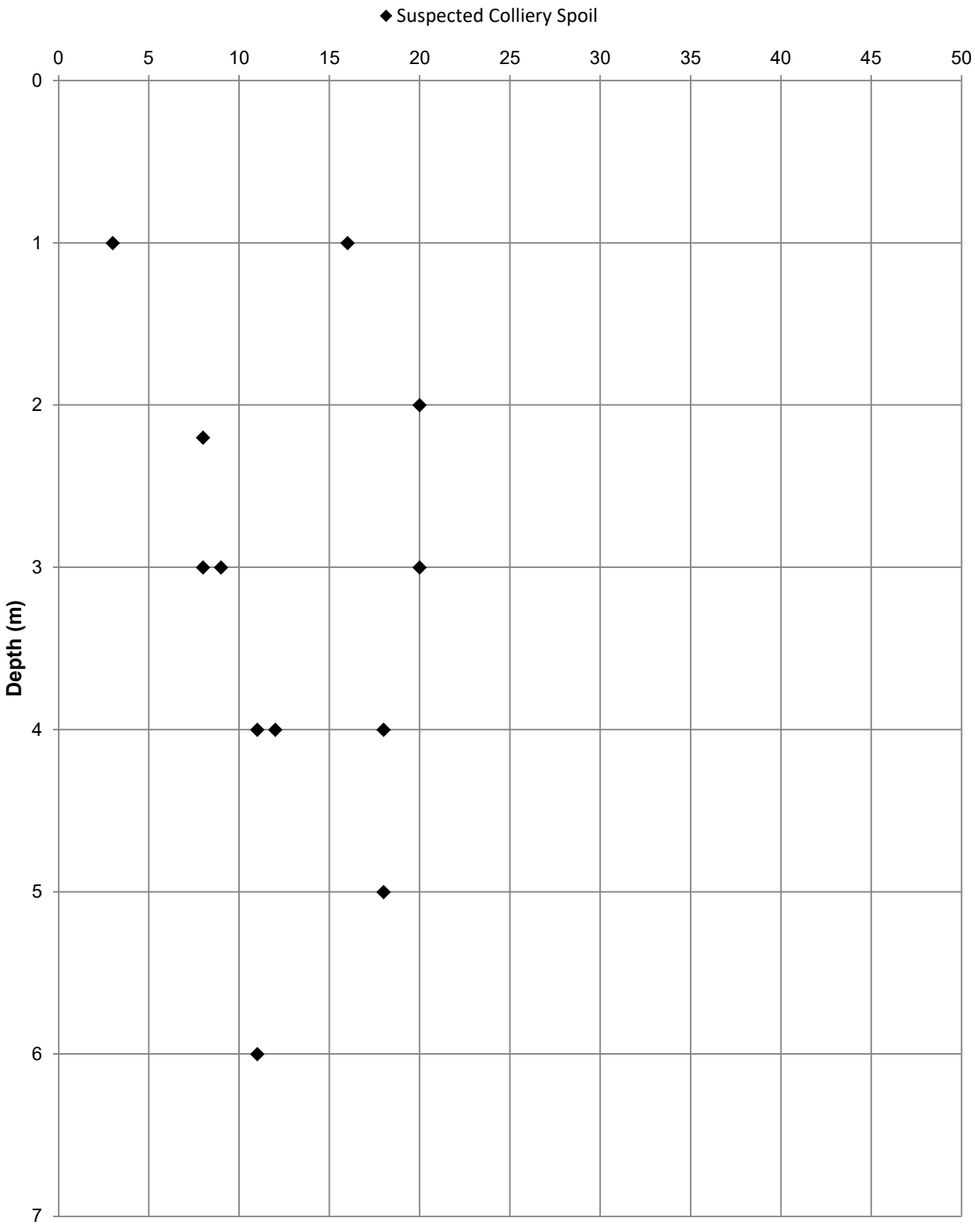
Data Status: **FINAL**

SPT N Value v Depth

Borehole No.

ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



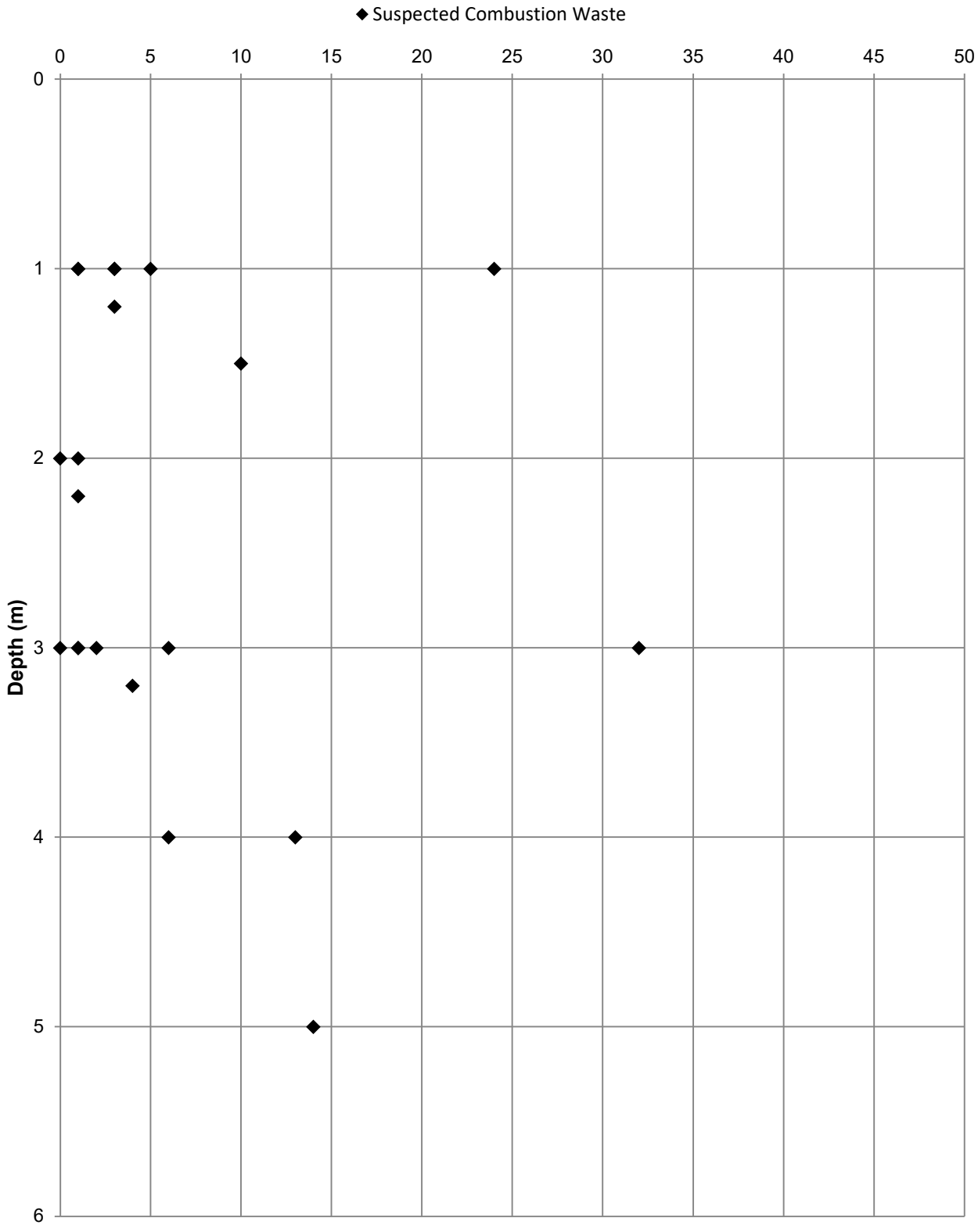
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



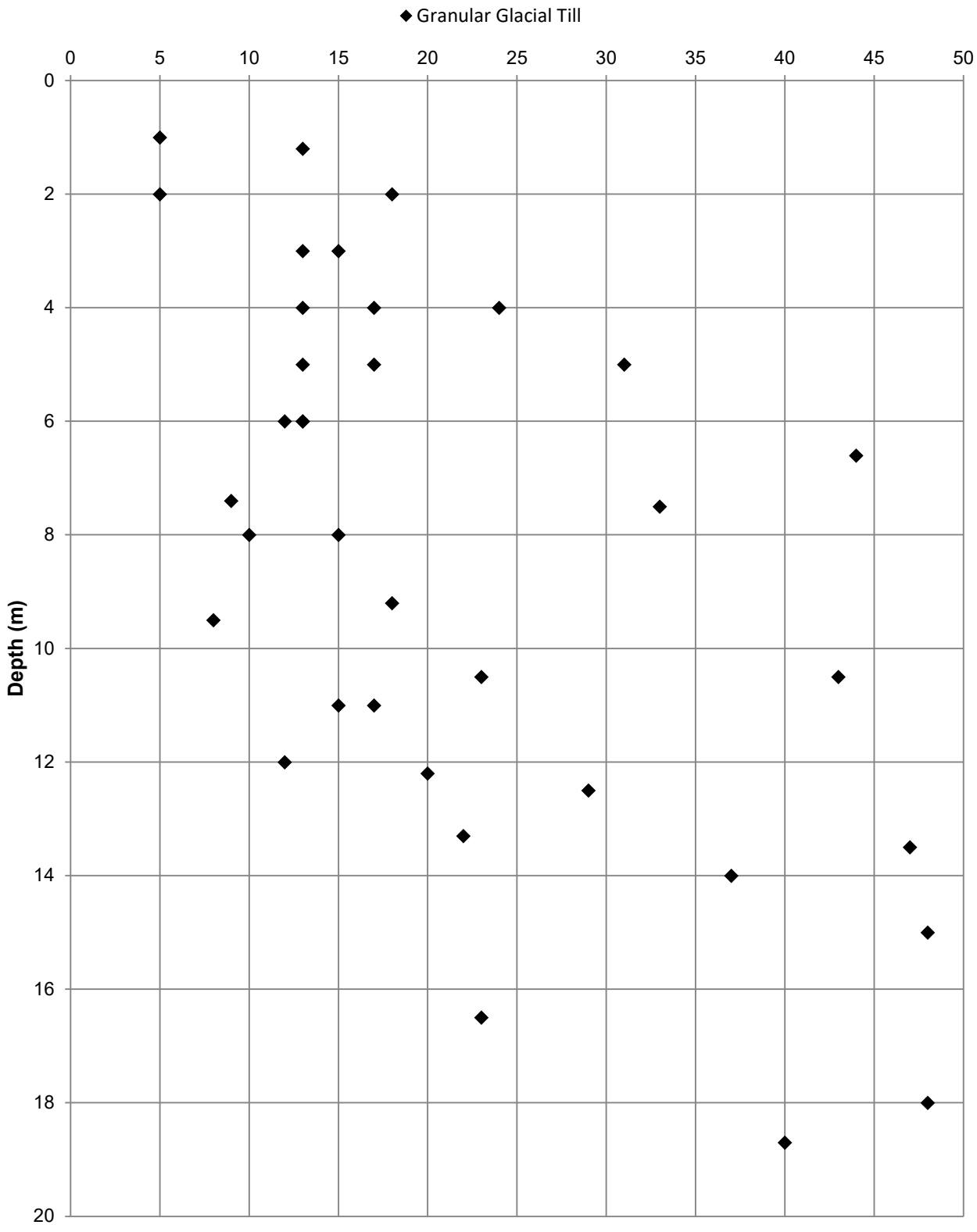
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



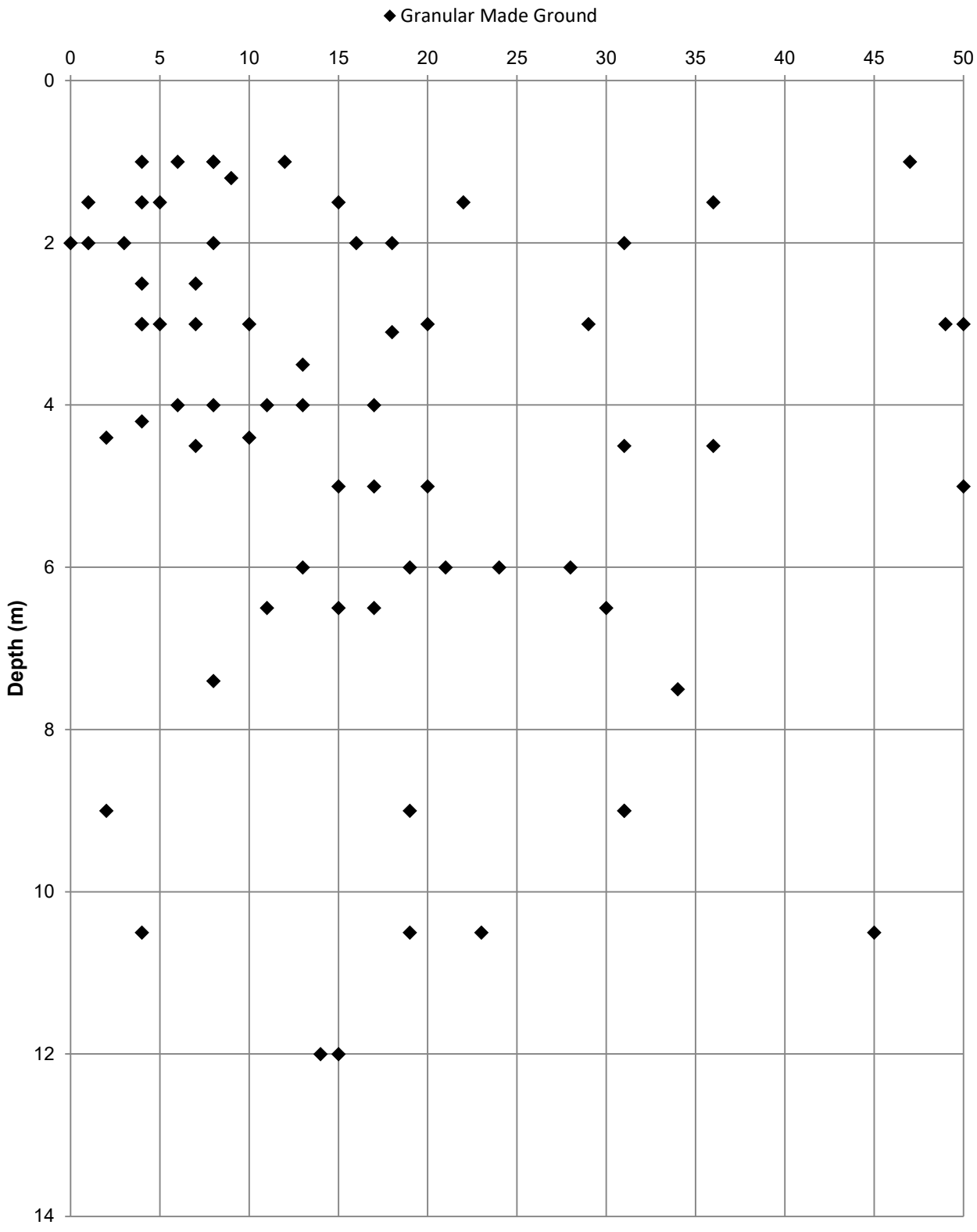
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



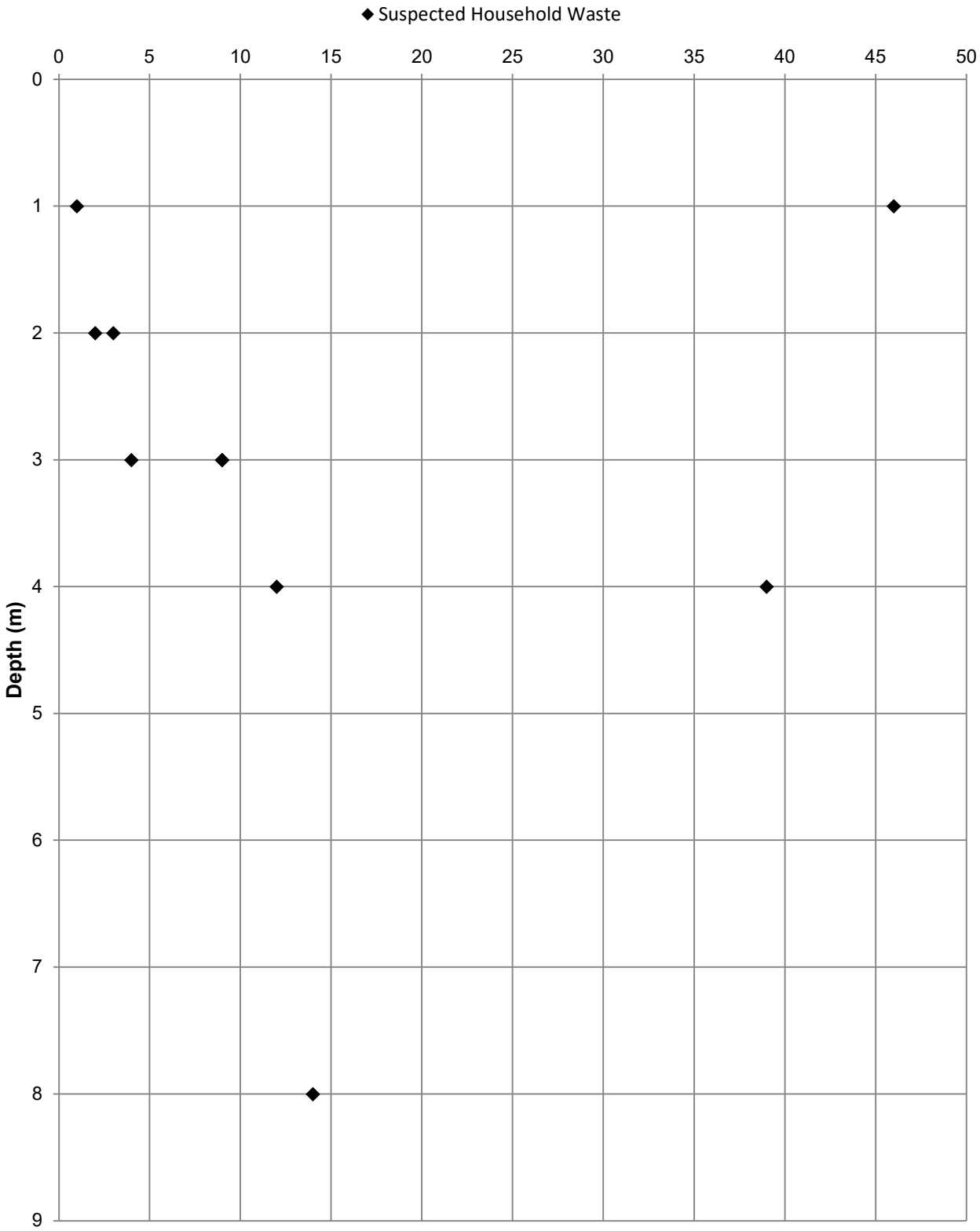
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



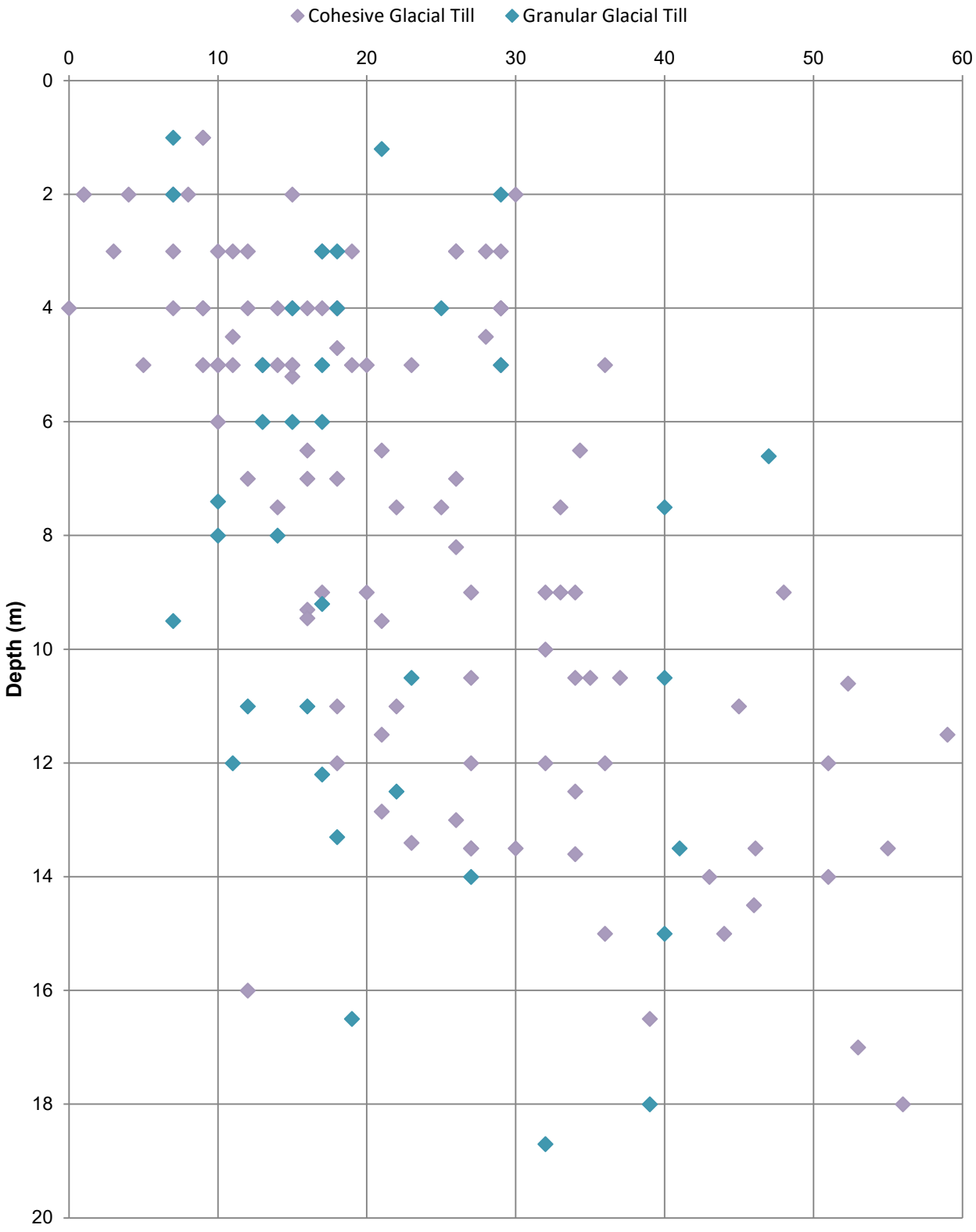
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N60/N160 Value vs Depth

Borehole No. ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



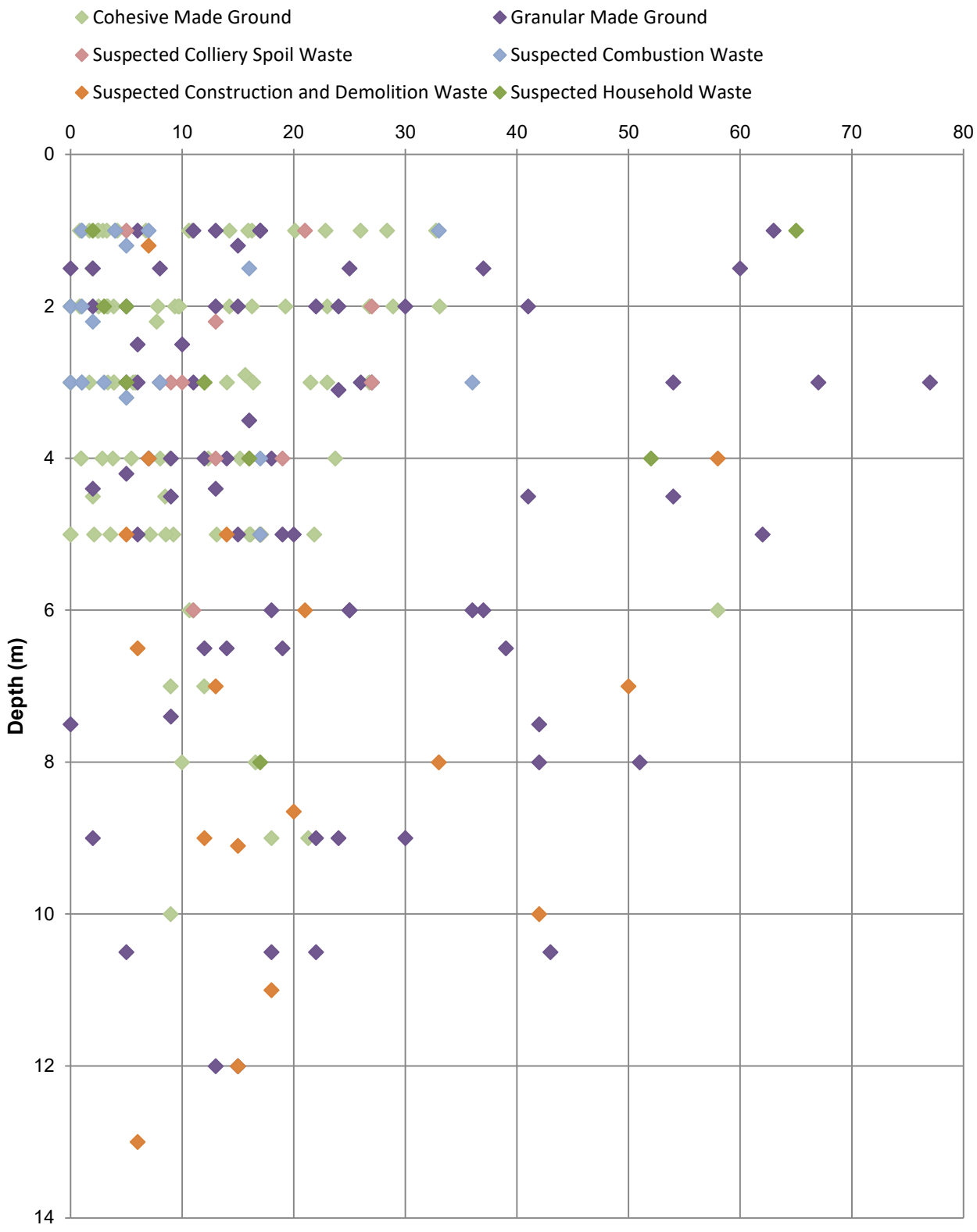
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N60/N160 Value vs Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



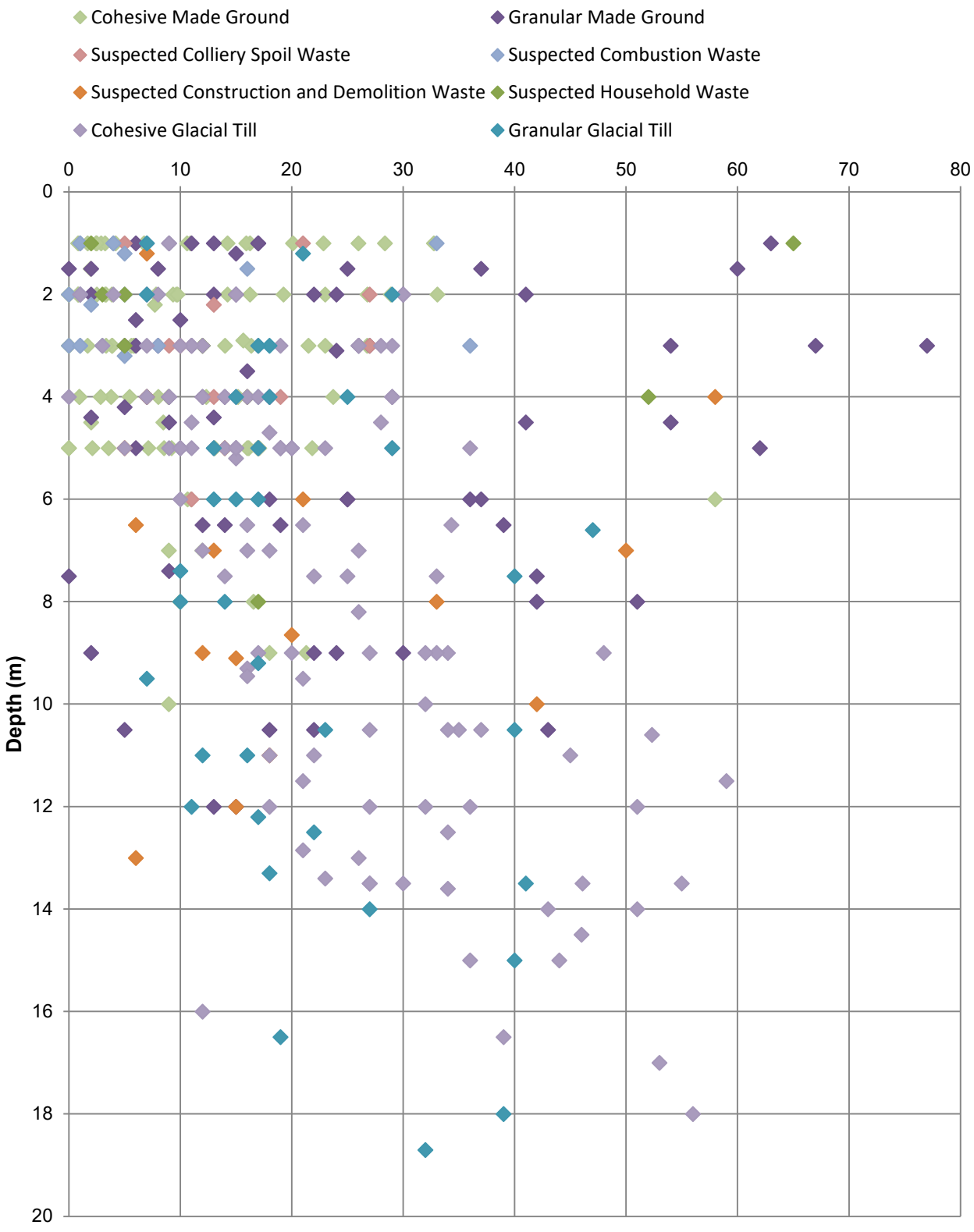
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N60/N160 Value vs Depth

Borehole No. ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



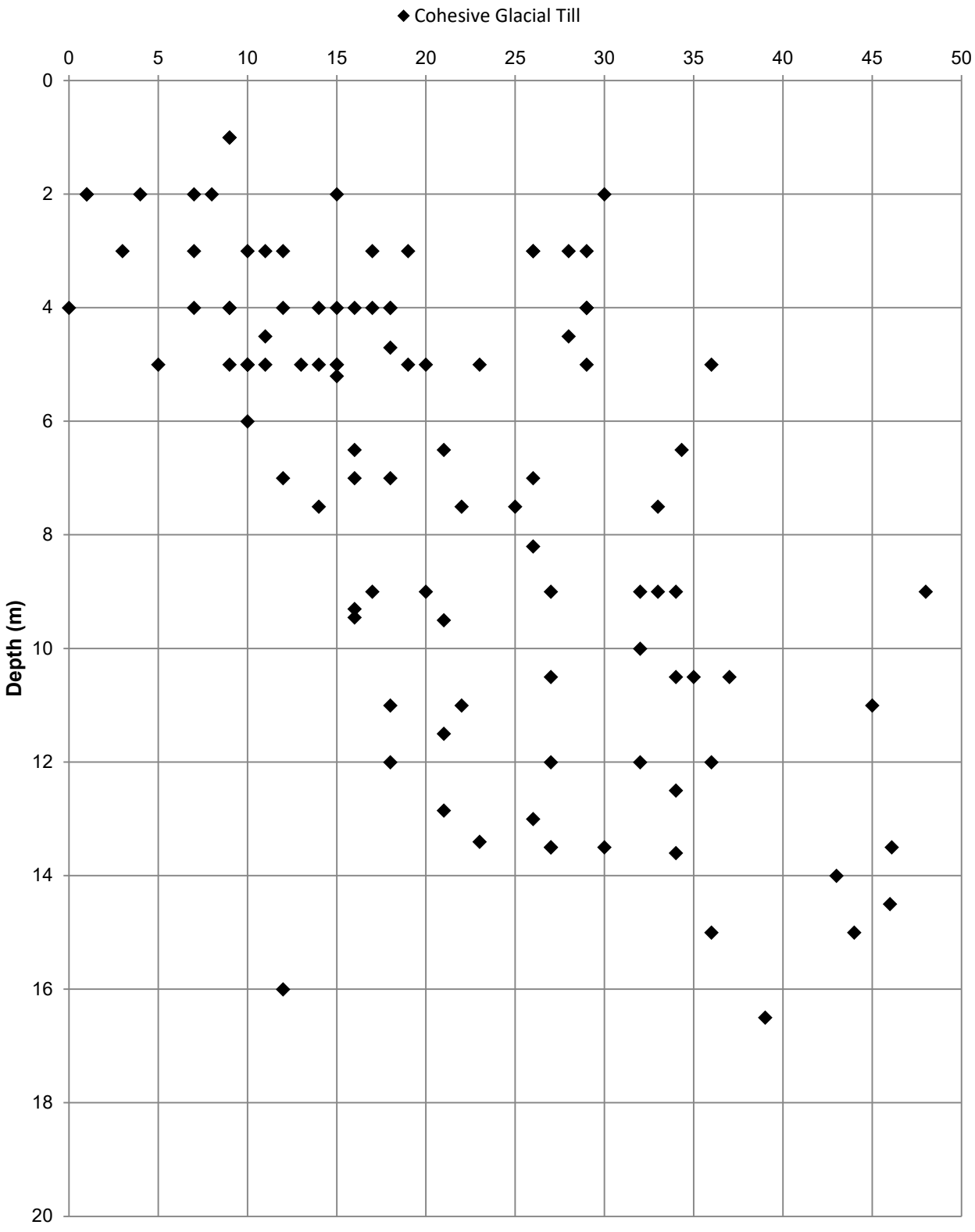
Date Reported: **24/08/2022**

Data Status: **Final**

SPT N60 Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



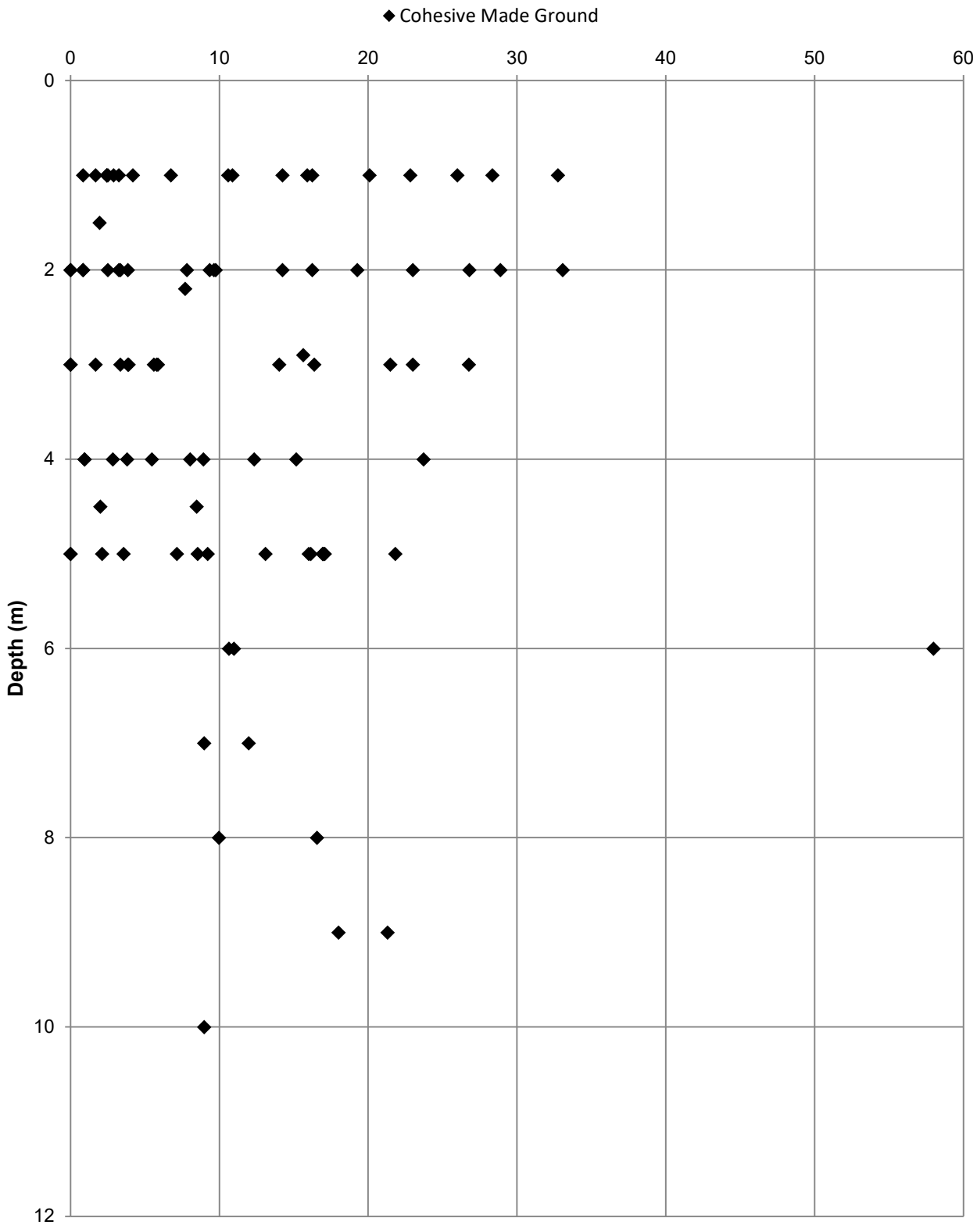
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N60 Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



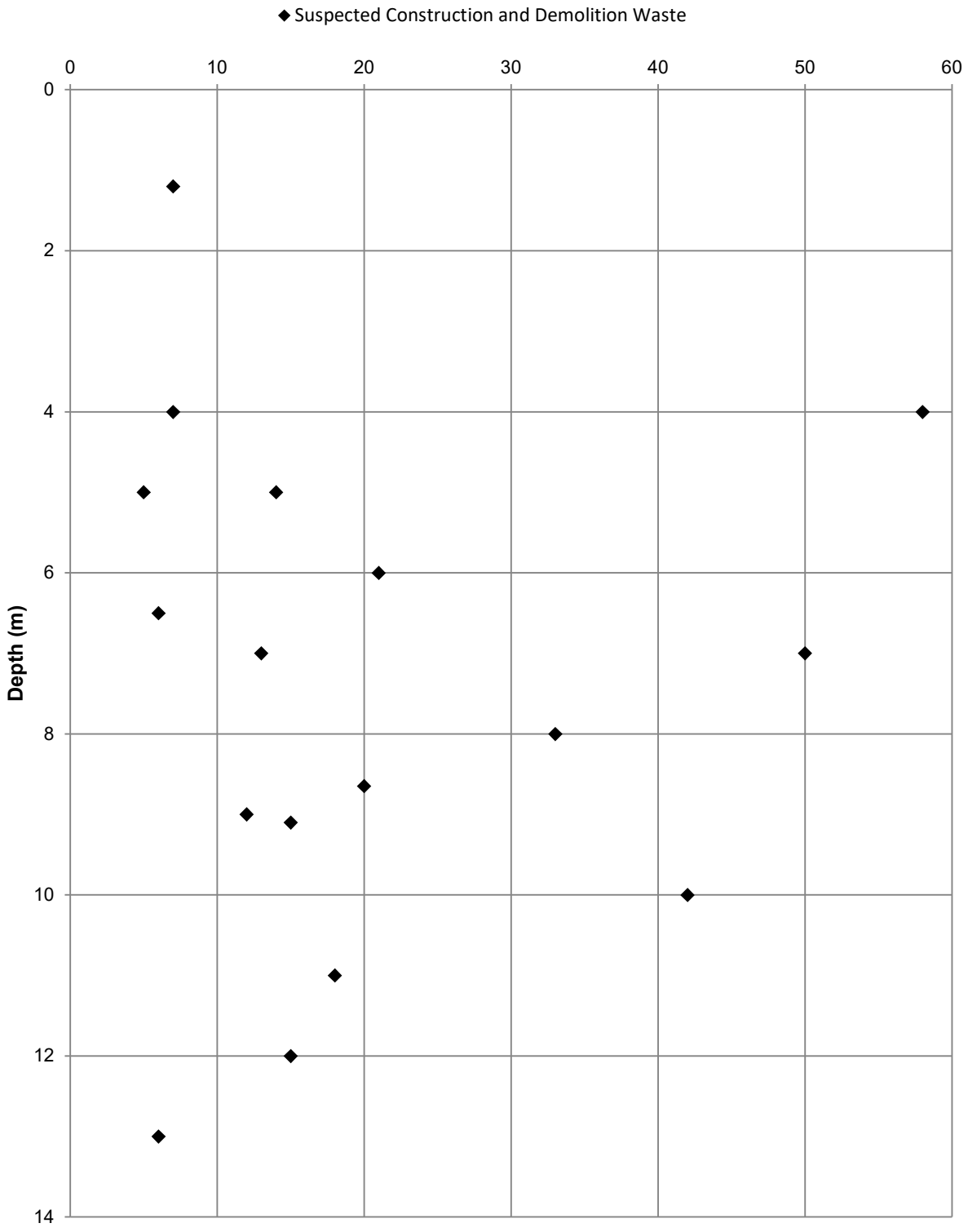
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N160 Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



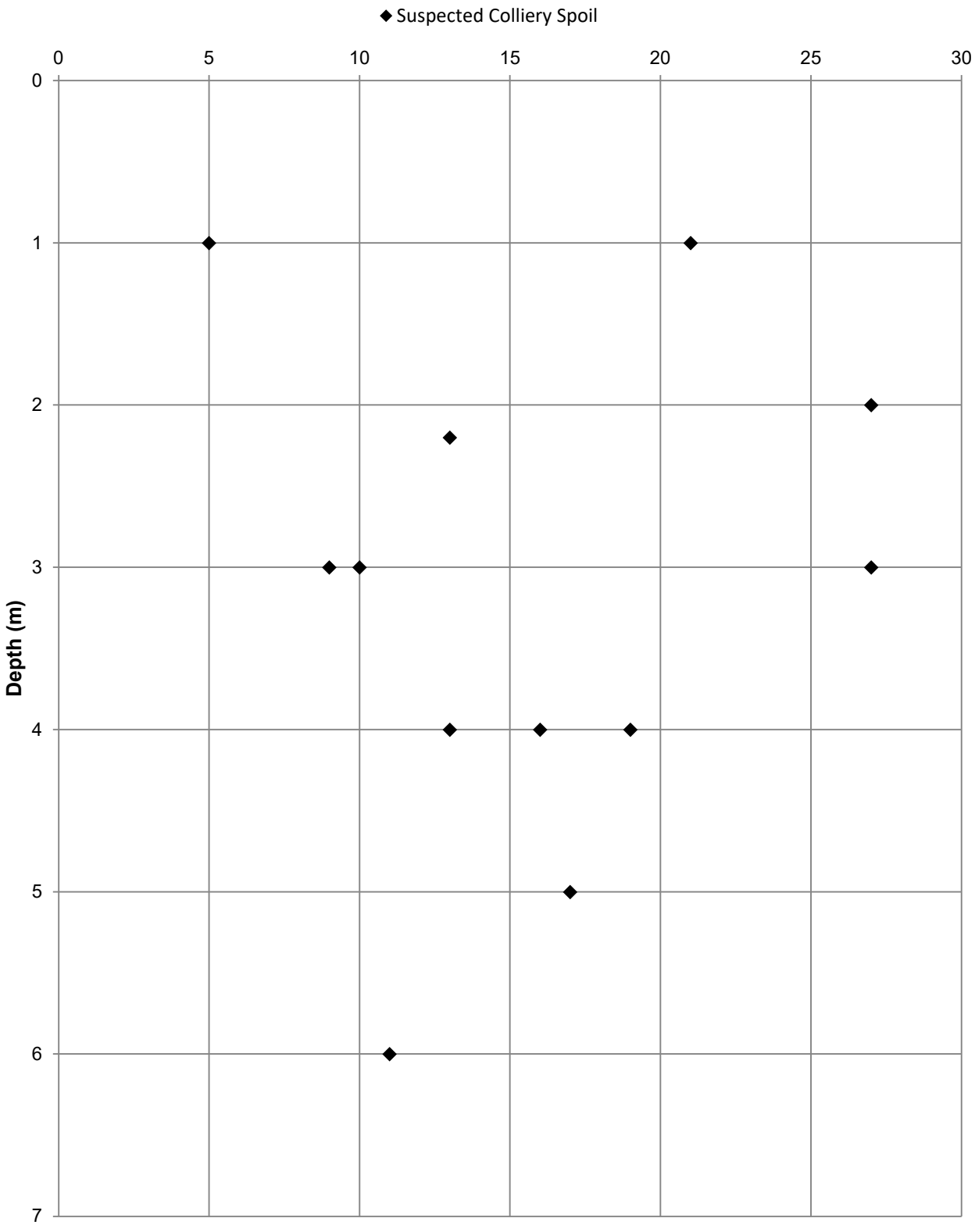
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N160 Value v Depth

Borehole No.: ALL

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



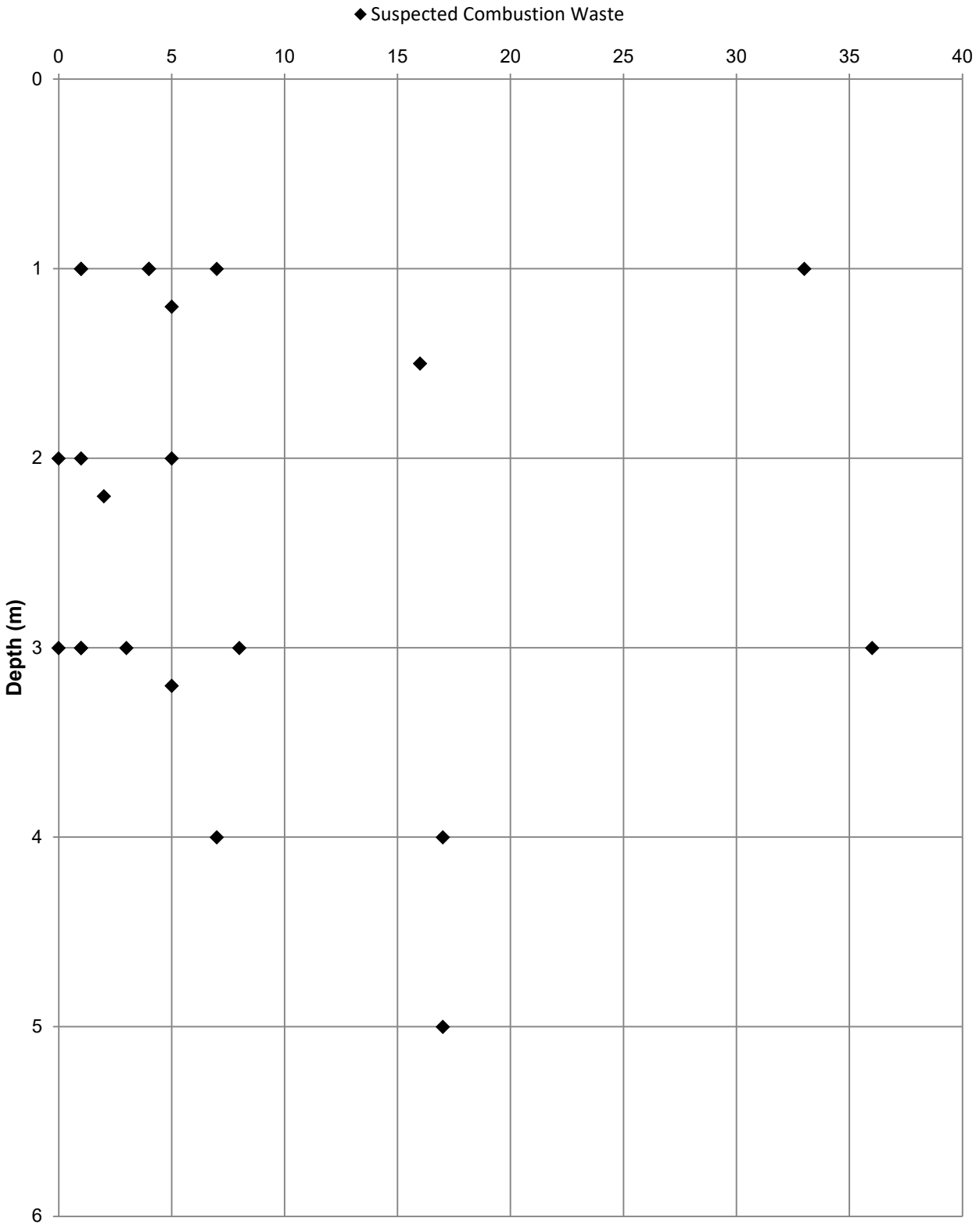
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N160 Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



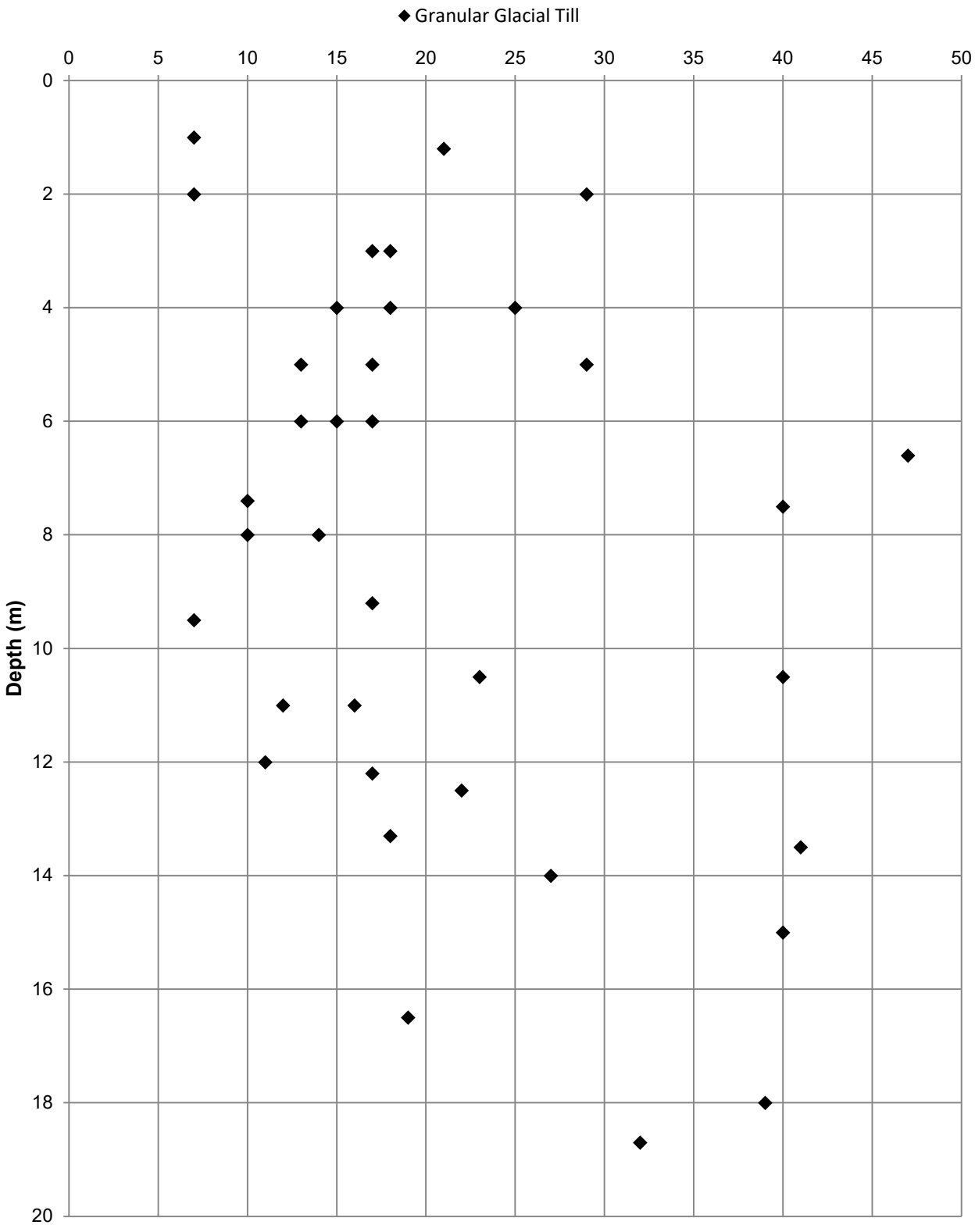
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N160 Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



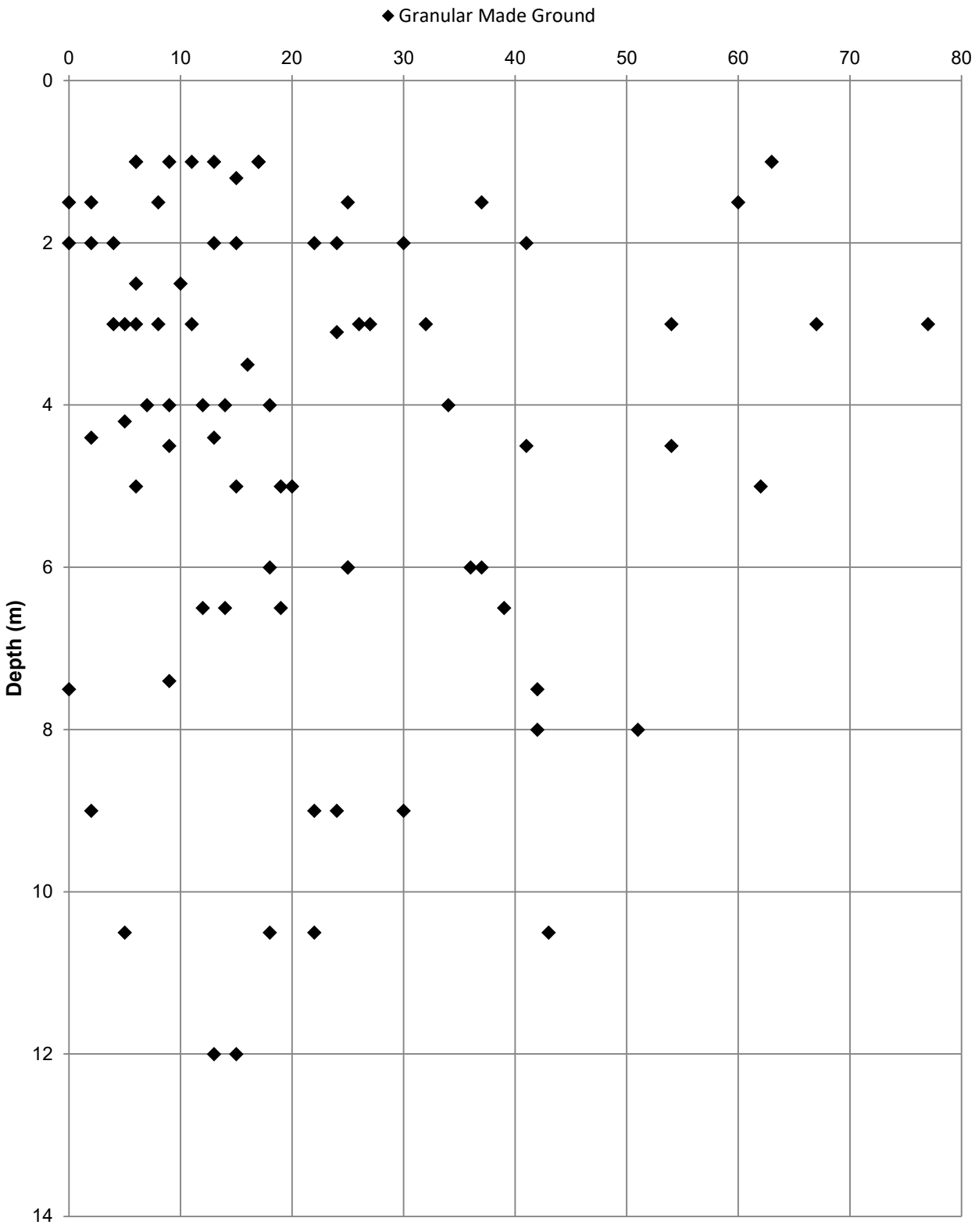
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N160 Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



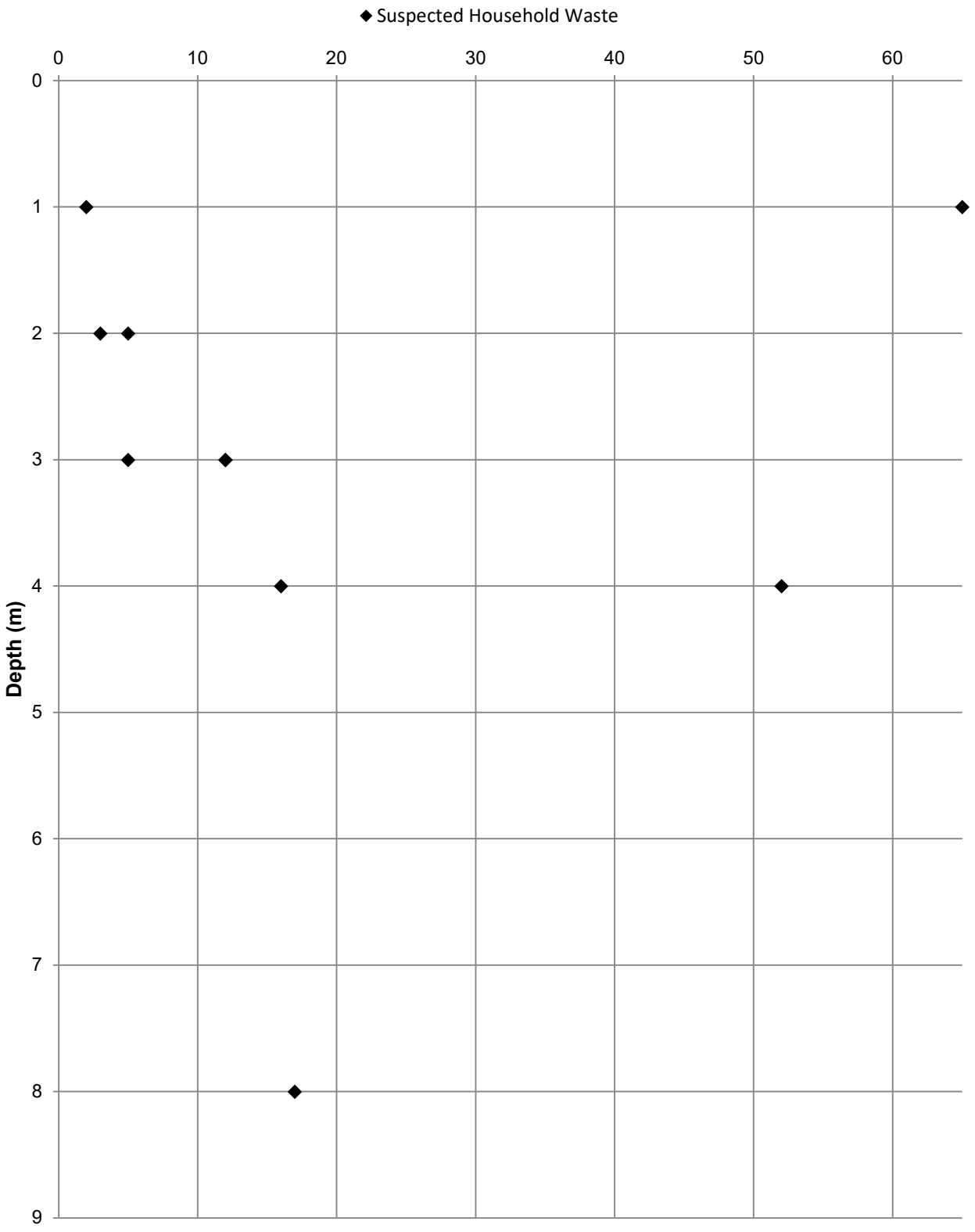
Date Reported: **24/08/2022**

Data Status: **FINAL**

SPT N Value v Depth

Borehole No.: All

Project ID: **LD10385**	Project Title: **Ten Acres Lane**	Final Depth: **N/A**
Client: **NUVU Developments Ltd**	Location: **Newton Heath**	Date Drilled: **N/A**



Date Reported: **24/08/2022**

Data Status: **FINAL**

A P P E N D I X P

Calibration Certificates

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR2152
Test Date:	10/09/2021
Report Date:	10/09/2021
File Name:	AR2152..spt
Test Operator:	JL

Instrumented Rod Data

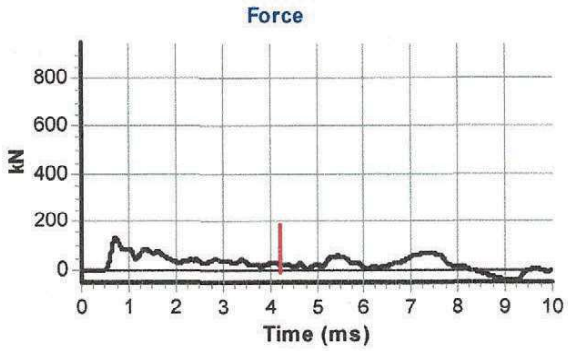
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	7080
Accelerometer No.2:	11609

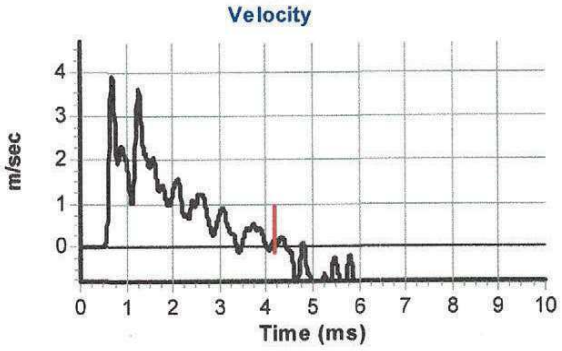
SPT Hammer Information

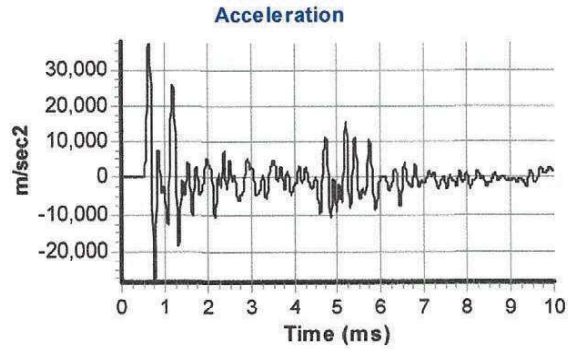
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

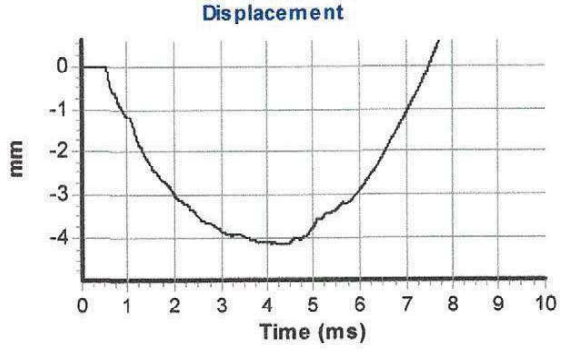
Comments / Location

GEOTRON - 77196









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	307

Energy Ratio E_r (%): **65**

Signed: J.LOCK
Title: FITTER

The recommended calibration interval is 12 months

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR3710
Test Date:	16/07/2021
Report Date:	16/07/2021
File Name:	AR3710.spt
Test Operator:	JL

Instrumented Rod Data

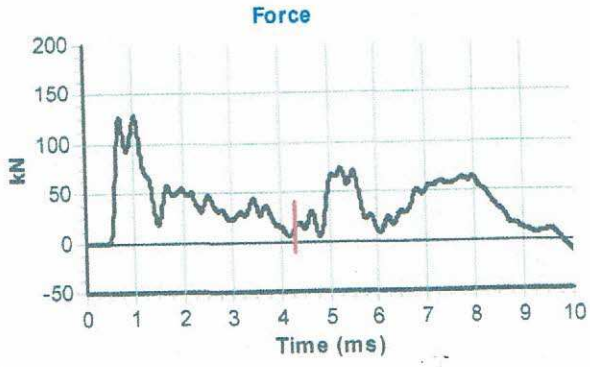
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	7080
Accelerometer No.2:	11609

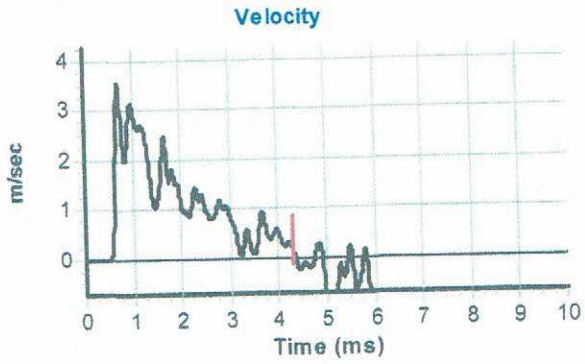
SPT Hammer Information

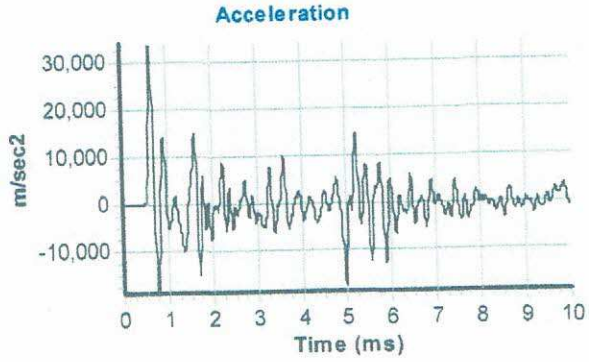
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

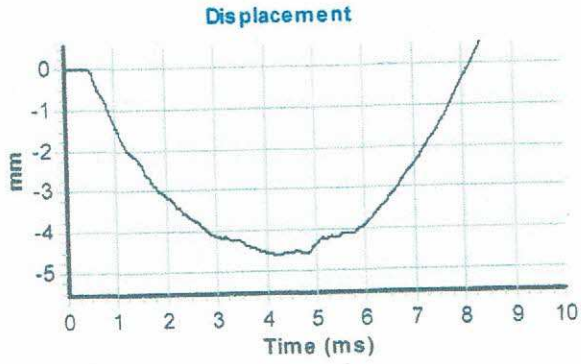
Comments / Location

GEOTRON / 76464









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	321

Energy Ratio E_r (%): **68**

Signed: C.McCLUSKEY

Title: FITTER

The recommended calibration interval is 12 months

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CERTIFICATE OF CALIBRATION

Issued By Pullman Instruments (UK) Ltd.

Date of Issue 14 October 2019

Certificate Number
1455564

Approved Signatory

Pullman Instruments (UK) Ltd.
Chatsworth House,
Chatsworth Terrace,
Harrogate, HG1 5HT
Tel 01423 720360 Email info@pullman.co.uk

☐ J.Stacey ☐ M.Collins ☐ C.Johnson ☐ A.J.Cox ☒ M. Conboy

Customer : WARDELL ARMSTRONG LLP
36 PARK ROW, LEEDS

Date Received : 09 October 2019

Instrument :

System ID :	DR2040	Job Number :	458674-1
Description :	Shear Vane Tester	Ref. Number :	DR2040
Manufacturer :	PILCON	Site :	
Model Number :	DR2526	Location :	
Serial Number :	DR2040		
Procedure Version :	19333v1		

Environmental Conditions

Temperature : 20°C +/- 2°C
Relative Humidity : 50% +/- 15%
Mains Voltage : 230V +/- 20V
Mains Frequency : 50Hz +/- 1Hz

Comments

No calibration adjustments or repairs were made to unit.
Measurements traceable to national standards.
Unit tested to manufacturers specification.

Traceability Information

Instrument description	*Serial number*	*Certificate number*	*Cal. Date*	*Cal. Period*
CM38 - NORBAR 43228 Torque Tester	60556	0256/224255	08/01/2019	52
CM183 - NORBAR 25Nm Transducer	103925	0256/224253	10/01/2019	52

Calibrated By : G.Bance **Date of Calibration :** 14 October 2019

This certificate provides traceability of measurement to recognised National Standards, and to the units of measurement realised at the National Physical Laboratory or other recognised National Standards laboratories.
Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory.
This certificate complies with the requirements of BS EN ISO 10012:2003.

CERTIFICATE OF CALIBRATION

Certificate Number
1455564

AS FOUND RESULTS

Test Title	Tolerance	Applied Value	Reading	Pass/Fail

Impact Shear Vane Tester.

Reading on Instrument	**Amount Of Applied Torque (Nm)**
4	*0.3*
8	*1.1*
12	*1.6*
16	*2.2*
20	*2.8*
24	*3.2*
28	*3.6*

end of test

Uncertainties

Low Torque	+/- 0.02% rdg (0-25N)

ARCHWAY
ENGINEERING (U.K) LTD

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR2462
Test Date:	16/09/2020
Report Date:	16/09/2020
File Name:	AR2462.spt
Test Operator:	JL

Instrumented Rod Data

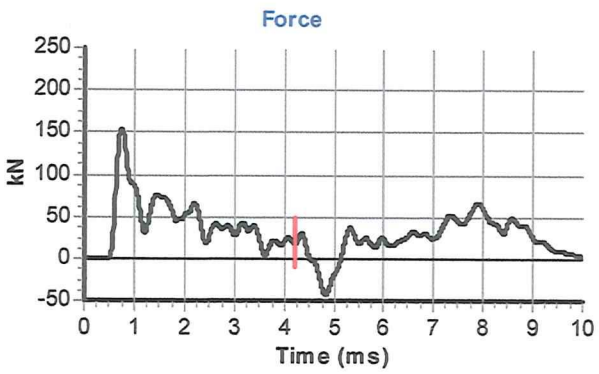
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.3
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	11609

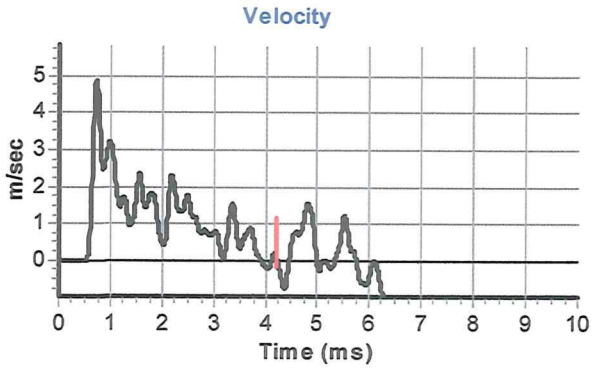
SPT Hammer Information

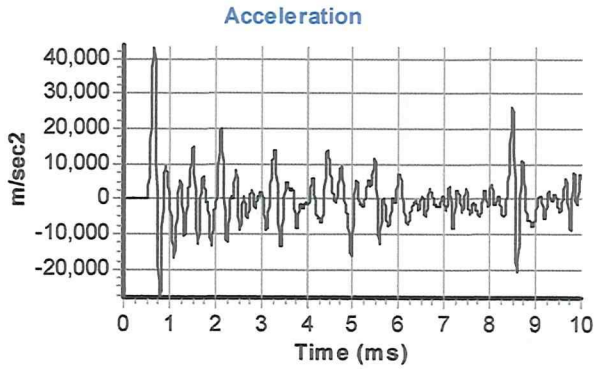
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

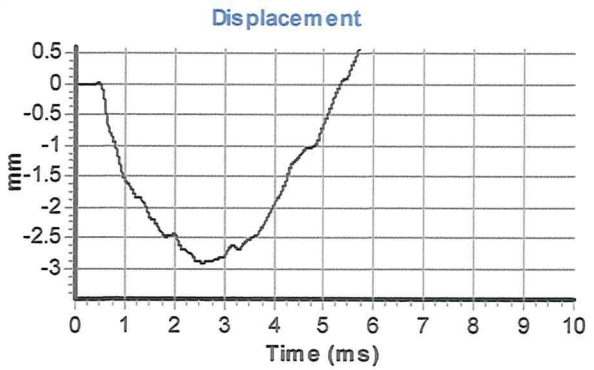
Comments / Location

GEOTRON









Calculations

Area of Rod A (mm2):	944
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	317

Energy Ratio E_r (%): **67**

Signed: J.LOCK

Title: FITTER

The recommended calibration interval is 12 months

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR95
Test Date:	07/08/2020
Report Date:	07/08/2020
File Name:	AR95.spt
Test Operator:	CM

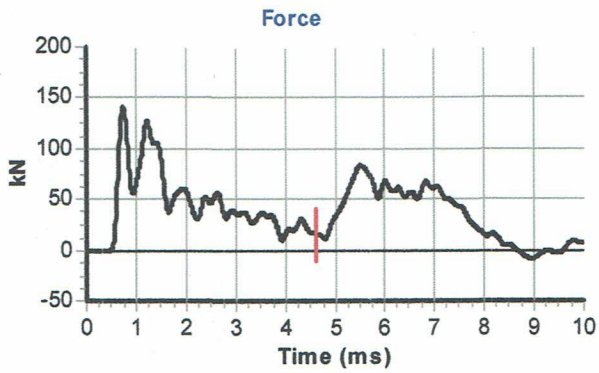
Instrumented Rod Data

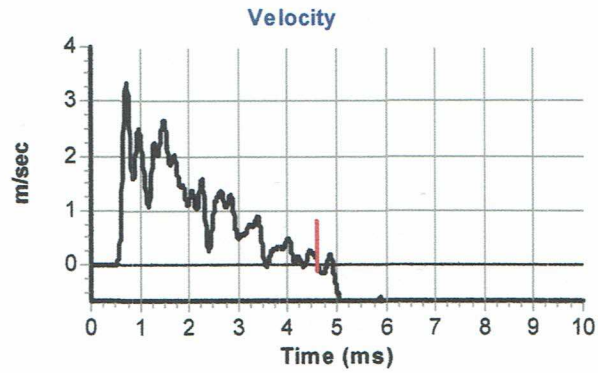
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.6
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	7080
Accelerometer No.2:	11609

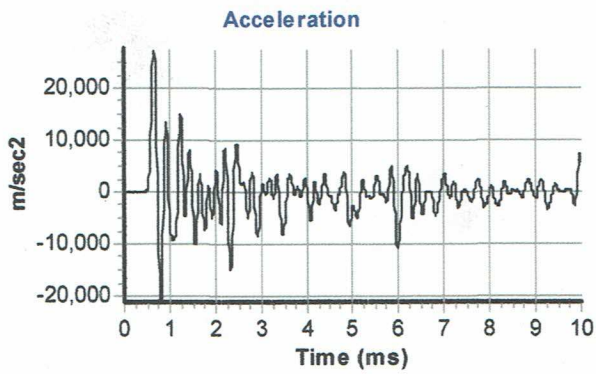
SPT Hammer Information

Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

Comments / Location
GEOTRON UK/71750







Calculations

Area of Rod A (mm2):	983
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	316

Energy Ratio E_r (%): **67**

Signed: C.McCLUSKEY
Title: FITTER

The recommended calibration interval is 12 months

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	DART511
Test Date:	21/01/2022
Report Date:	21/01/2022
File Name:	DART511.spt
Test Operator:	MT

Instrumented Rod Data

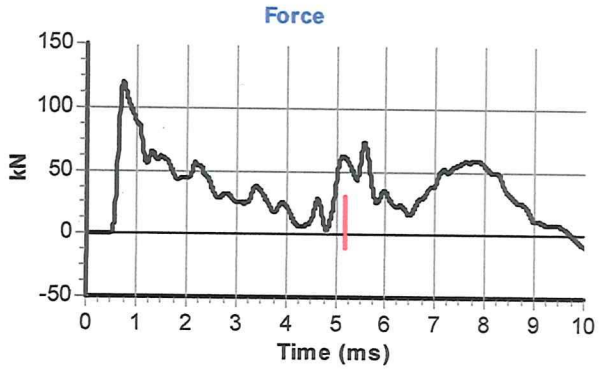
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	7080
Accelerometer No.2:	11609

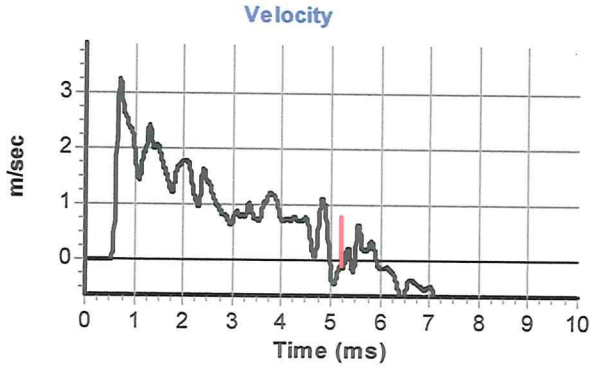
SPT Hammer Information

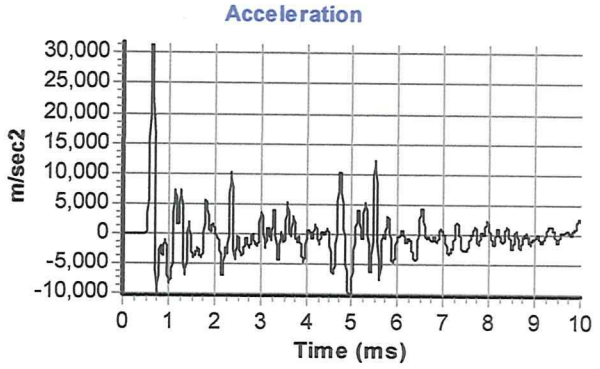
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

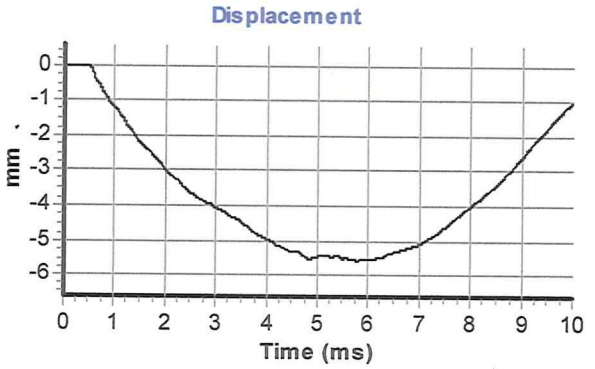
Comments / Location

GEOTRON UK LTD - 78859









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	319

Energy Ratio E_r (%): **67**

Signed: M.TONER

Title: TRAINEE FITTER

The recommended calibration interval is 12 months

J. Locke Fitter

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TEST DATE AND CONDITIONS		
Date	15/02/2022	
Atmospheric Pressure	984	mB
Ambient Temperature	21.1	°C
Environics Serial No.	5089	

GAS DATA LTD
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711

GAS DATA
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GFM436 Final Inspection & Calibration Check Certificate

Customer	Wardell Armstrong LLP
Certificate Number	123016
Order Number	330347

Serial Number	12237
Software Version	G436-00.0027/0009

Recalibration DUE Date
15/02/23

Instrument Checks				
Keyboard	✓		Display Contrast	✓
Pump Flow In	500	*Accept > 200 cc/min*	Pump Flow @ -200mB	300 *Accept > 200 cc/min*
Clock Set / Running	✓		Labels Fitted	✓

Gas Checks						
	CH_4		CO_2		O_2	
Sensor	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %
	60.8 *Accept ±3.0*	*60*	40.5 *Accept ±3.0*	*40*	20.9 *Accept ±0.5*	*20.9*
	5 *Accept ±0.3*	*5*	5 *Accept ±0.3*	*5*	6 *Accept ±0.3*	*6*
Zero Reading 100% N2	0 *Accept ±0.0*	*0*	0 *Accept ±0.0*	*0*	0 *Accept ±0.1*	*0*

Optional Gas Checks						
Applied Gas & Range		Concentration Tested @ (ppm)	Instrument Readings *(ppm)*			
Gas Type	Range *(ppm)*		Zero Reading		Instrument Gas Reading	
H2S	5000	*1500*	0	*Accept ±0.0*	1500	*Accept ±5.0*
CO	2000	*1000*	0	*Accept ±0.0*	1002	*Accept ±5.0*
Hexane	*2.0%*	2.0%	0	*Accept ±0.0*	1.99	*Accept ±10.0*

Cross Gas Effects									
Applied Gas *(ppm)*		Instrument Readings *(ppm)*							
Gas Type	Concentration	Toxic 1:	H2S	Toxic 2:	CO	Toxic 3:	HEX		
H2S	*1500*	1500		0		0			
CO	*1000*	40		1002		0			
Hexane	*2.0%*	0		0		1.99			

Pressure Checks			
Atmospheric Pressure [AP] *(mB)*			
Current Atmospheric Pressure (mB)		Instrument Atmospheric Pressure Reading (mB)	
AP Open Ports		984	*Accept ±2.0*
AP Port (Internal)	*+800 mB*	800	*Accept ±5.0*
	+1200mb	1200	*Accept ±5.0*

Flow Checks					
Borehole Flow			Differential Pressure		
Applied Reading *(l/h)*	Instrument Reading *(l/h)*		Applied Pressure *(Pa)*	Instrument Reading *(Pa)*	
-30	-30.3	*Accept ±3.0*	-421	-431	*Accept ±50*
-3	-3	*Accept ±1.0*	-19	-19	*Accept ±6.0*
0	0	*Accept ±0.0*	0	0	*Accept ±0.5*
3	3	*Accept ±0.5*	16	16	*Accept ±3.0*
30	30	*Accept ±3.0*	360	358	*Accept ±50*
60	59.8	*Accept ±6.0*	1092	1088	*Accept ±130*
90	90.9	*Accept ±9.0*	2141	>>>>>	*Accept ±250*

Temperature Checks		
Calibration Temperature	Instrument Temperature Reading ^{0}C	
Applied Temperature ^{0}C		
-10	-10	*Accept ±2.0*
0	0	*Accept ±1.0*
30	30	*Accept ±1.0*
60	60	*Accept ±1.0*
100	100	*Accept ±1.0*

Technician:	Date Tested:
Jack Rutland	*16/02/2022*

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to BS EN ISO9001:2015, BS EN ISO14001:2015, BS EN ISO45001:2018.

TEST DATE AND CONDITIONS		
Date	15.2.22	
Atmospheric Pressure	984	mB
Ambient Temperature	21.1	°C
Environics Serial No.	5089	

GAS DATA LTD
Unit 4
Fairfield Court
Seven Stars Estate
Coventry
CV3 4LJ
UK
+44 (0)24 7630 3311

GAS DATA
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GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
330347	GFM436	12237 9436-27/09	123516

Calibration Technician ..... **Date** 15.2.22

Inspection Technician ..... **Date** 16.2.22

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable (NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All Keys)	P	Leather Case		X
	Backlight	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mB)	n/a	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe - *(new issue)*		✓
	Service Date set to?	15.2.23	Flow Sample Pipe - *(new issue)*		✓
Channel Tests	Data Logging Enabled?	P	Hard Carry Case		✓
	Verify CH4/LEL/Hexane/PID	P	Spares Pot		X
	Verify CO2	P	Allen Key		X
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		✓
	Verify LEL	P	USB Memory stick		X
	Verify 1st Option Gas	N/A	SM V5 Software	Ver 6.05	X
	Verify Atmospheric pressure	P	Internal Filter Pack	Qty	X
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	**Extra Items:**		
	Verify vane anemometer input	P	Sample Tube		
DataBase Checks	Jobcard(s) completed and signed	P			
	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	n/a			
Label Checks	No. of Calibration label fitted	GDC 11360	**Comments:**		
	MCERTS label displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from Sales Order	5000 ppm			
	H2S Range from Cal Cert	5000 ppm			
	Over-range value correct?	P			

TEST DATE AND CONDITIONS		
Date	08/02/2021	
Atmospheric Pressure	988	mB
Ambient Temperature	21.9	°C
Environics Serial No.	5089	

GAS DATA LTD
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711

GFM436 Final Inspection & Calibration Check Certificate

Customer	Wardell Armstrong LLP
Certificate Number	122297
Order Number	327797

Serial Number	12237
Software Version	G436-00.0027/0009

Recalibration DUE Date
08/02/22

Instrument Checks					
Keyboard	✓		Display Contrast	✓	
Pump Flow In	400	*Accept > 200 cc/min*	Pump Flow @ -200mB	250	*Accept > 200 cc/min*
Clock Set / Running	✓		Labels Fitted	✓	

Gas Checks						
Sensor	CH_4		CO_2		O_2	
	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %
	60	*60*	40	*40*	20.9	*20.9*
	Accept ±3.0		*Accept ±3.0*		*Accept ±0.5*	
	5	*5*	5	*5*	6	*6*
	Accept ±0.3		*Accept ±0.3*		*Accept ±0.3*	
Zero Reading 100% N2	0	*0*	0	*0*	0	*0*
	Accept ±0.0		*Accept ±0.0*		*Accept ±0.1*	

Optional Gas Checks						
Applied Gas & Range		Concentration Tested @ (ppm)	Instrument Readings *(ppm)*			
Gas Type	Range *(ppm)*		Zero Reading		Instrument Gas Reading	
H2S	5000	*1500*	0	*Accept ±0.0*	1500	*Accept ±5.0*
CO	2000	*1000*	0	*Accept ±0.0*	1002	*Accept ±5.0*
Hexane	*2.0%*	2.0%	0	*Accept ±0.0*	1.99	*Accept ±10.0*

Cross Gas Effects									
Applied Gas *(ppm)*		Instrument Readings *(ppm)*							
Gas Type	Concentration	Toxic 1:	H2S	Toxic 2:	CO	Toxic 3:	HEX		
H2S	*1500*	1500		0		0			
CO	*1000*	0		1002		0			
Hexane	*2.0%*	0		0		1.99			

Pressure Checks			
Atmospheric Pressure [AP] *(mB)*			
Current Atmospheric Pressure (mB)		Instrument Atmospheric Pressure Reading (mB)	
AP Open Ports		988	*Accept ±2.0*
AP Port (Internal)	*+800 mB*	800	*Accept ±5.0*
	+1200mb	1200	*Accept ±5.0*

Flow Checks					
Borehole Flow			Differential Pressure		
Applied Reading *(l/h)*	Instrument Reading *(l/h)*		Applied Pressure *(Pa)*	Instrument Reading *(Pa)*	
-30	-30.2	*Accept ±3.0*	-548	-560	*Accept ±50*
-3	-3	*Accept ±1.0*	-21	-21	*Accept ±6.0*
0	0	*Accept ±0.0*	0	0	*Accept ±0.5*
3	3	*Accept ±0.5*	17	17	*Accept ±3.0*
30	30	*Accept ±3.0*	392	390	*Accept ±50*
60	60	*Accept ±6.0*	1217	1217	*Accept ±130*
90	90.5	*Accept ±9.0*	2415	2415	*Accept ±250*

Temperature Checks		
Calibration Temperature Applied Temperature ^{0}C	Instrument Temperature Reading ^{0}C	
-10	-10	*Accept ±2.0*
0	0	*Accept ±1.0*
30	30	*Accept ±1.0*
60	60	*Accept ±1.0*
100	100	*Accept ±1.0*

Technician:	Date Tested:
Jack Rutland	*09/02/2021*

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

TEST DATE AND CONDITIONS	
Date	8.2.2021
Atmospheric Pressure	988 mB
Ambient Temp	21.9 °C
Environics Serial No.	5089

GAS DATA LTD
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711

GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
327797	GFM436	12237 9436-27/09	122797

Calibration Technician ..... **Date** 8.2.2021

Inspection Technician ..... **Date** 9-2-21

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable (NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All Keys)	P	Leather Case		✓
	Backlight	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mB)	n/a	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe - *(new issue)*		X
	Service Date set to?	8.2.22	Flow Sample Pipe - *(new issue)*		X
Channel Tests	Data Logging Enabled?	P	Hard Carry Case		✓
	Verify CH4/LEL/Hexane/PID	P	Allen Key		X
	Verify CO2	P	Spares Pot		✓
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		✓
	Verify LEL	P	USB Memory stick		X
	Verify 1st Option Gas	N/A	SM V5 Software	Ver 5.05	X
	Verify Atmospheric pressure	P	Internal Filter Pack	Qty	X
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	**Extra Items:**		
	Verify vane anemometer input	P	Sample Tubes		
DataBase Checks	Jobcard(s) completed and signed	P			
	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	n/a			
Label Checks	No. of Calibration label fitted	GDC 11107	**Comments:**		
	MCERTS label displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from Sales Order	5000 ppm			
	H2S Range from Cal Cert	5000 ppm			
	Over-range value correct?	P			

TEST DATE AND CONDITIONS		
Date	18/02/2020	
Atmospheric Pressure	997	mB
Ambient Temperature	22.6	°C
Environics Serial No.	5089	

GAS DATA LTD
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711

GFM436 Final Inspection & Calibration Check Certificate

Customer	Wardell Armstrong LLP
Certificate Number	121609
Order Number	325219

Serial Number	12237
Software Version	G436-00.0027/0009

Recalibration DUE Date
18/02/21

Instrument Checks					
Keyboard	✓		Display Contrast	✓	
Pump Flow In	500	*Accept > 200 cc/min*	Pump Flow @ -200mB	300	*Accept > 200 cc/min*
Clock Set / Running	✓		Labels Fitted	✓	

Gas Checks						
	CH_4		CO_2		O_2	
	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %	Instrument Gas Readings %	True Gas Value %
Sensor	60	60	40	40	20.9	20.9
	Accept ±3.0		*Accept ±3.0*		*Accept ±0.5*	
	5	5	5	5	6	6
	Accept ±0.3		*Accept ±0.3*		*Accept ±0.3*	
Zero Reading 100% N2	0	0	0	0	0	0
	Accept ±0.0		*Accept ±0.0*		*Accept ±0.1*	

Optional Gas Checks						
Applied Gas & Range		Concentration Tested @ (ppm)	Instrument Readings *(ppm)*			
			Zero Reading		Instrument Gas Reading	
Gas Type	Range *(ppm)*					
H2S	5000	*1500*	0	*Accept ±0.0*	1500	*Accept ±5.0*
CO	2000	*1000*	0	*Accept ±0.0*	996	*Accept ±5.0*
Hexane	*2.0%*	2.0%	0	*Accept ±0.0*	1.99	*Accept ±10.0*

Cross Gas Effects									
Applied Gas *(ppm)*		Instrument Readings *(ppm)*							
Gas Type	Concentration	Toxic 1:	H2S	Toxic 2:	CO	Toxic 3:	HEX		
H2S	*1500*	1500		0		0			
CO	*1000*	50		996		0			
Hexane	*2.0%*	0		0		1.99			

Pressure Checks			
Atmospheric Pressure [AP] *(mB)*			
Current Atmospheric Pressure (mB)		Instrument Atmospheric Pressure Reading (mB)	
AP Open Ports		997	*Accept ±2.0*
AP Port (Internal)	*+800 mB*	800	*Accept ±5.0*
	+1200mb	1200	*Accept ±5.0*

Flow Checks					
Borehole Flow			Differential Pressure		
Applied Reading *(l/h)*	Instrument Reading *(l/h)*		Applied Pressure *(Pa)*	Instrument Reading *(Pa)*	
-30	-30	*Accept ±3.0*	-436	-436	*Accept ±50*
-3	-3	*Accept ±1.0*	-19	-20	*Accept ±6.0*
0	0	*Accept ±0.0*	0	0	*Accept ±0.5*
3	3	*Accept ±0.5*	17	17	*Accept ±3.0*
30	30	*Accept ±3.0*	384	384	*Accept ±50*
60	60	*Accept ±6.0*	1182	1179	*Accept ±130*
90	90.6	*Accept ±9.0*	2358	>>>>>	*Accept ±250*

Temperature Checks		
Calibration Temperature Applied Temperature °C	Instrument Temperature Reading °C	
-10	-10	*Accept ±2.0*
0	0	*Accept ±1.0*
30	30	*Accept ±1.0*
60	60	*Accept ±1.0*
100	100	*Accept ±1.0*

Technician:	Date Tested:
Jack Rutland	*19/02/2020*

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

TEST DATE AND CONDITIONS	
Date	18.2.20
Atmospheric Pressure	997 mB
Ambient Temp	22.6 °C
Environics Serial No.	5059

GAS DATA LTD
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LJ
Tel 02476303311 Fax 02476307711

GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
323219	GFM436	12237 G436-27/09	121609

Calibration Technician ..... **Date** 18.2.20

Inspection Technician ..... **Date** 19.2.20

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable (NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All Keys)	P	Leather Case		✓
	Backlight	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mB)	n/a	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe - *(new issue)*		✓
	Service Date set to?	18.2.21	Flow Sample Pipe - *(new issue)*		✓
Channel Tests	Data Logging Enabled?	P	Hard Carry Case		✓
	Verify CH4/LEL/Hexane/PID	P	Allen Key		X
	Verify CO2	P	Spares Pot		✓
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		✓
	Verify LEL	P	USB Memory stick		✓
	Verify 1st Option Gas	N/A	SM V5 Software	Ver 6.05	✓
	Verify Atmospheric pressure	P	Internal Filter Pack	Qty	X
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	**Extra Items:**		
	Verify vane anemometer input	P	Sample Tubes		
DataBase Checks	Jobcard(s) completed and signed	P			
	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	n/a			
Label Checks	No. of Calibration label fitted	GDC 08819	**Comments:**		
	MCERTS label displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from Sales Order	50000 ppm			
	H2S Range from Cal Cert	50000 ppm			
	Over-range value correct?	P			

CERTIFICATE OF CALIBRATION

Issued By Pullman Instruments (UK) Ltd. **Certificate Number** **1534875**
Date of Issue 20 January 2022

Pullman Instruments (UK) Ltd.
Chatsworth House,
Chatsworth Terrace,
Harrogate, HG1 5HT
Tel 01423 720360 Email info@pullman.co.uk

www.pullman.co.uk

Approved Signatory

J.Stacey ☐ M.Collins ☐ C.Johnson ☐ A.J.Cox ☐ M. Conboy ☑

Customer : WARDELL ARMSTRONG LLP
36 PARK ROW,
LEEDS, LS1 5JL

Date Received : 18 January 2022

Instrument :

System ID :	DR2040	Job Number :	484355-1
Description :	Shear Vane Tester	Ref Number :	DR2040
Manufacturer :	PILCON	Site :	
Model Number :	DR2526	Location :	
Serial Number :	DR2040		
Procedure Version	22413v1		

Environmental Conditions

Temperature :	20°C ± 2°C	Mains Voltage :	230V ± 20V
Relative Humidity :	50%RH ± 15%RH	Mains Frequency :	50Hz ± 1Hz

Comments

No calibration adjustments or repairs were made to unit.
Measurements traceable to national standards.
Unit tested to manufacturers specification.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
50591.IND STATIC TRANSDUCER	103925	0256/254777	12/12/2020	104
43228 Torque Tool Tester	60556	0256/256288	19/02/2021	52

Calibrated By : G.Bance **Date of Calibration : 20 January 2022**

This certificate provides traceability of measurement to recognised National standards, and to the units of measurements realised at the National Physical Laboratory or other recognised National standards laboratories. Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory.
This certificate complies with the requirements of BS EN ISO 10012:2003.

CERTIFICATE OF CALIBRATION

Certificate Number
1534875

AS FOUND RESULTS

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
Start of test				
Impact Shear Vane Tester. 33mm Vane				
Overall Condition	---	---	---	PASS

Reading on Instrument	Amount Of Applied Torque (Nm)
2	0.3
4	0.6
6	0.9
8	1.1
10	1.4
12	1.7
14	2.0
16	2.3
18	2.7
20	3.0
22	3.4
24	3.7
26	3.9
28	4.1

End of test

END OF TEST DATA

Uncertainties

Low Torque : +/- 0.02% rdg (0-25N)

Pullman Instruments (UK) Ltd.
Pullman Instruments (UK) Ltd.
Chatsworth House,
Chatsworth Terrace,
Harrogate, HG1 5HT
Tel 01423 720360 Email info@pullman.co.uk

DESPATCH NOTE

ZOE HOLMES
WARDELL ARMSTRONG LLP
36 PARK ROW
LEEDS

. LS1 5JL
Tel : 0113 831 5533

If undelivered please return to :
Pullman Instruments (UK) Ltd. Pullman Instruments (UK) Ltd. Chatsworth House,

DESPATCH REF.	T109308
DATE	20/01/2022
ORDER No.	LD2460
ACCOUNT No.	WAR501
CARRIAGE VIA	POST

Qty	Description	List Price	Discount %	Net Amount
1	Standard Certificate For Soil Shear Vane Tester PILCON DR2526 Shear Vane Tester Serial No. : DR2040 , Job No.: 484355-1 , Cert No.: 1534875 , Cust Ref.: DR2040 Accessories : Case,Vanes,	xxxxx	xxxxx	xxxxx

We are starting to implement a new automated invoicing system. In future delivery notes will not show prices, but invoices should be issued within two working days of your delivery. If you require prices before the invoice is received please e mail accounts@pullman.co.uk giving the order number or job reference and a copy of the invoice can be emailed to you when issued.Thank you for your co operation

Received By

Signature .....

Print Name .....

Date .....

CERTIFICATE OF CALIBRATION

Issued By Pullman Instruments (UK) Ltd. **Certificate Number** **1489661**

Date of Issue 19 October 2020

Pullman Instruments (UK) Ltd.
Chatsworth House,
Chatsworth Terrace,
Harrogate, HG1 5HT
Tel 01423 720360 Email info@pullman.co.uk

www.pullman.co.uk

Approved Signatory

J.Stacey ☐ M.Collins ☐ C.Johnson ☐ A.J.Cox ☐ M. Conboy ☑

Customer : WARDELL ARMSTRONG LLP
36 PARK ROW,
LEEDS, LS1 5JL

Date Received : 14 October 2020

Instrument :

System ID :	DR2040	Job Number :	469326-1
Description :	Shear Vane Tester	Ref Number :	DR2040
Manufacturer :	PILCON	Site :	
Model Number :	DR2526	Location :	
Serial Number :	DR2040		
Procedure Version	22413v1		

Environmental Conditions

Temperature :	20°C ± 2°C	Mains Voltage :	230V ± 20V
Relative Humidity :	50%RH ± 15%RH	Mains Frequency :	50Hz ± 1Hz

Comments

No calibration adjustments or repairs were made to unit.
Measurements traceable to national standards.
Unit tested to manufacturers specification.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
CM38 - NORBAR 43228 Torque Tester	60556	0256/245796	30/01/2020	52
CM183 - NORBAR 25Nm Transducer	103925	0256/245799	30/01/2020	52

Calibrated By : G.Bance **Date of Calibration : 19 October 2020**

This certificate provides traceability of measurement to recognised National standards, and to the units of measurements realised at the National Physical Laboratory or other recognised National standards laboratories. Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory.
This certificate complies with the requirements of BS EN ISO 10012:2003.

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	DART387
Test Date:	28/04/2020
Report Date:	28/04/2020
File Name:	DART387.spt
Test Operator:	CM

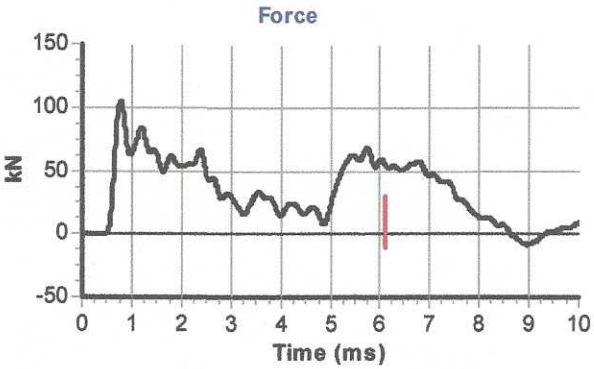
Instrumented Rod Data

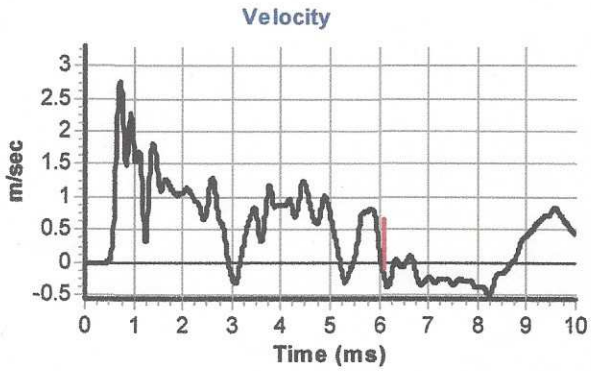
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	7080
Accelerometer No.2:	11609

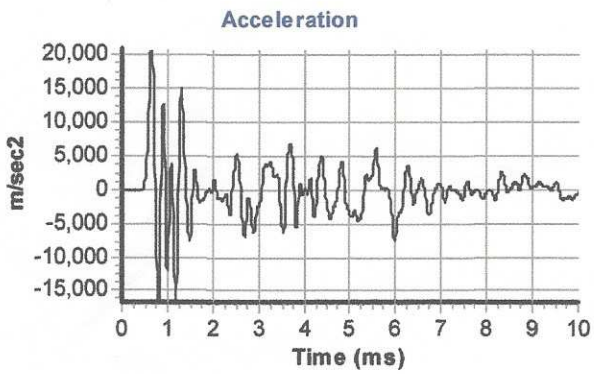
SPT Hammer Information

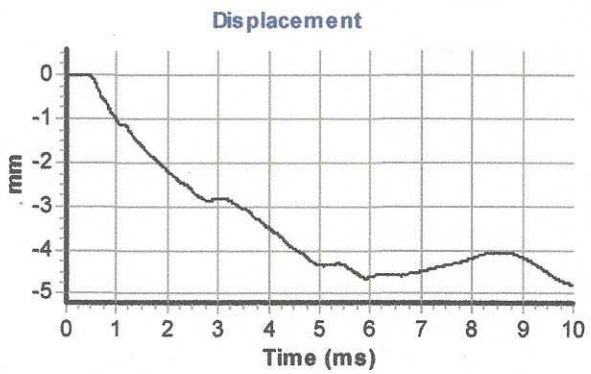
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

Comments / Location
EXPLORATION/









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	308

Energy Ratio E_r (%): **65**

Signed: C.McCLUSKEY
Title: FITTER

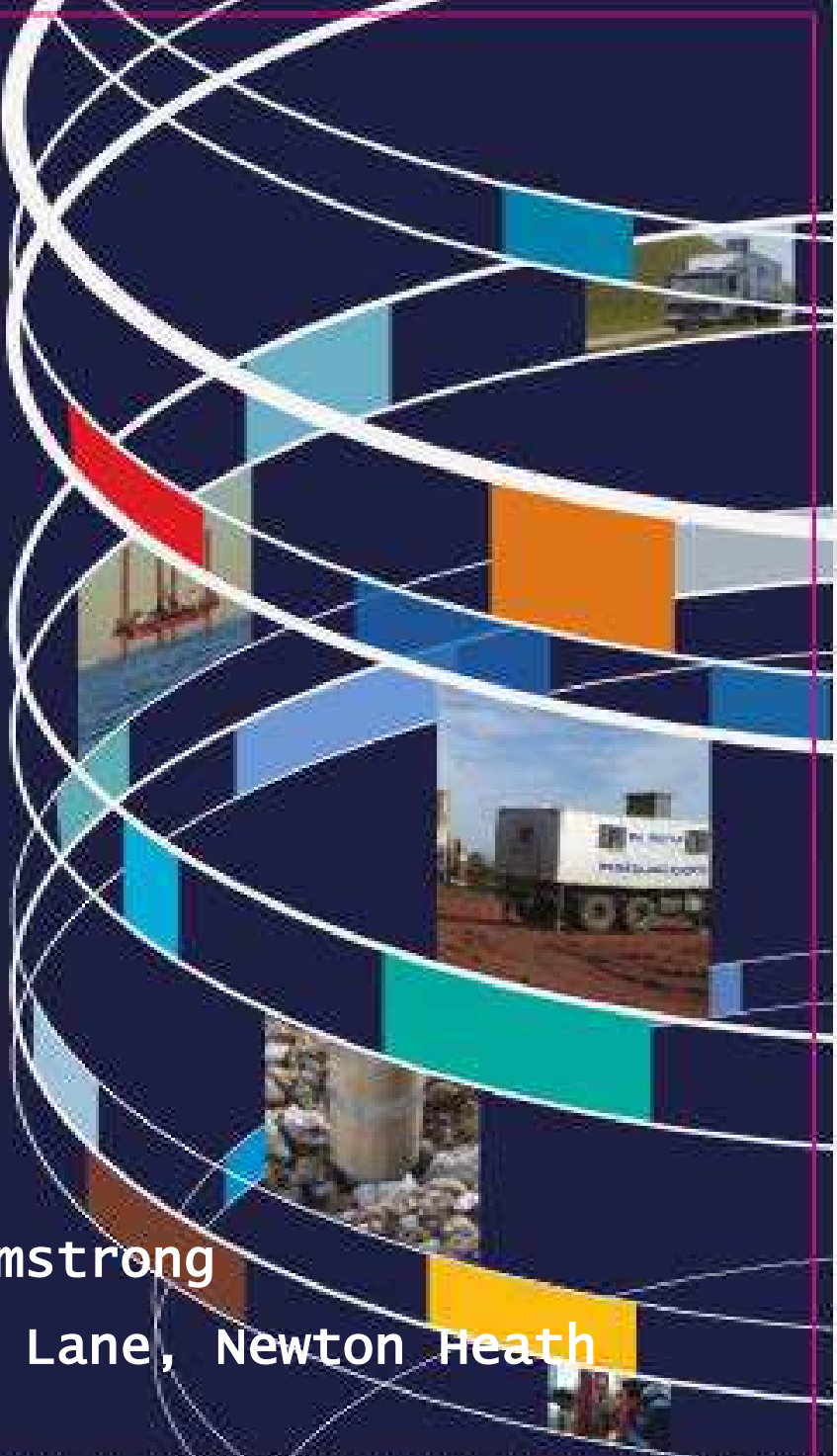
The recommended calibration interval is 12 months

SPTMAN ver.1.93 All rights reserved, Testconsult ©2010

A P P E N D I X Q

OIP & MIP Testing

IN SITU
SITE INVESTIGATION



STATIC CONE PENETRATION TEST

FACTUAL REPORT

CLIENT: Wardell Armstrong

PROJECT: Ten Acres Lane, Newton Heath

Project	**Ten Acres Lane, Newton Heath**
Project No.	**1210414**
Client	**Wardell Armstrong**
Address	**Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD**

Attention: Mr Jonathan Currie

Dear Mr Currie,

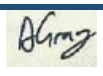
We have pleasure in providing a digital copy of our report and data for the above project.

We hope that you are satisfied with the performance of our staff, equipment and reporting on this project. If you should have any queries about any aspect of the works carried out, please do not hesitate to contact us. We look forward to being of service to you in the future.

Yours faithfully,
In Situ Site Investigation Limited

Darren Ward
Director

Report Issue

Issue	Date	Prepared	Sign	Checked	Sign	Approved	Sign
01	24/08/2021	Alistair Gray		Luisa Dhimitri		Darren Ward	

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1.0 INTRODUCTION

In Situ Site Investigation (ISSI), was contracted by Wardell Armstrong to perform several membrane interface profiling tool (hereby MIP) and Optical Interface Probing (hereby OIP) test holes at their site, Ten Acres Lane, Newton Heath (hereby Site).

Through the period of 2nd August 2021 – 6th August 2021, ISSI completed 12 MIP and 48 OIP tests at selected locations throughout the site.

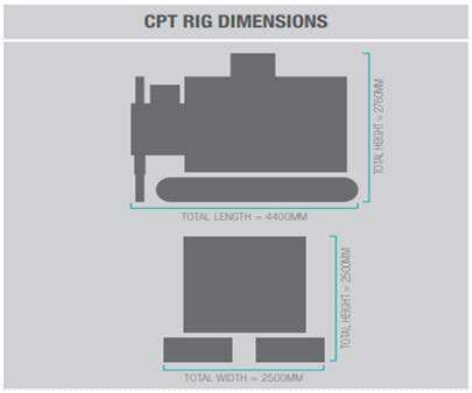
ISSI was made aware that the site had several contaminants of concern including free phase hydrocarbon compounds, dissolved phase hydrocarbons, and volatile organics.

2.0 EQUIPMENT DESCRIPTION

2.1 PUSHING EQUIPMENT

During this project a direct (static) push rig was utilised. A 20-tonne tracked crawler rig was supplied by ISSI.

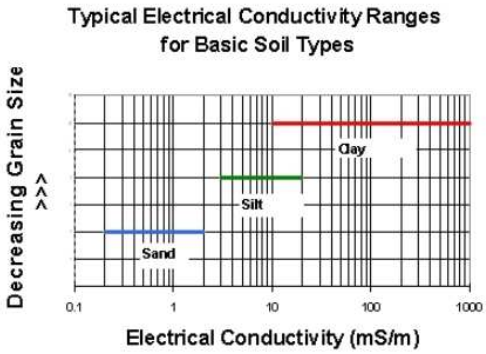
CPT RIG DETAILS	
DRIVE SYSTEM	TRACKED RIG
TOTAL WEIGHT	20 TONNES
GROUND BEARING PRESSURE	36KPA
CPT RAM THRUST CAPACITY	20 TONNES
MAXIMUM PENETRATION	20-40M DEPENDING ON THE GROUND CONDITIONS.
PERFORMANCE RATES	100-150M OF TESTING A DAY, DEPENDING ON ACCESS TO POSITIONS.
TYPICAL SITES FOR THIS RIG	SOFT, BOGGY SITES. LOW GROUND BEARING PRESSURE



2.2 MIP

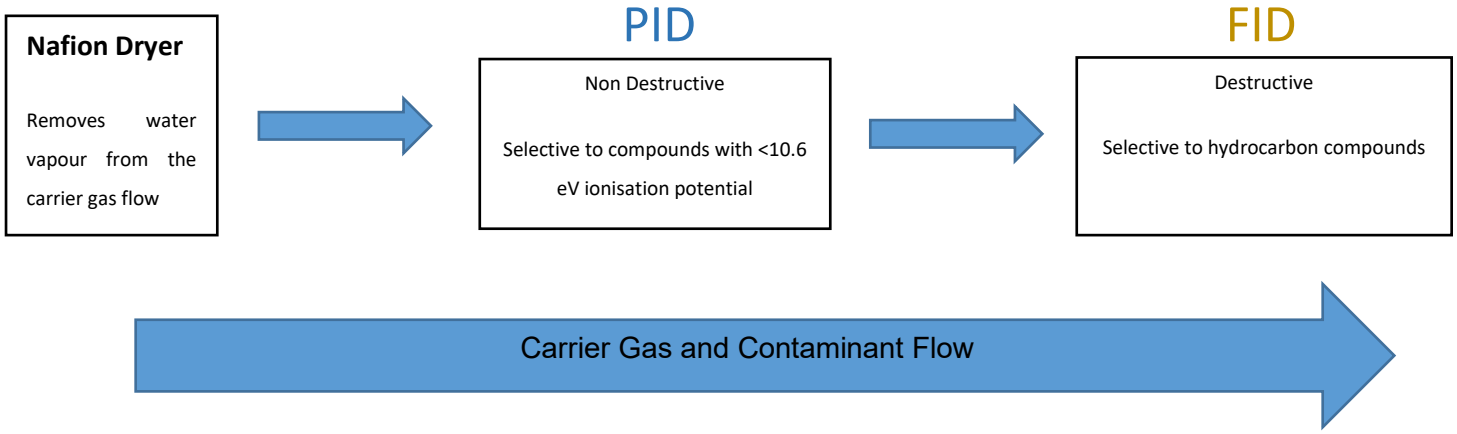
The MIP is an interface between contaminates in the soil and the detectors at ground surface. It is a mapping tool used to find the depth at which contamination is located, but is not used to determine concentration of the compound. Two advantages of using the MIP are that it detects contamination in situ and can be used in all types of soil conditions. The MIP is a logging tool used to make continuous measurements of VOCs in soil. Volatile compounds outside the probe diffuse across a membrane and are swept from the probe to a gas phase detector at ground surface. A log is made of detector response versus probe depth. In order to speed diffusion, the probe membrane is heated to approximately 121°C. Along with the detection of VOCs in the soil, the MIP also measures the electrical conductivity of the soil to give a probable lithology of the subsurface. This is accomplished by using a dipole measurement arrangement at the end of the MIP probe so that both conductivity and detector readings may be taken simultaneously. A simultaneous log of soil electrical conductivity is recorded with the detector response.

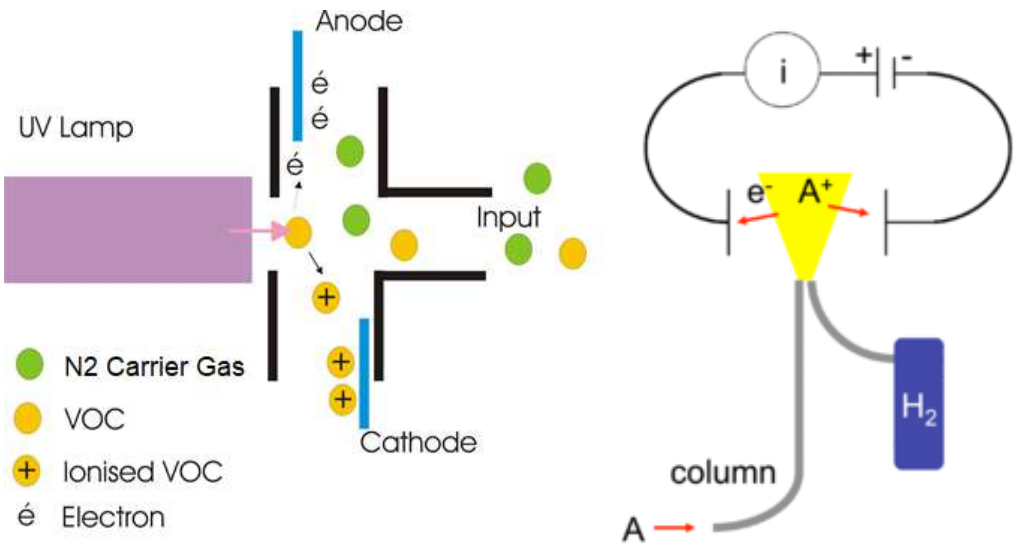
The MIHP probe also includes an electrical conductivity (EC) measuring device housed close to the end of the probe, and a continuous profile of EC is logged alongside the MIP and HPT logs. Soil conductivity and resistivity (the inverse of conductivity) have long been used as tools to classify soils. The power of this tool stems from the fact that, in general, silts and clays exhibit higher electrical conductivity readings than sands and gravels. The conductance of the soil is based upon its parent mineralogy as well as the conductance of the pore fluids within the formation.



2.3 GC Detector Array Information

The gas chromatography equipment can be configured with several different detector types. During this project FID & PID detectors were chosen and utilised due to their robust detection capabilities and sensitivities to the specified target compounds. The differential responses between detector types can be used to investigate the presence of multiple target compounds with differing properties. When the N2 carrier gas exits the trunkline, it takes the following path:





PID System Setup	
Main Photon Energy	10.6eV
Fill Gas	Kr
Window Material	MgF2
Comments: Specific to compounds with an ionisation potential of <10.6eV. PID detectors can be susceptible to quenching by compounds such as methane, ethane, some acid gasses etc.	

FID System Setup	
Carrier Gas	N2
Fuel Gas	H2
Compressor Gas	Air
Comments: Destructive, Specific to H-C bonds within molecules.	

2.4 OIP

The OIP (Optical Image Profiler) is a direct push tool used for the delineation of non-aqueous phase liquid (NAPL) hydrocarbon fuels and oils. The OIP-UV probe is designed with UV and visible light sources which are directed out a sapphire window. As the probe is advanced into the subsurface, the UV light source will induce fluorescence of the fuel polycyclic aromatic hydrocarbons (PAHs). This fluorescence is captured by an onboard camera which operates at 30 images per second. Images are saved throughout the advancement of the log and still photos are taken using UV and visible light sources each meter as well as at operator chosen depths. Soil fluorescence images (20 per ft) are saved throughout the log

3.0 SITE SET UP

The MIHPT probe, OIP Probe and Detection equipment, pump and flow controllers, data logger and gas chromatograph were instated into the CPT pushing rig at the start of this project and remained in-situ during the works. An inverter was used to power the data logger, whilst all other electrical power was taken from a dual generator setup attached to the outside of the pushing rig. All electrical equipment was earthed to the chassis of the pushing rig.

The following set points were used during the course of this project:

MIP Heater Temperature: **121°C**

MIP Flow: **35-45 ml/min**

MIP Carrier: **Nitrogen**

MIP Pressure: **40 kPa**

HTL (Heated Trunkline) Used: **YES**

MIP Reference Compound(s): **Toluene**

MIP Response Test Concentration Toluene: **10ppm**

MIP Response Test Matrix Toluene: **Water, Methanol**

Detector Array: **FID (H_2), PID (10.6 eV)**

PID Gain used: **LOW**

FID Gain used: **LOW**

OIP Light Filter: **275UV**

OIP Reference Compound 1: **Diesel**

OIP Reference Compound 2: **Synthetic 5W-30 Oil**

The MIP probe was advanced into the ground at a rate of approximately 1.6m/min, and was paused every 30cm in order to maintain heater temperature and allow volatile collection. The pause time is equal to that of the trip time once the heater block has reached a stable temperature. The OIP Probe was advanced at a rate of 2cm/s and an additional optical image was collected ever 1m, or when significant detector response was observed.

4.0 PRE/POST LOG PERFORMANCE INFORMATION

Performance checks of each component of the MIP system are undertaken pre and post test. If the system is found to be performing inadequately, then it should not be used until the source of the performance issue has been rectified and the system tested again.

EC:

The electrical conductivity sensor is tested at a high and low load, using a 2-pin connector of known load. The acceptable Δ (deviation from expected value of 55 (mS/m) in the low test, 290 (mS/m) in the high test) is 10%. All pre-and post EC system checks have been examined and found to conform to this parameter.

Chemical Standards Preparation

The choice of the chemical for the preparation of the Standard is project-specific, and it is recommended to be similar to the contaminant of concern at that project. Further, the concentration of the chemical in the Standard Test should cover the range of concentrations that could be encountered in the subsurface to assess the MIP instrumentation responses to different concentrations. The rationale behind the chemical standard response test is to ensure consistency and repeatability of the detector response over the course of the MIP logging. This detector response needs to be both visible and significant. As no information was given about the nature of the contamination on site, toluene at 10ppm was chosen as the response standard.

Chemical standard preparation was performed by the MIP probe operator prior to and during the testing phase of the project when required.

Detector Response:

Detector responses to the chemical standard test are dependent on the physical and chemical properties of the chemical used and the operation of the detector. For example, when toluene is used as a standard, both FID and PID will yield a clear response. If the chemical standard used has a higher ionisation potential than the energy of the lamp (in this case 10.6ev) then the compound will not be detected by the PID. This can be used to assess the degradation pathway of some chemicals in the subsurface, via the differential response in the detectors.

The rationale for the Standard Test is to ensure the proper detector response and the repeatability of such response during the actual MIP logging operation. Further, this

response must be identifiable, i.e. that it is a noticeable significant peak above the baseline, which requires a steady low baseline response. A signal to noise ratio calculation can be performed to calculate the significance of the target compound peak.

All pre and post test detector response logs are included in this report.

Response Time Assessment:

Response time is defined as the time required for the nitrogen carrier containing the first liberated volatiles from the probe head to travel through the MIP system trunk-line to the detector array on the surface. Trip time assessment is an important factor in the correct use of the MIP probe, as this measurement is paired to the depth readings to plot the detector response at the correct depths across the log. Measurement of the trip time during the chemical response tests before and after each MIHPT test ensures that the carrier gas system is intact and has not succumbed to drift. All chemical response tests are included in this report with each individual MIHPT profile..

5.0 MIP DATA QUALITY CONTROL AND USEABILITY

ISSI conducted all recommended quality assurance checks and calibration as described below, and in accordance with ISSI operating procedure. A brief explanation of each parameter that is monitored and assessed for QC purposes is outlined. A summary of each individual log and the QC associated with it can be found in parts 6.0 and 7.0 of this report.

Response Time

The average response times for all pushes were in the range of 60-100 seconds. Some variation in trip time between pre and post log response testing was observed.

Detector Response

The Detector responses pre and post log can be found after each individual log in section 14 of this report.

Electrical Conductivity

The electrical conductivity sensor is tested at a high and low load, using a 2-pin connector of known load. The acceptable Δ (deviation from expected value - 55 (mS/m) in the low test, 290 (mS/m) in the high test) is 10%.

MIP Flow

Under optimal conditions the MIP flow rates will be between 40-50ml/min. The MIP flow is monitored by the MIP controller inside the rig. Pre/Post log testing gas flows are measured independently by a hand held flow meter.

MIP Pressure

MIP Pressure is monitored during the probes advancement into the ground, a raise in pressure indicates a possible blockage, where a significant drop in pressure indicates a leak in the gas flow system.

No significant drops or raises in pressure were observed during individual pushes.

MIP Temperature

The temperature of the membrane is monitored across the push to ensure that the heater remains at a suitable temperature during probe advancement.

The heater operation is controlled by a thermocouple in the probe. Loose connections can occur during normal operation of the probe, especially if the probe is advanced or hammered into dense material. No issues with MIP temperature occurred during this project.

OIP Visual Target Testing

The Visual light camera is tested using a visual target including several different colours.

OIP Black Box Testing

The OIP lens in UV mode is covered with a “black box”, and the level of fluorescence should be 0.1 or below. This test is undertaken to ensure that no contamination is behind the OIP window.

OIP Diesel Reference

The OIP window is exposed to a cuvette containing diesel. Recorded fluorescence levels should be greater than or equal to 65%.

OIP Motor Oil Reference

The OIP window is exposed to a cuvette containing motor oil. Recorded fluorescence levels should be greater than or equal to 65%

OIP Optical Power

Power to the downhole cameras is monitored using a downhole sensor, encased in the OIP probe connection tube. Some change in the power to the camera array is to be expected (for example when taking a visual image when in UV mode) however, significant changes in the optical power could indicate an issue with the camera array.

6.0 OIP LOG QC SUMMARY TABLE

Location	Black Box Test Acceptable (</=0.1%)	Visible Light Test Acceptable	Diesel Fluorescence Test Acceptable (>65%)	Motor Oil Fluorescence Test Acceptable (>65%)	Comments
OIP01	Yes	Yes	Yes	Yes	
OIP02	Yes	Yes	Yes	Yes	
OIP03	Yes	Yes	Yes	Yes	
OIP04	Yes	Yes	Yes	Yes	
OIP05	Yes	Yes	Yes	Yes	
OIP06	Yes	Yes	Yes	Yes	
OIP07	Yes	Yes	Yes	Yes	
OIP08	Yes	Yes	Yes	Yes	
OIP09	Yes	Yes	Yes	Yes	
OIP10	Yes	Yes	Yes	Yes	
OIP11	Yes	Yes	Yes	Yes	
OIP12	Yes	Yes	Yes	Yes	
OIP13	Yes	Yes	Yes	Yes	
OIP14	Yes	Yes	Yes	Yes	
OIP15	0.2	Yes	Yes	Yes	Possible internal or black box contamination
OIP17	Yes	Yes	Yes	Yes	Contamination of lens – adjust baseline
OIP18	Yes	Yes	Yes	Yes	
OIP19	Yes	Yes	Yes	Yes	
OIP20	Yes	Yes	Yes	Yes	
OIP21	0.2	Yes	Yes	Yes	Possible internal or black box contamination
OIP22	N/A	N/A	N/A	N/A	Tests bypassed by DH
OIP23	Yes	Yes	Yes	Yes	
OIP24	Yes	Yes	Yes	Yes	
OIP25	Yes	Yes	Yes	Yes	
OIP27	Yes	Yes	Yes	Yes	
OIP28	Yes	Yes	Yes	Yes	
OIP29	Yes	Yes	Yes	Yes	
OIP31	Yes	Yes	Yes	Yes	
OIP31A	Yes	Yes	Yes	Yes	
OIP33	Yes	Yes	Yes	Yes	
OIP33A	Yes	Yes	Yes	Yes	
OIP34	Yes	Yes	Yes	Yes	
OIP35	Yes	Yes	Yes	Yes	
OIP36	Yes	Yes	Yes	Yes	
OIP37	Yes	Yes	Yes	Yes	
OIP38	Yes	Yes	Yes	Yes	
OIP40	N/A	N/A	N/A	N/A	Tests bypassed by DH
OIP42	Yes	Yes	Yes	Yes	
OIP43	Yes	Yes	Yes	Yes	
OIP44	0.2	Yes	Yes	Yes	Possible internal or black box contamination

OIP45	Yes	Yes	Yes	Yes	
OIP46	Yes	Yes	Yes	Yes	
OIP47	Yes	Yes	Yes	Yes	
OIP48	Yes	Yes	Yes	Yes	
OIP49	Yes	Yes	Yes	Yes	
OIP49A	Yes	Yes	Yes	Yes	
OIP49B	Yes	Yes	Yes	Yes	
OIP50	Yes	Yes	Yes	Yes	

7.0 MIHPT LOG QC SUMMARY TABLE

Location	MIP Temp >100 for log duration	MIP Pressure	MIP Flow	Comments
MIP02	Yes	Significant Δ	Significant Δ	Pressure increases after 2mbgl
MIP04	95 @3mbgl	Acceptable	Acceptable	
MIP06	Yes	Acceptable	Acceptable	
MIP10	Yes	Acceptable	Acceptable	
MIP13	Yes	Acceptable	Acceptable	
MIP15	Yes	Significant Δ	Significant Δ	Pressure increases after 4.8mbgl
MIP17	Yes	Acceptable	Acceptable	
MIP18	Yes	Acceptable	Acceptable	
MIP20	Yes	Acceptable	Acceptable	
MIP38	Yes	Acceptable	Acceptable	
MIP46	Yes	Significant Δ	Significant Δ	Pressure decrease to setpoint after 0.95mbgl
MIP48	Yes	Acceptable	Acceptable	

8.0 MIHPT DETECTOR RESPONSE SUMMARY TABLE

Location	Response Tests FID	Response Test PID	Signal To Noise	Response Time Variation	Comments
MIP02	See Section 15	See Section 15	Acceptable	Acceptable	
MIP04	See Section 15	See Section 15	Acceptable	Acceptable	
MIP06	See Section 15	See Section 15	Acceptable	Acceptable	
MIP10	See Section 15	See Section 15	Acceptable	Acceptable	
MIP13	See Section 15	See Section 15	Acceptable	Acceptable	
MIP15	See Section 15	See Section 15	Acceptable	Acceptable	
MIP17	See Section 15	See Section 15	Acceptable	Acceptable	
MIP18	See Section 15	See Section 15	Acceptable	Acceptable	
MIP20	See Section 15	See Section 15	Acceptable	Acceptable	
MIP38	See Section 15	See Section 15	Acceptable	Acceptable	
MIP46	See Section 15	See Section 15	Acceptable	Acceptable	
MIP48	See Section 15	See Section 15	Acceptable	Acceptable	

9.0 MIHPT/OIP TERMINATIONS

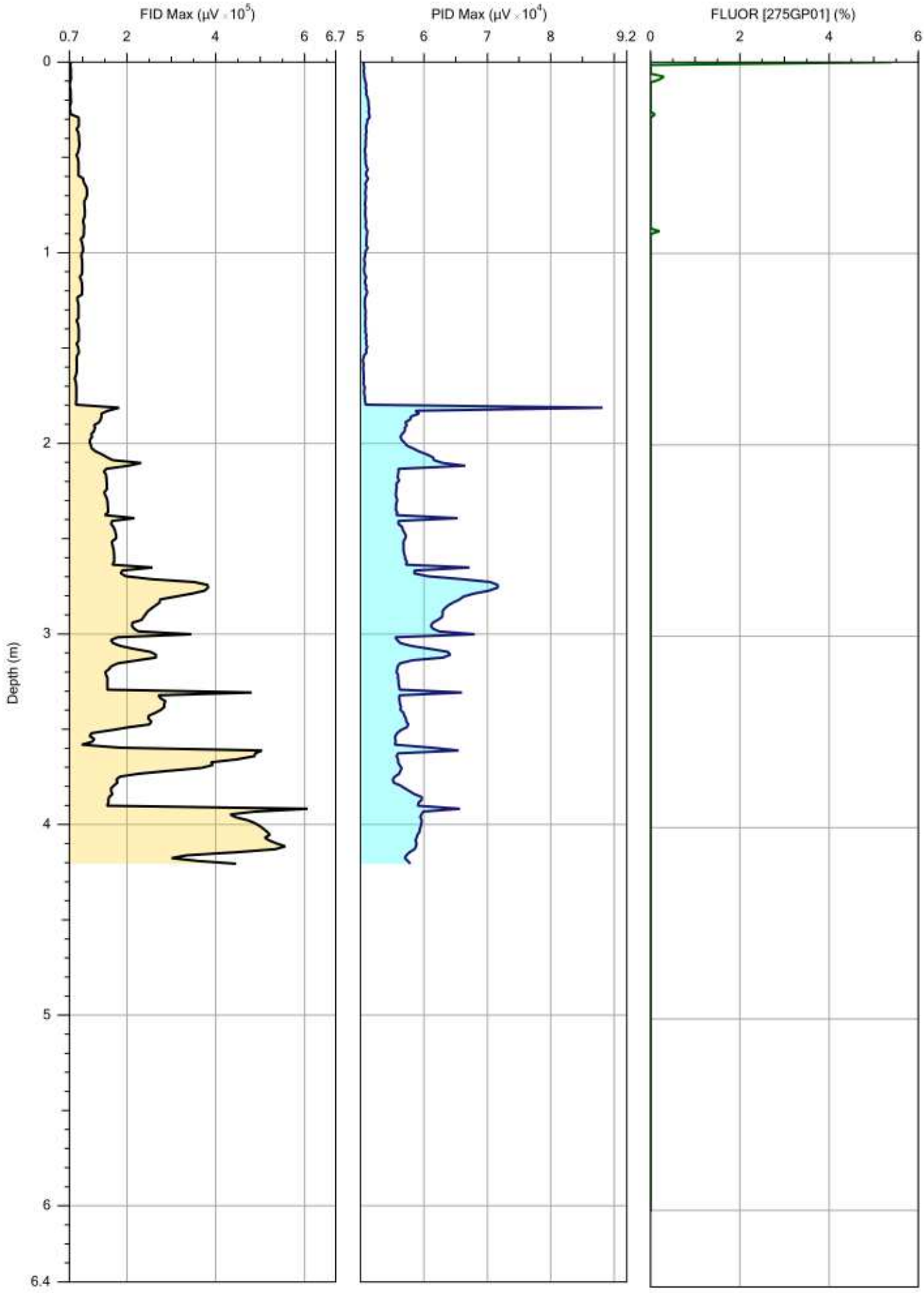
Location	MIP (Membrane) Depth	MIP Termination Reason
MIP02	4.206	Maximum Force Reached
MIP04	7.803	Maximum Force Reached
MIP06	4.206	Maximum Force Reached
MIP10	6.005	Maximum Force Reached
MIP13	3.307	Maximum Force Reached
MIP15	6.020	Maximum Force Reached
MIP17	4.542	Maximum Force Reached
MIP18	4.770	Maximum Force Reached
MIP20	5.197	Maximum Force Reached
MIP38	2.118	Maximum Force Reached
MIP46	5.425	Maximum Force Reached
MIP48	4.115	Maximum Force Reached

Location	OIP (Lens) Depth	OIP Termination Reason
OIP01	4.999	Maximum Force Reached
OIP02	6.005	Maximum Force Reached
OIP03	4.999	Maximum Force Reached
OIP04	4.999	Maximum Force Reached
OIP05	7.010	Maximum Force Reached
OIP06	6.020	Maximum Force Reached
OIP07	4.907	Maximum Force Reached
OIP08	5.410	Maximum Force Reached
OIP09	7.513	Maximum Force Reached
OIP10	6.507	Maximum Force Reached
OIP11	3.932	Maximum Force Reached
OIP12	5.989	Maximum Force Reached
OIP13	4.008	Maximum Force Reached
OIP14	10.241	Maximum Force Reached
OIP15	5.502	Maximum Force Reached
OIP17	4.907	Maximum Force Reached
OIP18	8.976	Maximum Force Reached
OIP19	4.496	Maximum Force Reached
OIP20	5.197	Maximum Force Reached
OIP21	2.515	Maximum Force Reached
OIP22	0.122	Maximum Force Reached
OIP23	0.579	Maximum Force Reached
OIP24	3.505	Maximum Force Reached
OIP25	10.119	Maximum Force Reached
OIP27	7.986	Maximum Force Reached
OIP28	5.822	Maximum Force Reached
OIP29	0.000	Refusal

OIP31	0.564	Maximum Force Reached
OIP31A	5.166	Maximum Force Reached
OIP33	1.544	Maximum Force Reached
OIP33A	2.484	Maximum Force Reached
OIP34	0.579	Maximum Force Reached
OIP35	4.008	Maximum Force Reached
OIP36	2.012	Maximum Force Reached
OIP37	6.081	Maximum Force Reached
OIP38	2.515	Maximum Force Reached
OIP40	6.888	Maximum Force Reached
OIP42	3.490	Maximum Force Reached
OIP43	0.229	Maximum Force Reached
OIP44	6.005	Maximum Force Reached
OIP45	6.005	Maximum Force Reached
OIP46	6.005	Maximum Force Reached
OIP47	3.871	Maximum Force Reached
OIP48	3.901	Maximum Force Reached
OIP49	1.326	Maximum Force Reached
OIP49A	1.219	Maximum Force Reached
OIP49B	4.008	Maximum Force Reached
OIP50	2.042	Maximum Force Reached

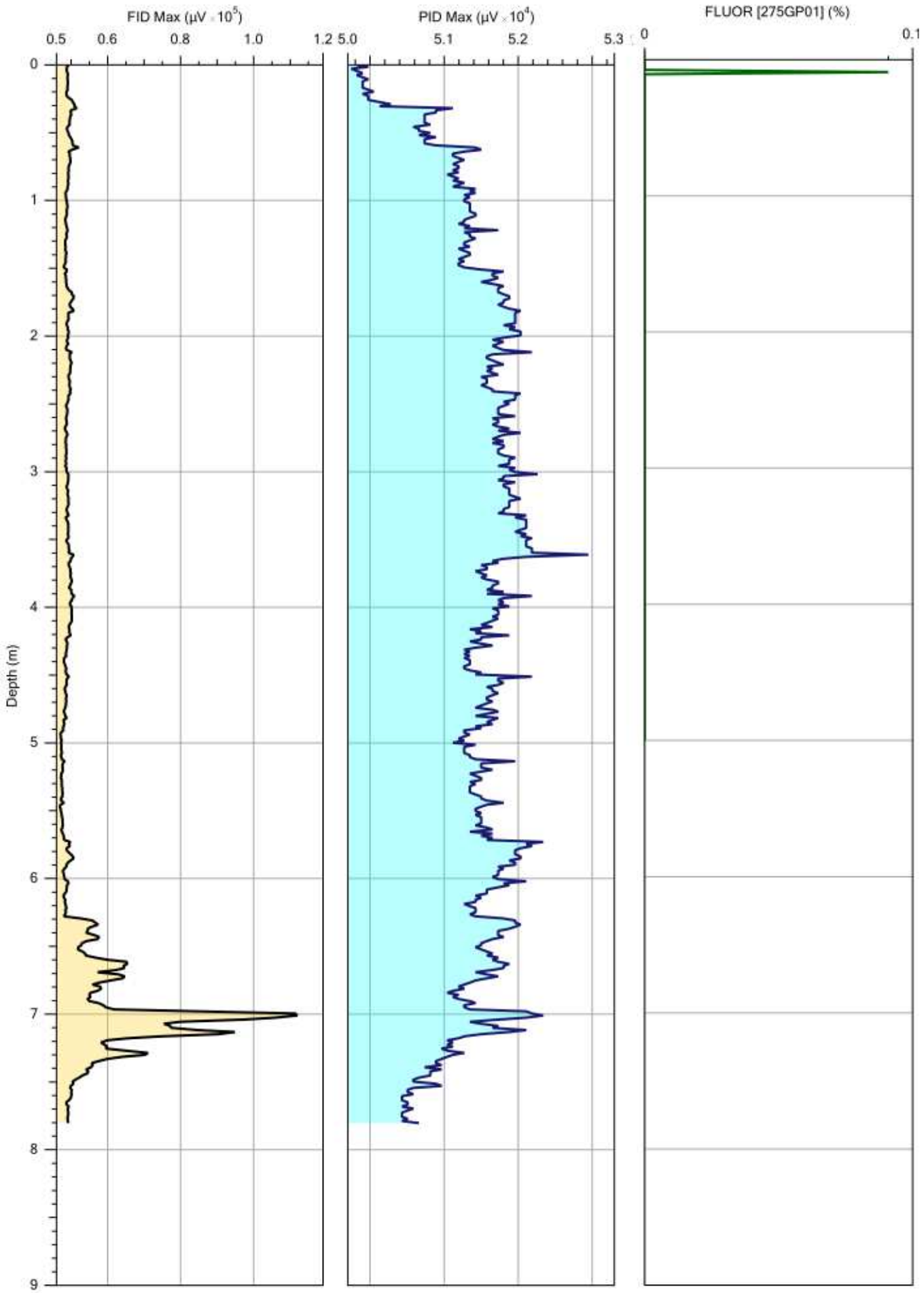
10.0 MIP/OIP DETECTOR PLOTS

Where an MIP and OIP log have been performed in the same location detector responses from both probes are shown.



IN SITU
SITE INVESTIGATION

		MIP02.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



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SITE INVESTIGATION

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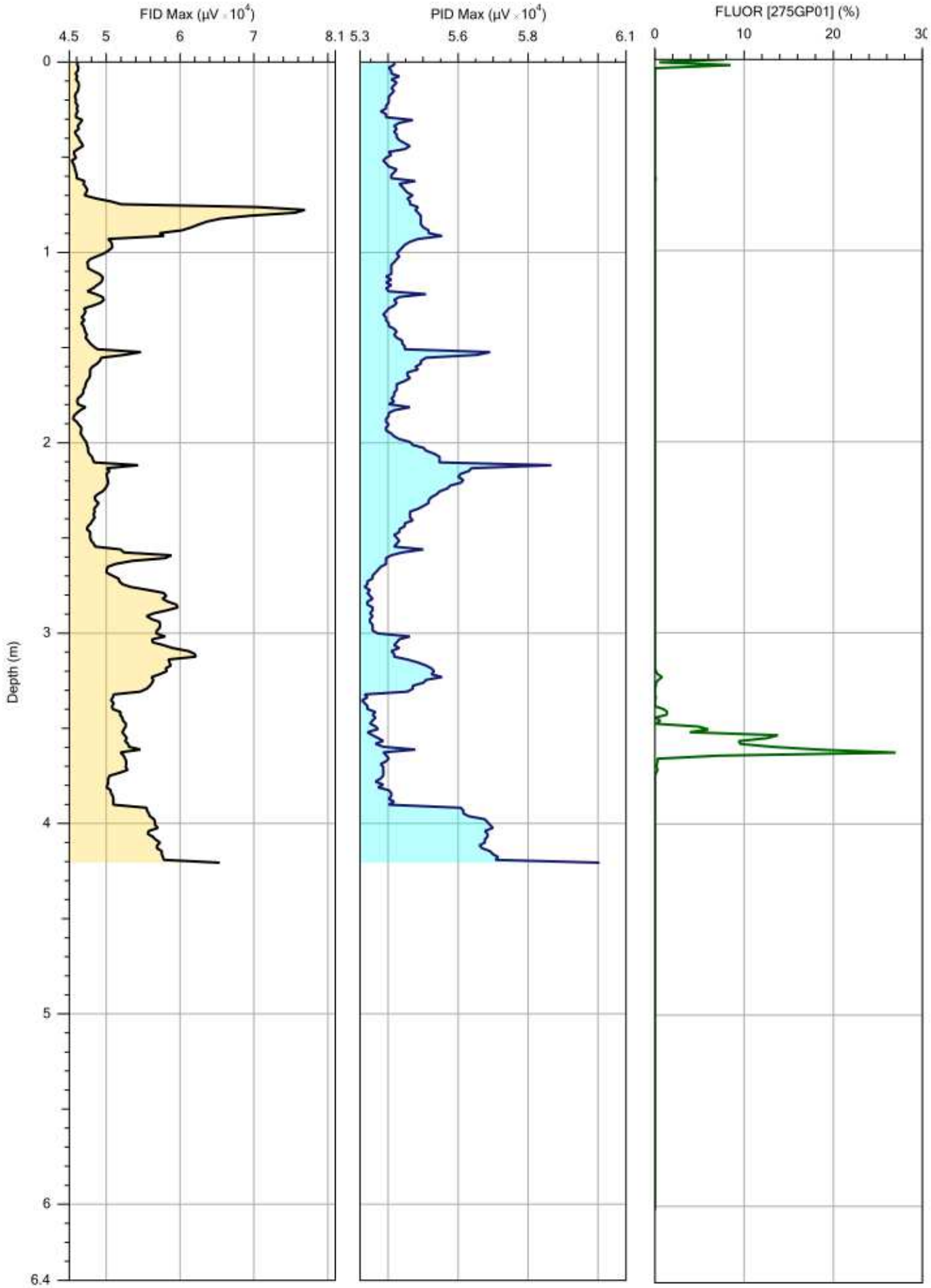
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



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SITE INVESTIGATION

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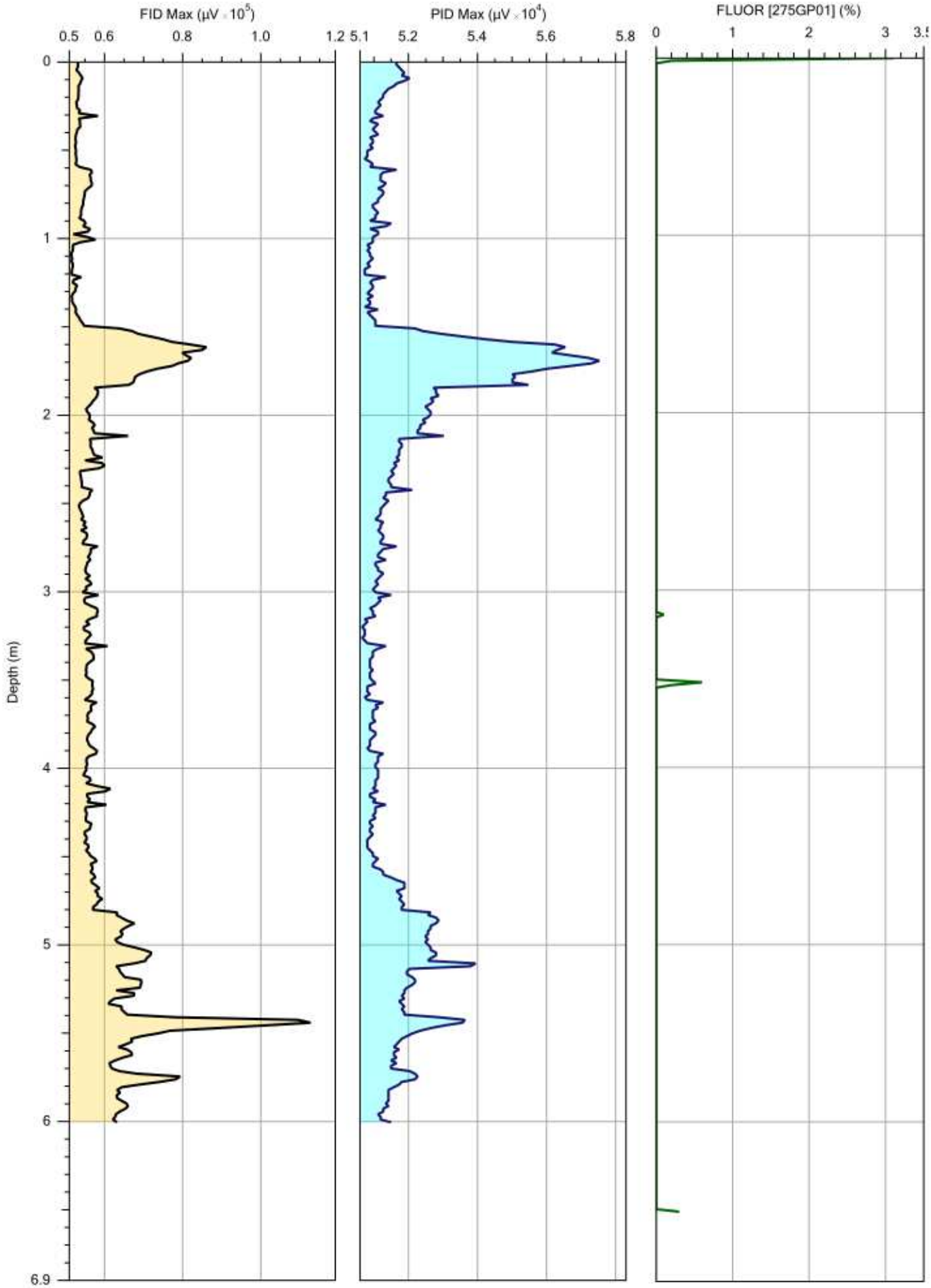
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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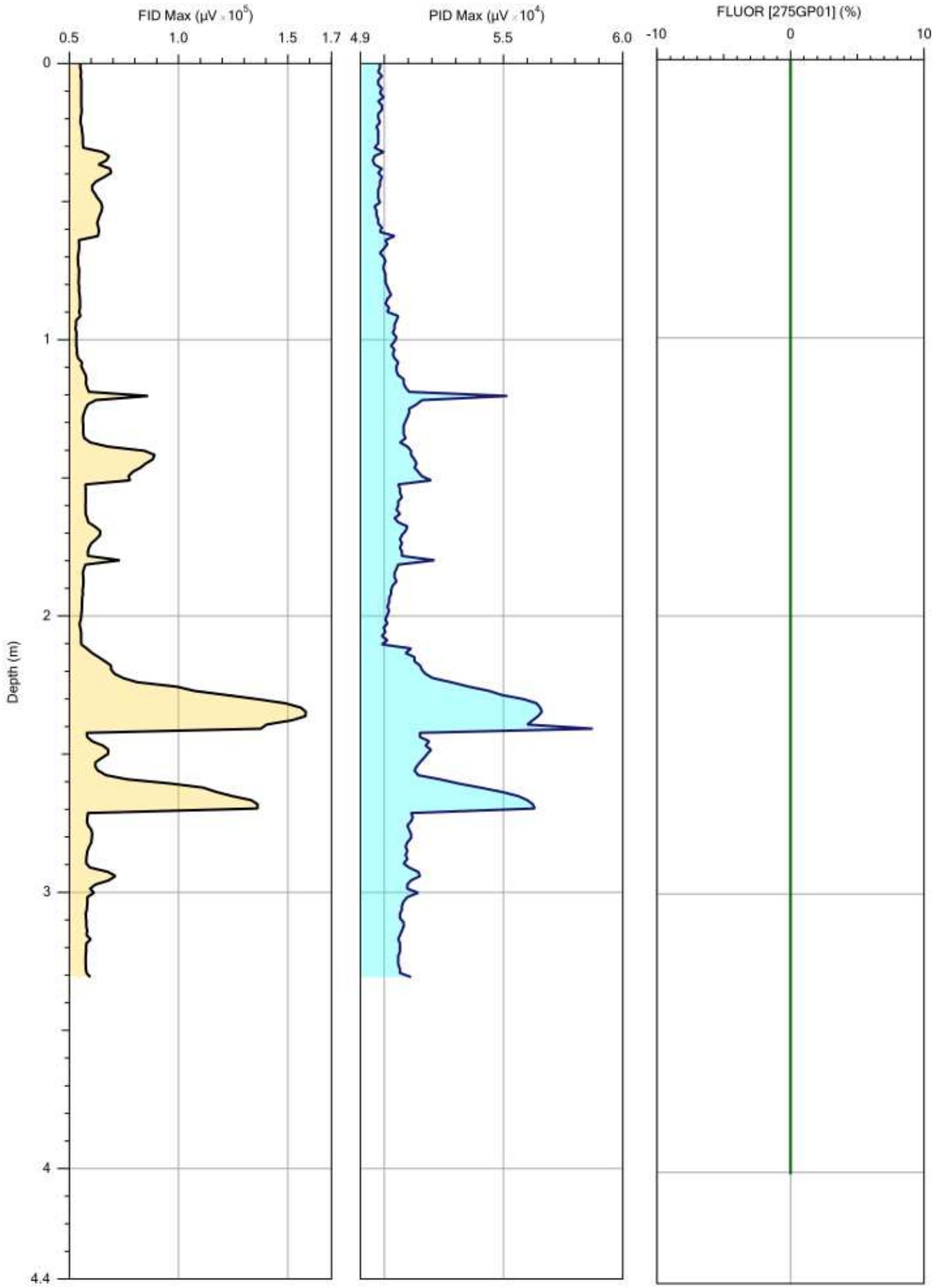
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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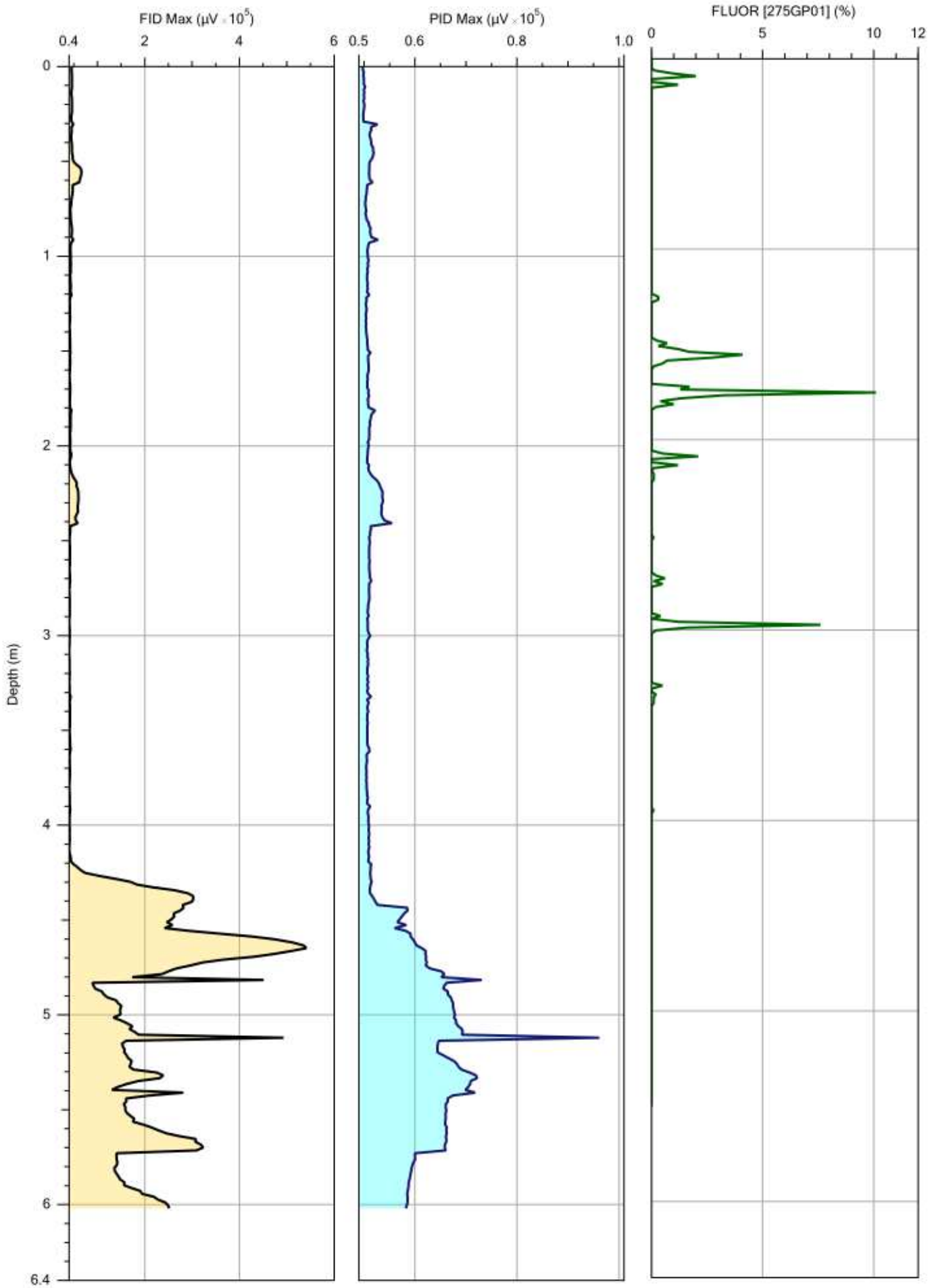
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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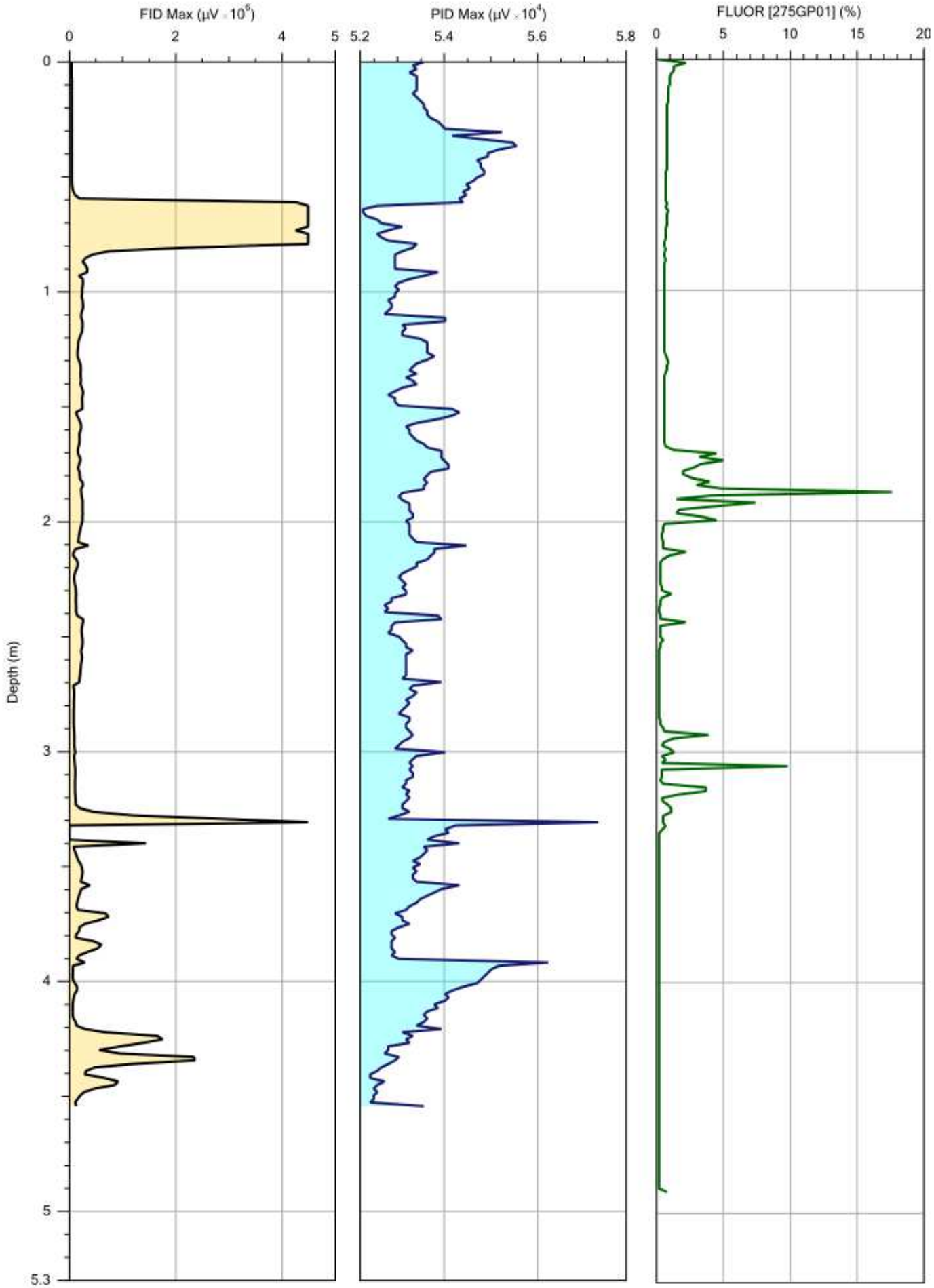
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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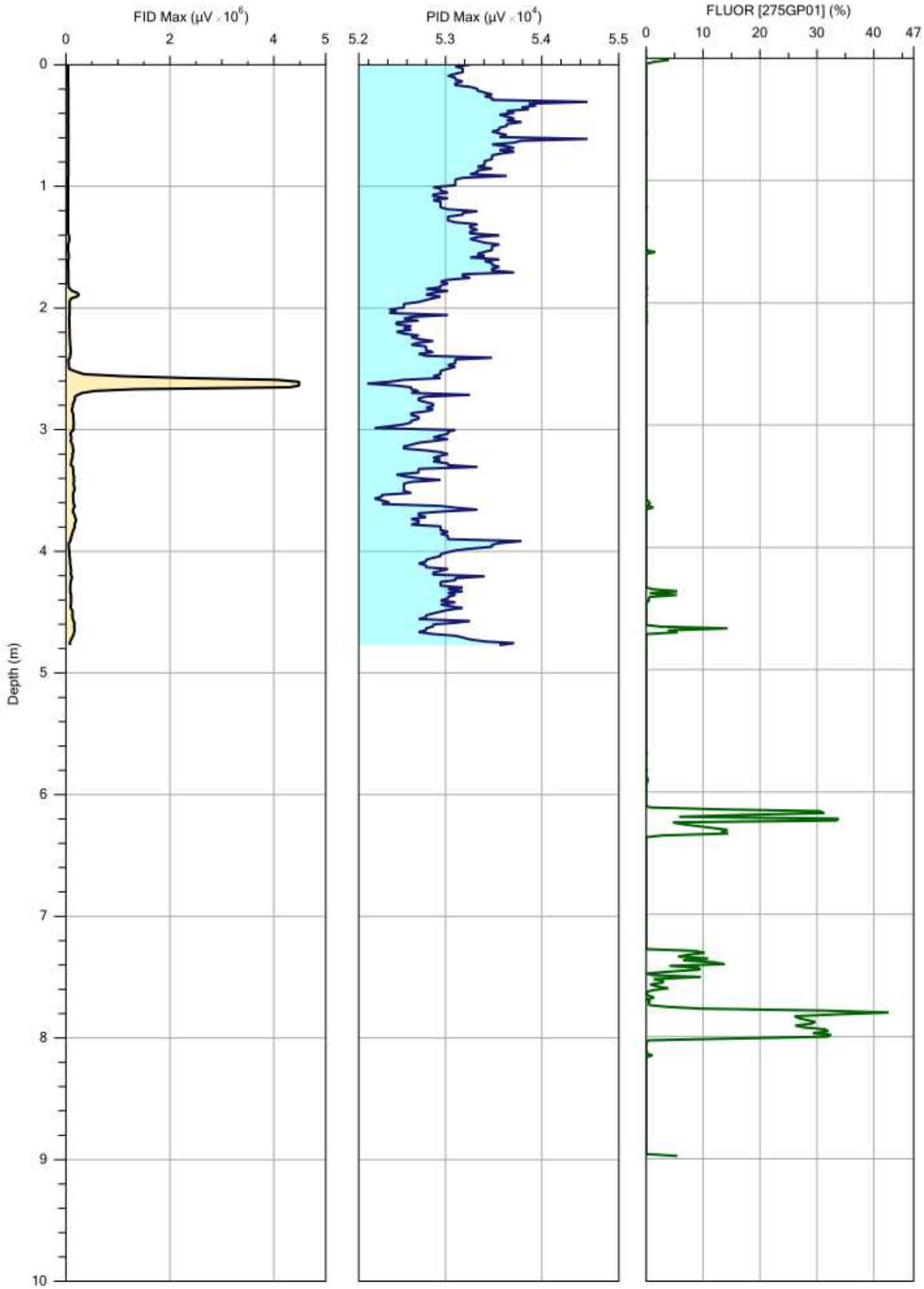
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



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SITE INVESTIGATION

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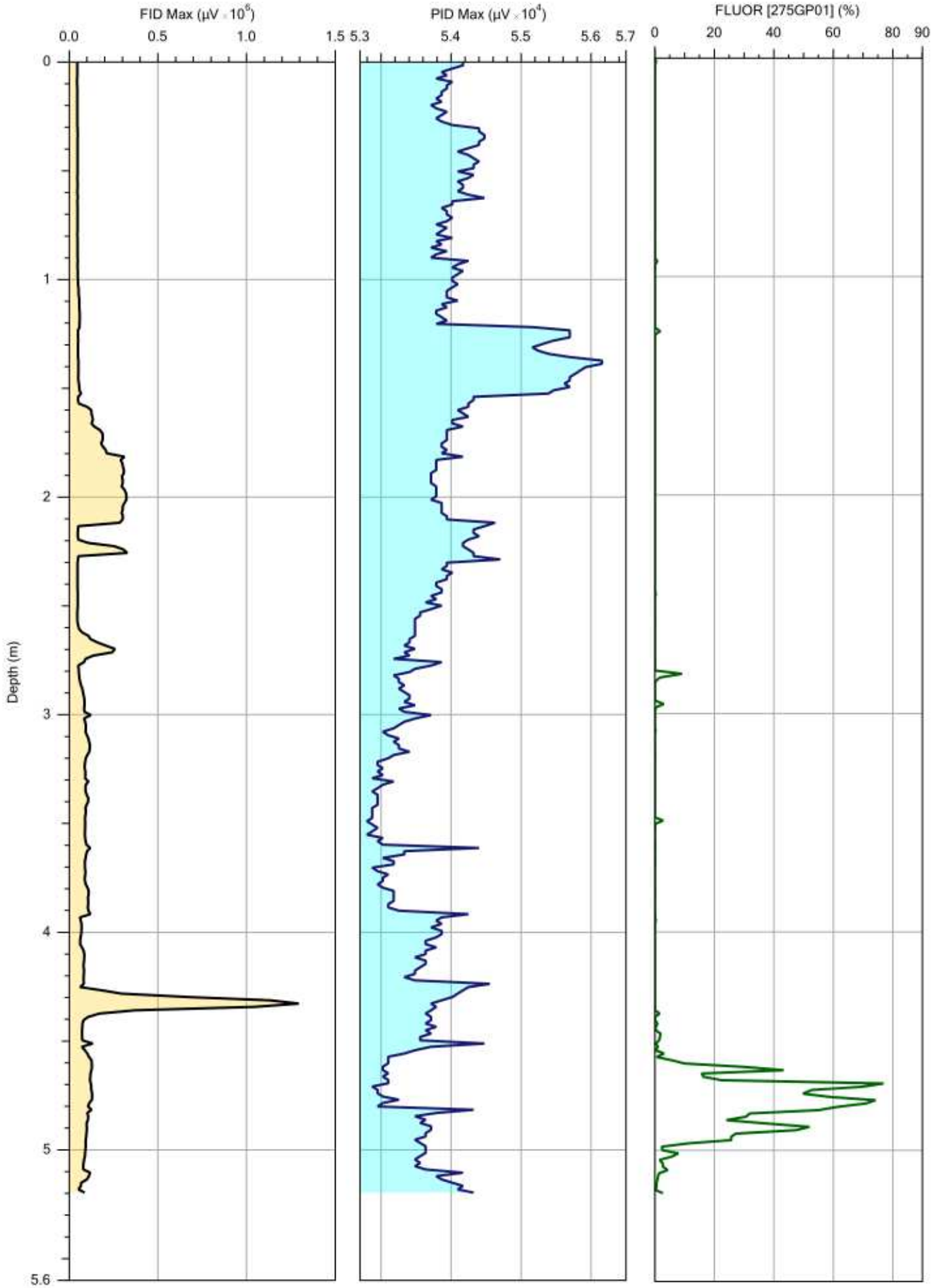
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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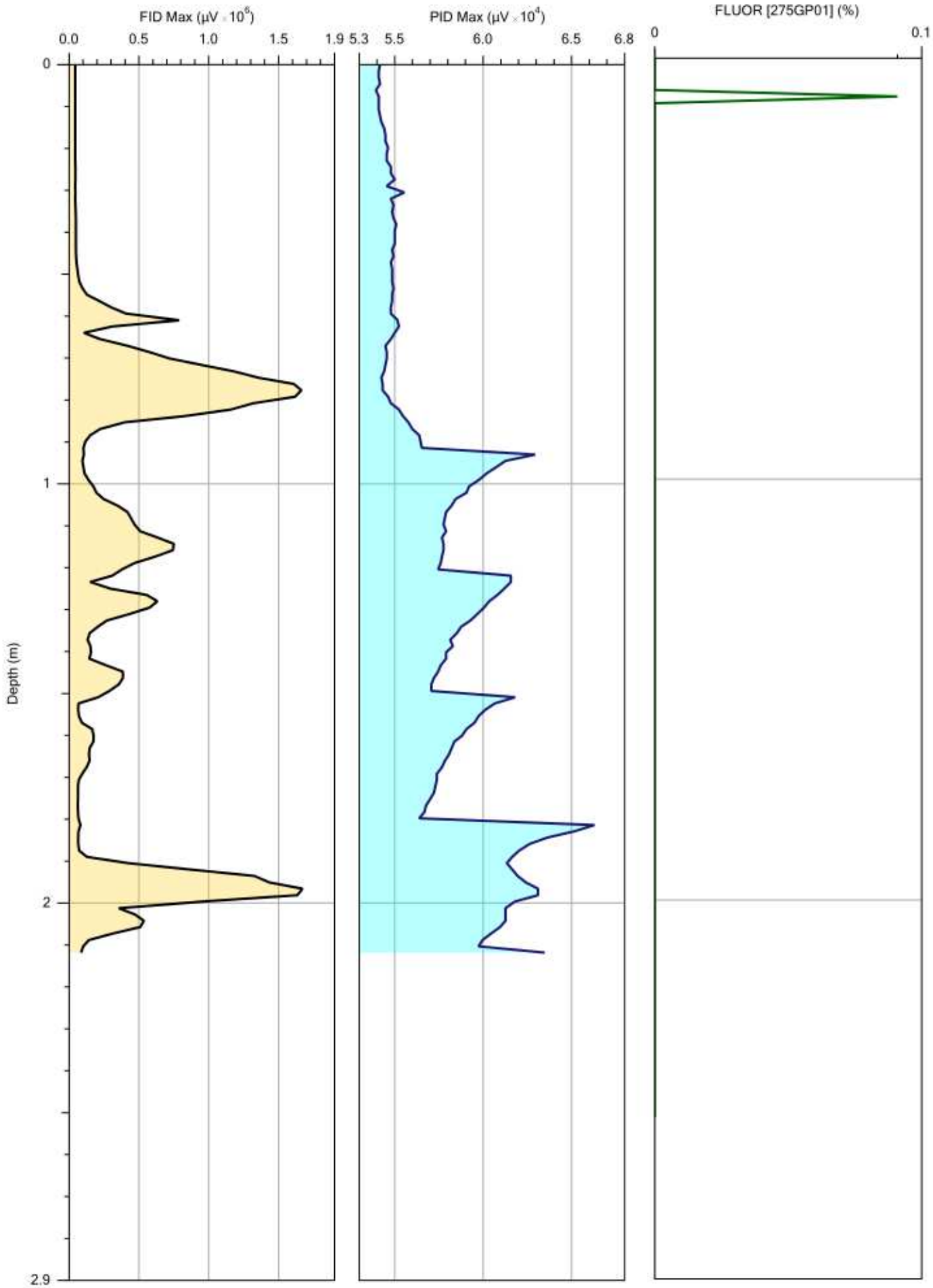
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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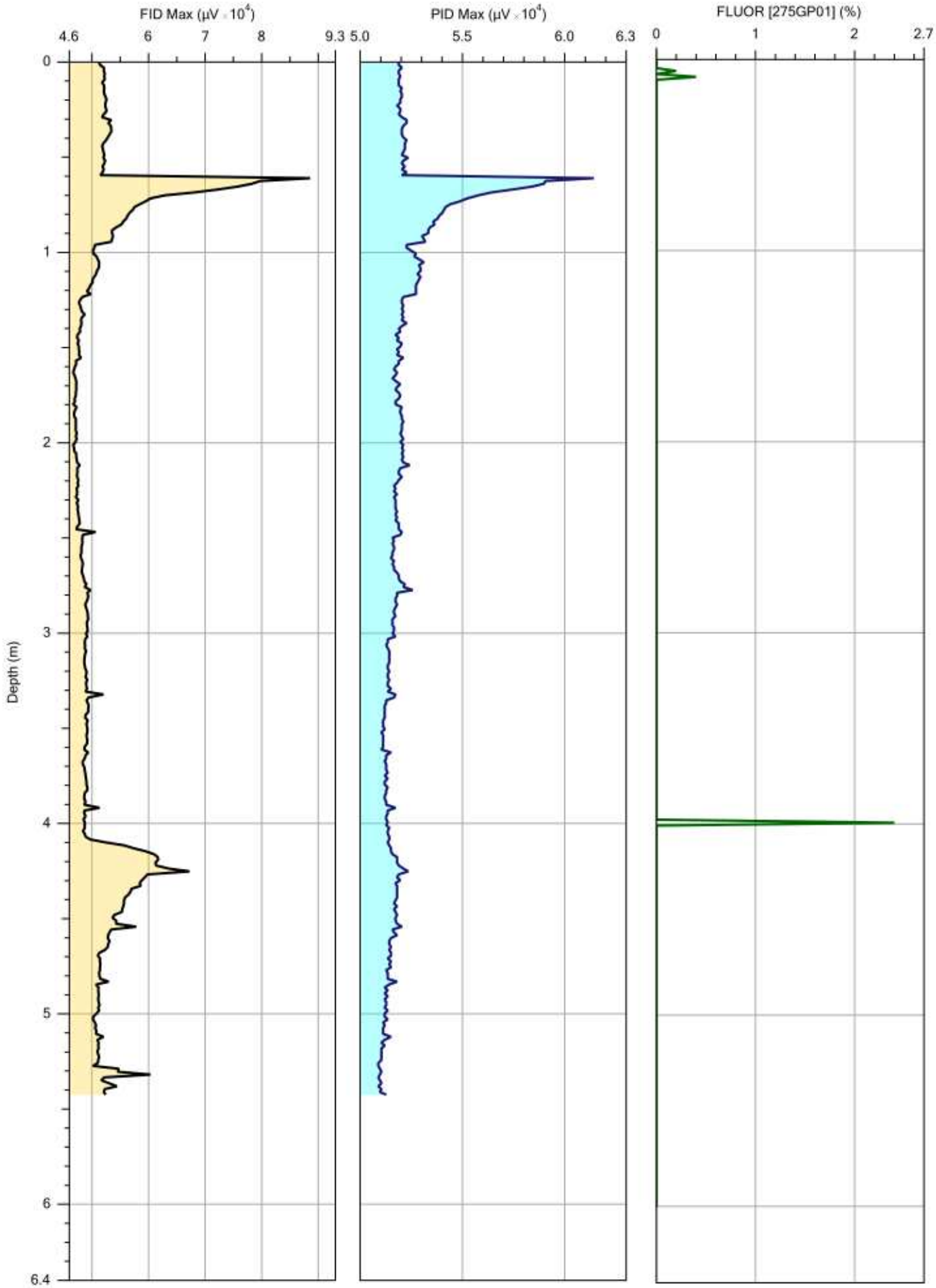
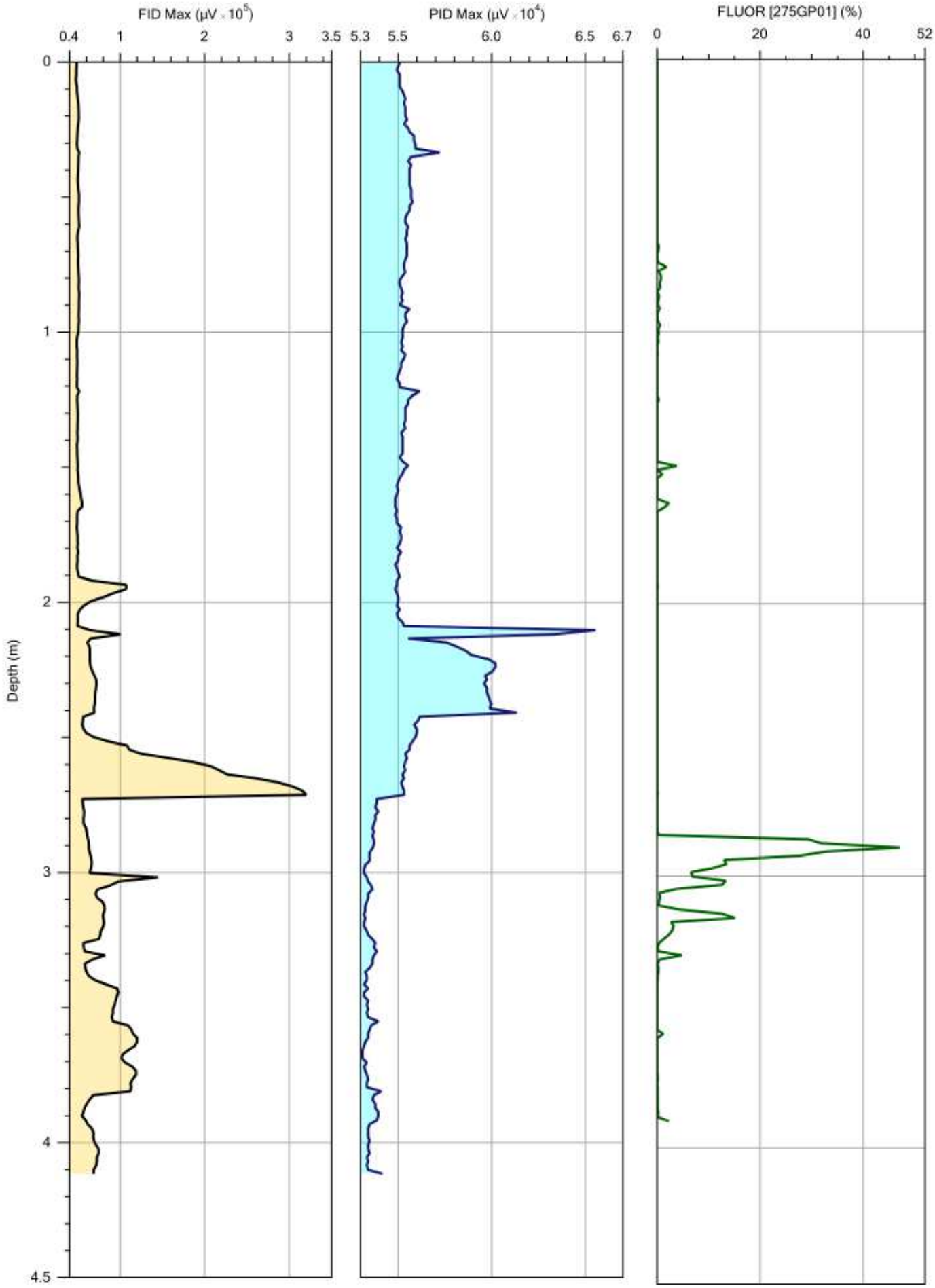
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

		File: MIP46.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath

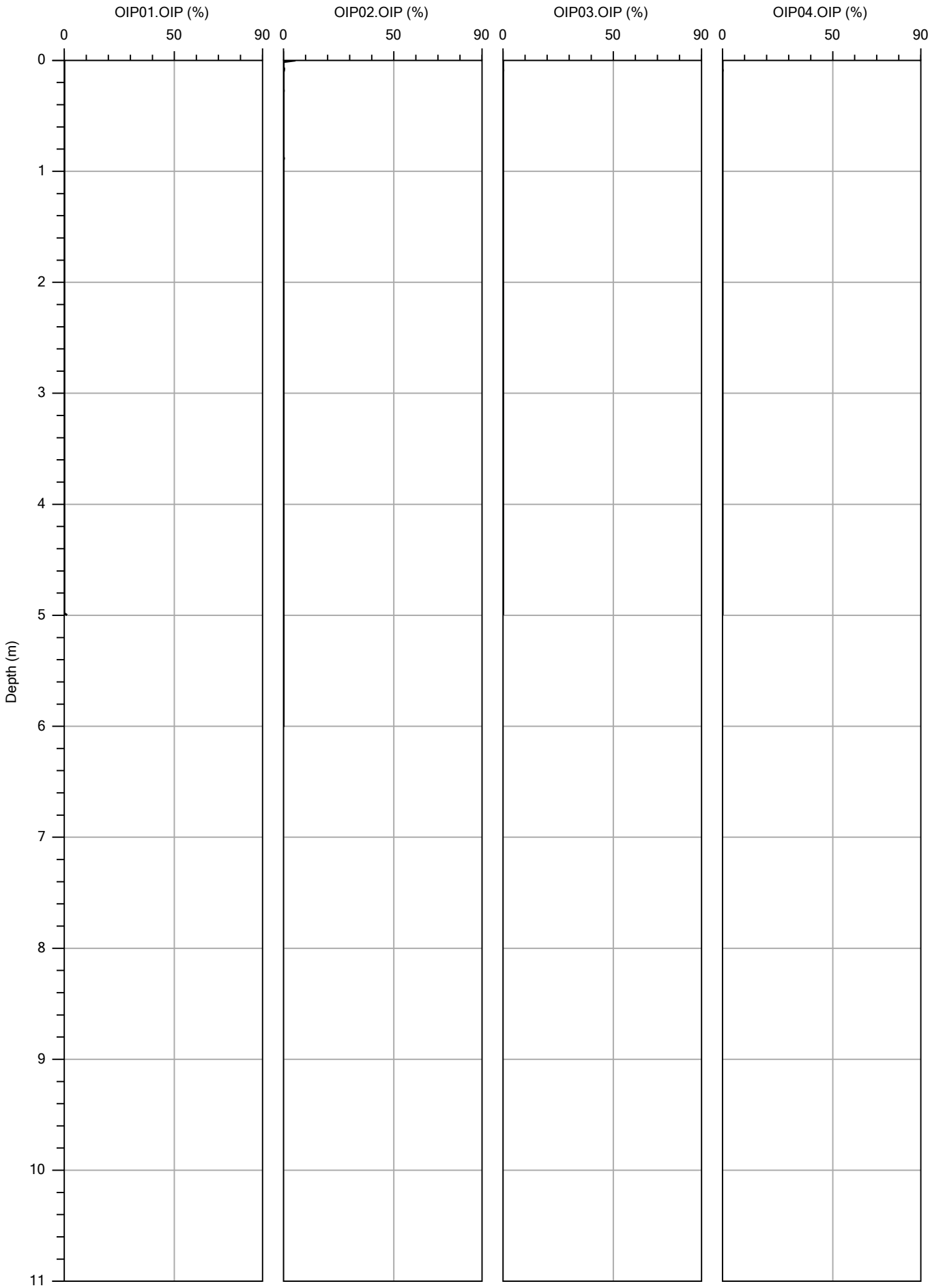


IN SITU
SITE INVESTIGATION

		File: MIP48.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath

11.0 OIP CROSS SECTIONS

Please note that all optical images captured during this project are included with this report as a zip file.

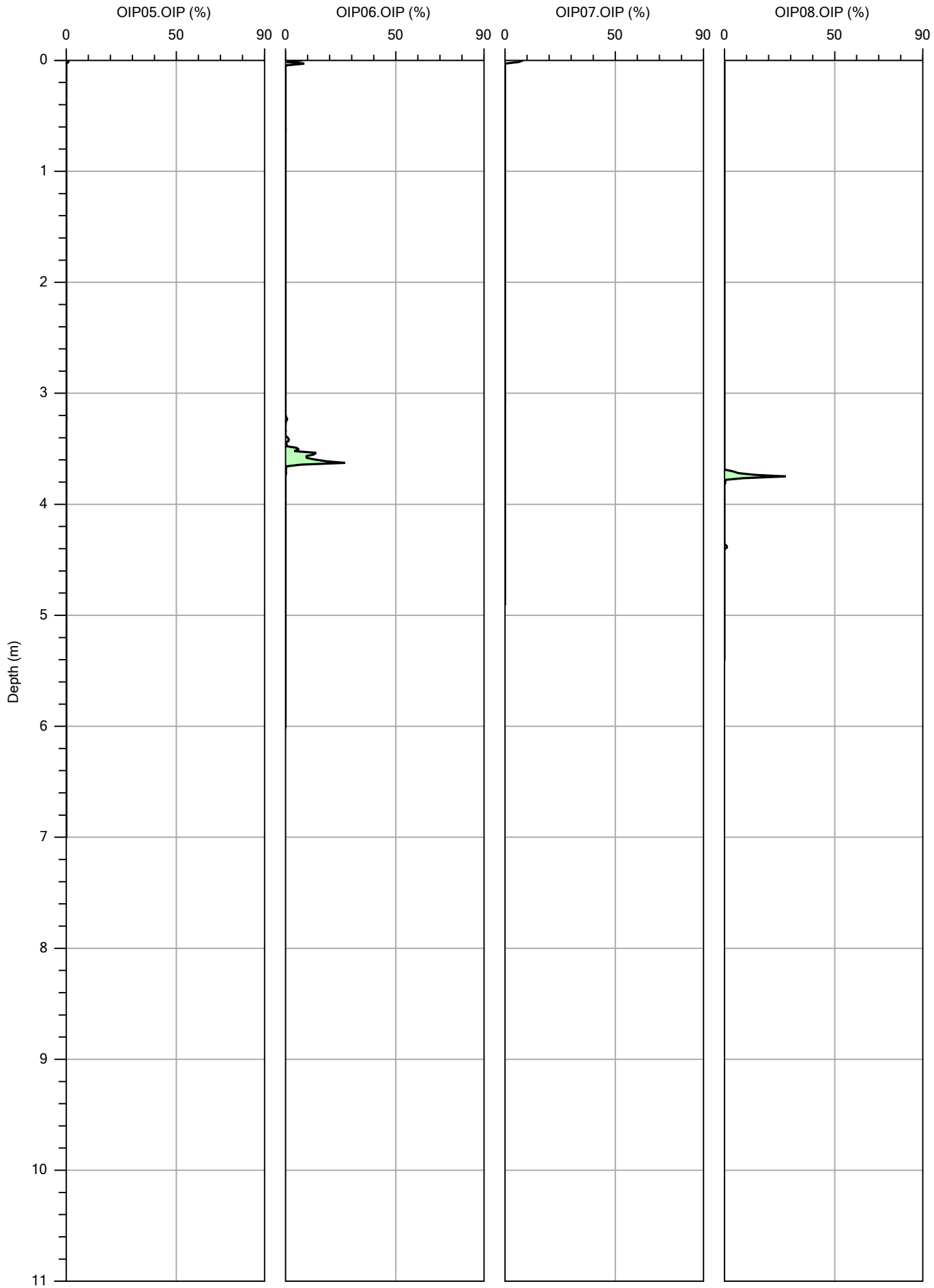


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP01.OIP	02/08/2021
OIP02.OIP	02/08/2021
OIP03.OIP	02/08/2021
OIP04.OIP	02/08/2021

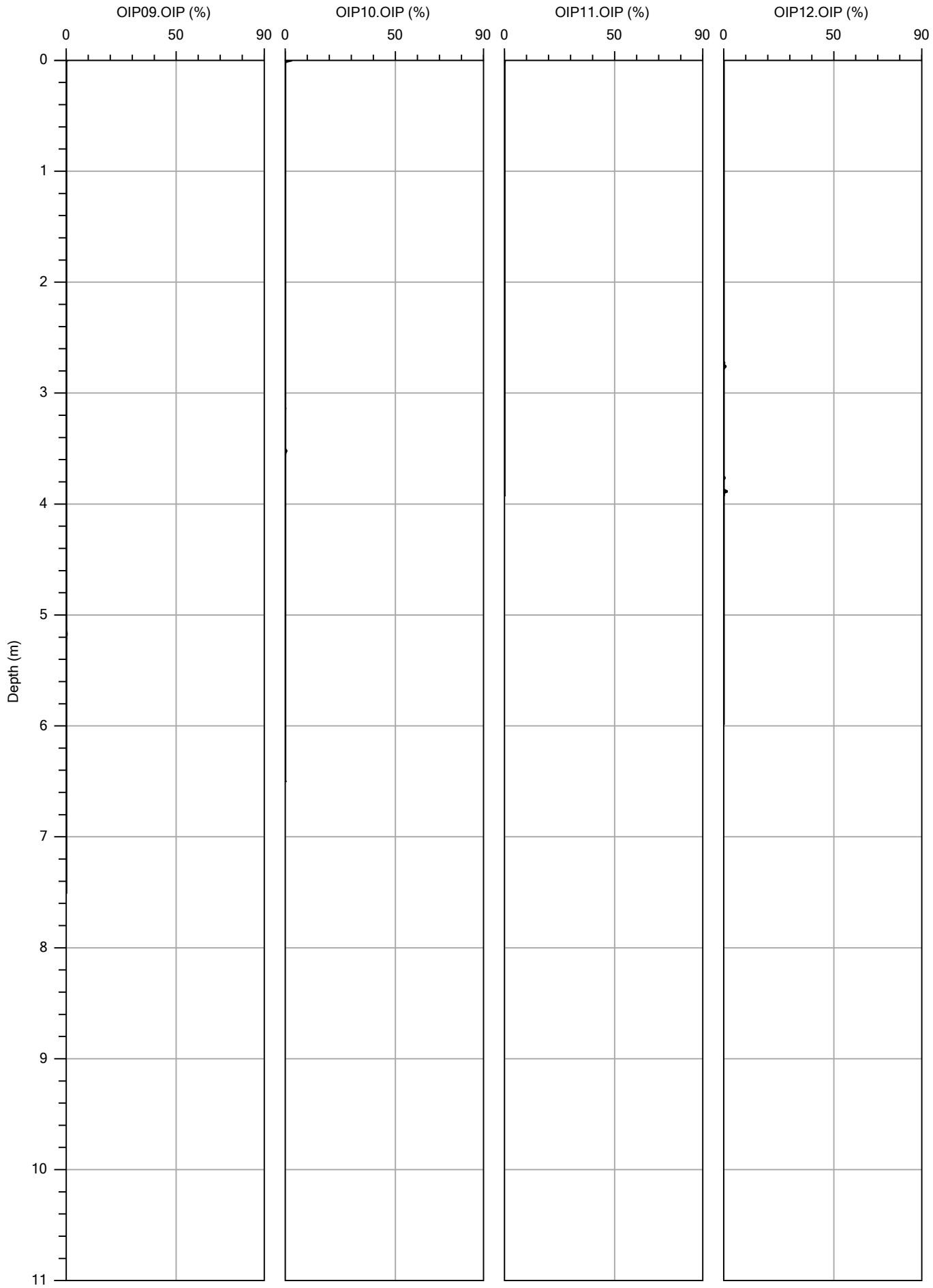


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP05.OIP	02/08/2021
OIP06.OIP	03/08/2021
OIP07.OIP	03/08/2021
OIP08.OIP	02/08/2021

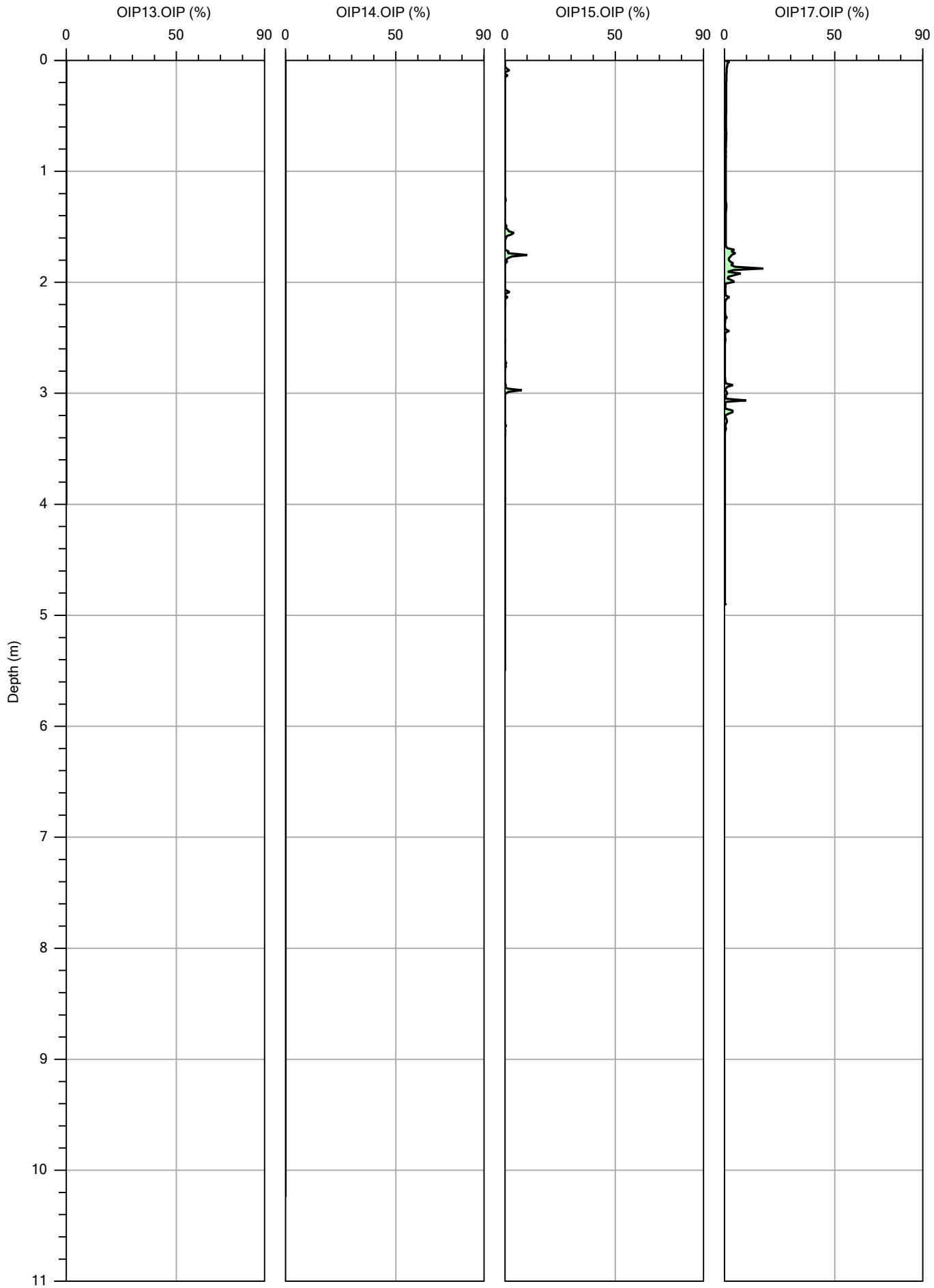


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP09.OIP	05/08/2021
OIP10.OIP	05/08/2021
OIP11.OIP	05/08/2021
OIP12.OIP	02/08/2021

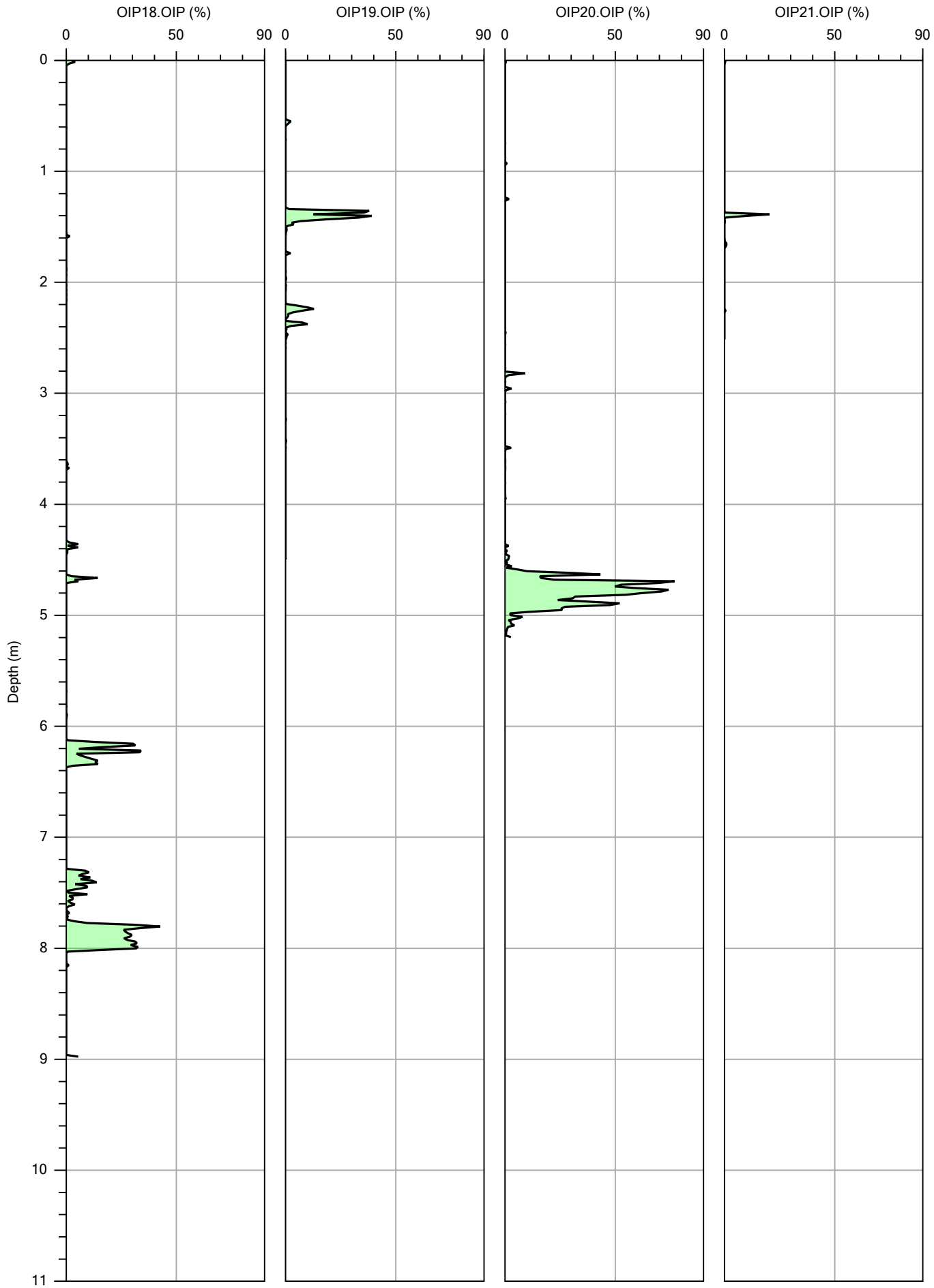


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP13.OIP	02/08/2021
OIP14.OIP	02/08/2021
OIP15.OIP	02/08/2021
OIP17.OIP	03/08/2021

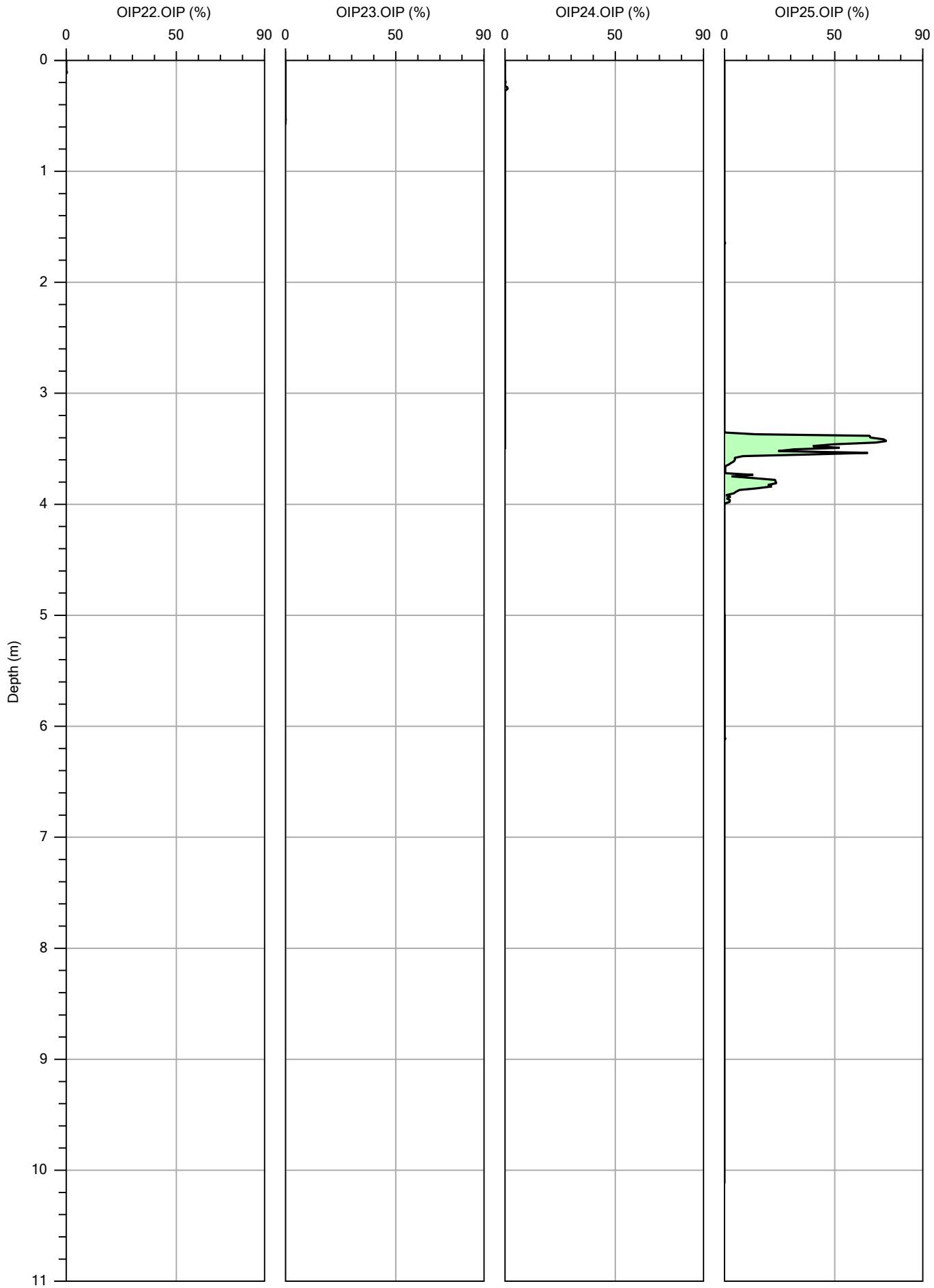


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP18.OIP	03/08/2021
OIP19.OIP	03/08/2021
OIP20.OIP	03/08/2021
OIP21.OIP	03/08/2021

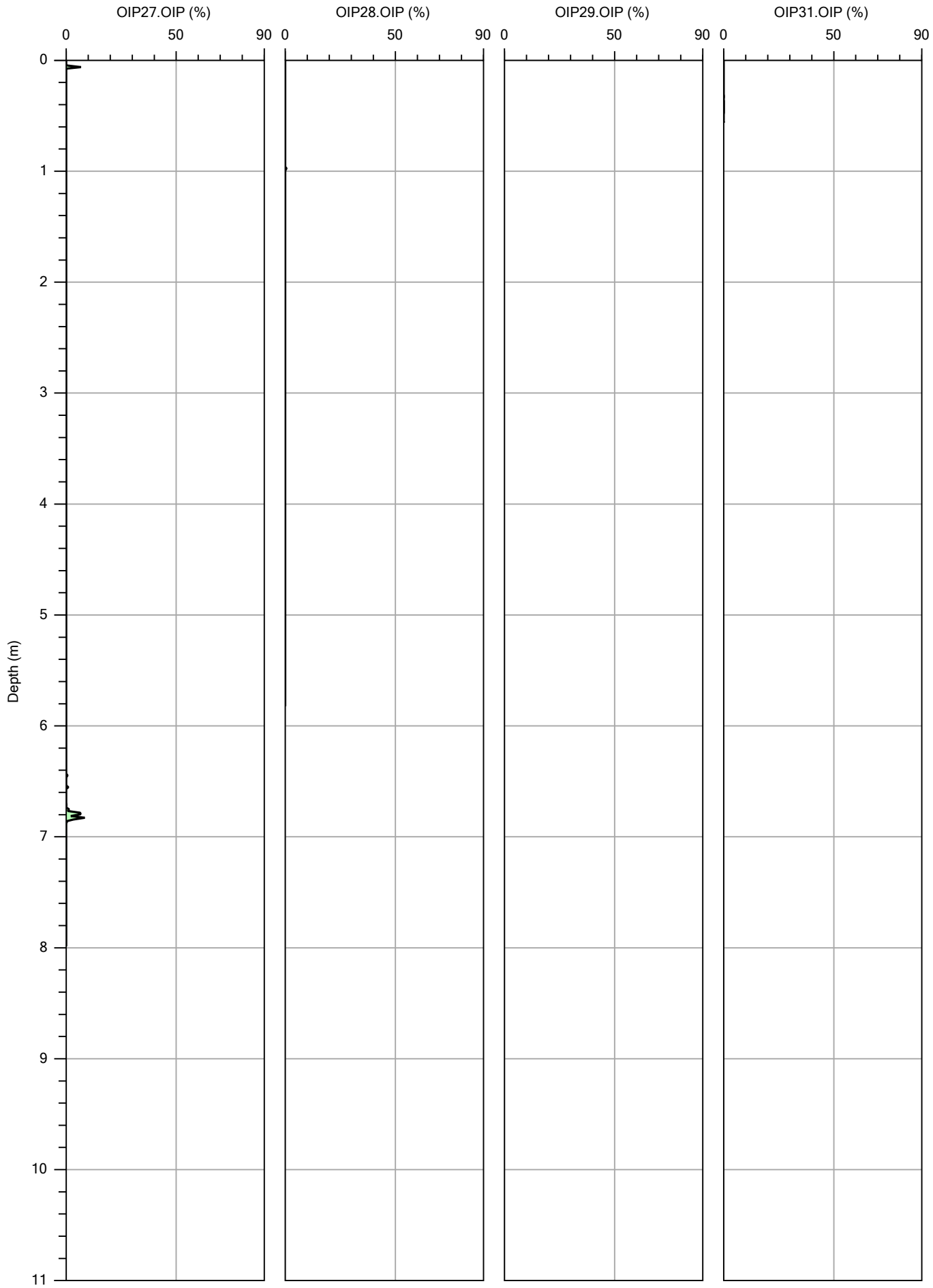


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP22.OIP	05/08/2021
OIP23.OIP	05/08/2021
OIP24.OIP	03/08/2021
OIP25.OIP	05/08/2021

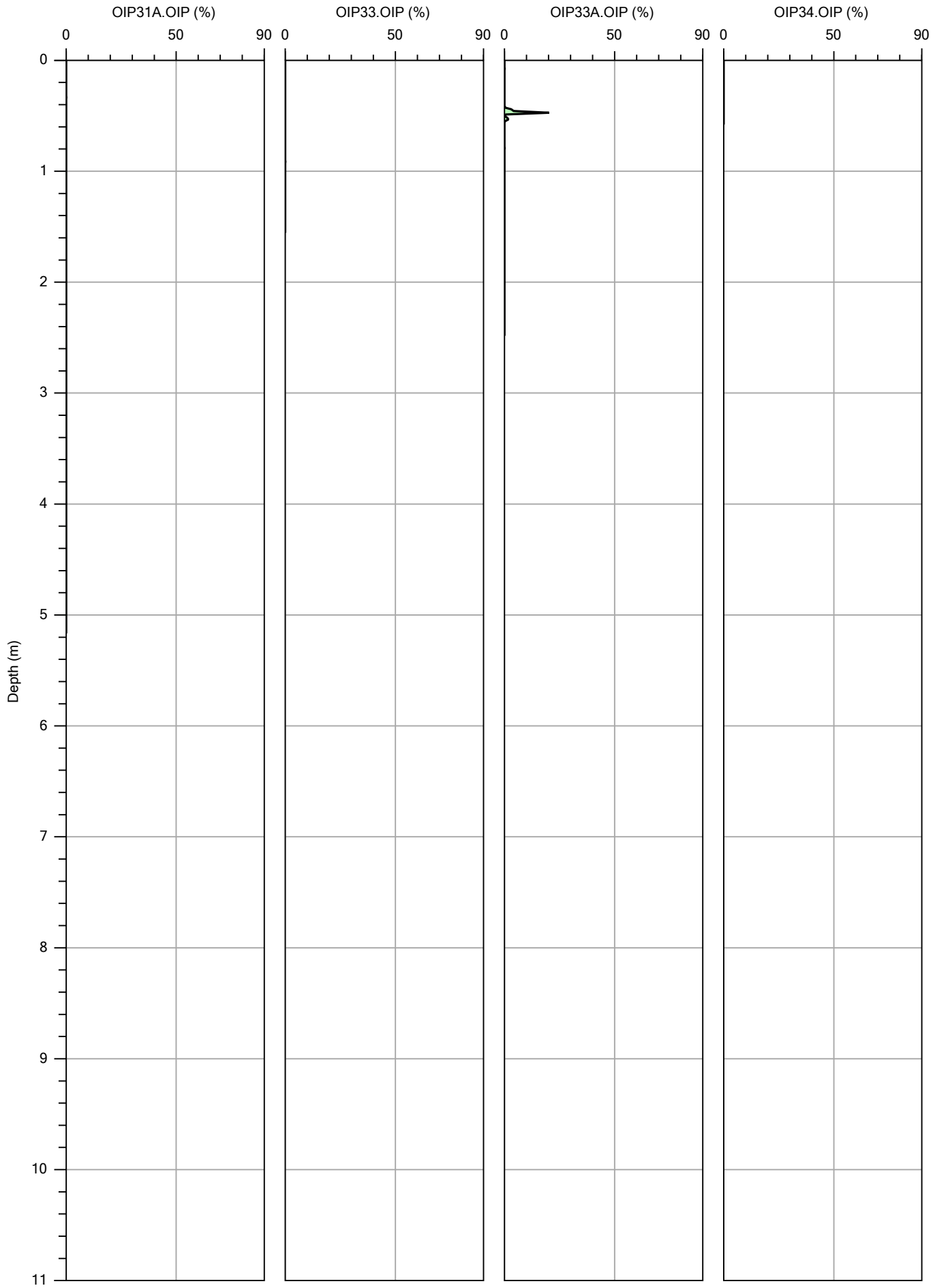


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP27.OIP	05/08/2021
OIP28.OIP	05/08/2021
OIP29.OIP	
OIP31.OIP	05/08/2021

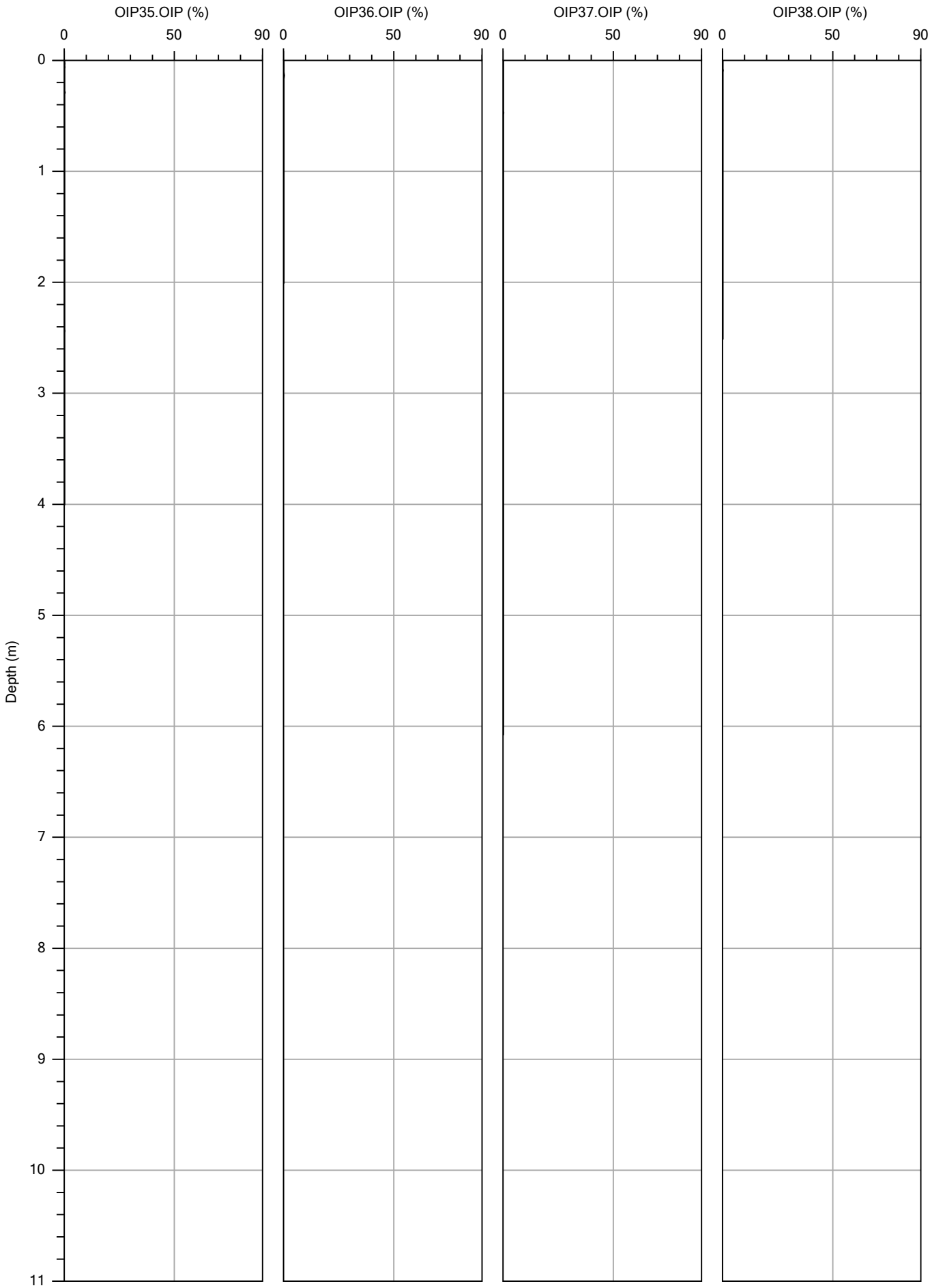


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP31A.OIP	05/08/2021
OIP33.OIP	05/08/2021
OIP33A.OIP	05/08/2021
OIP34.OIP	05/08/2021

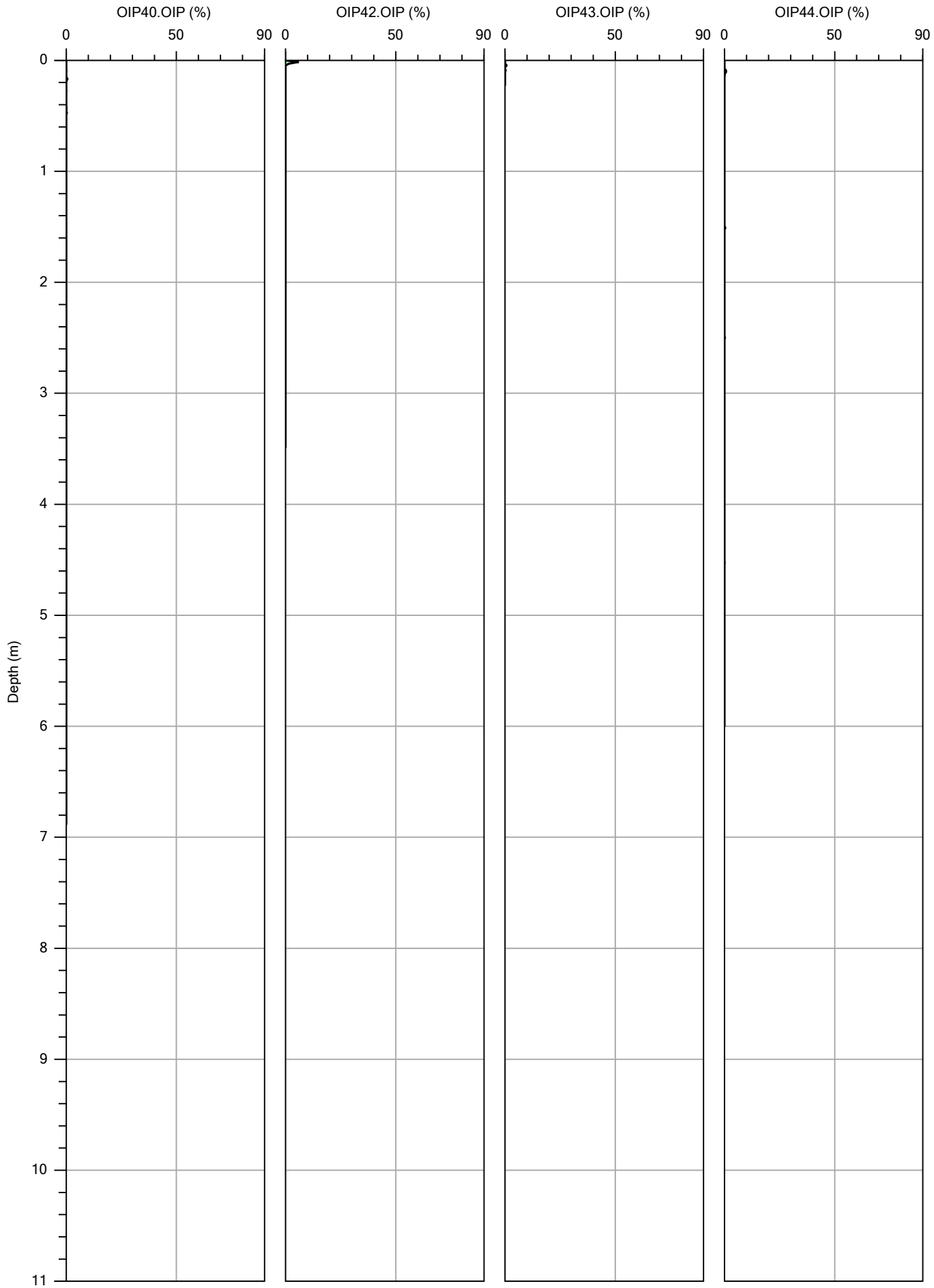


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP35.OIP	05/08/2021
OIP36.OIP	03/08/2021
OIP37.OIP	03/08/2021
OIP38.OIP	03/08/2021

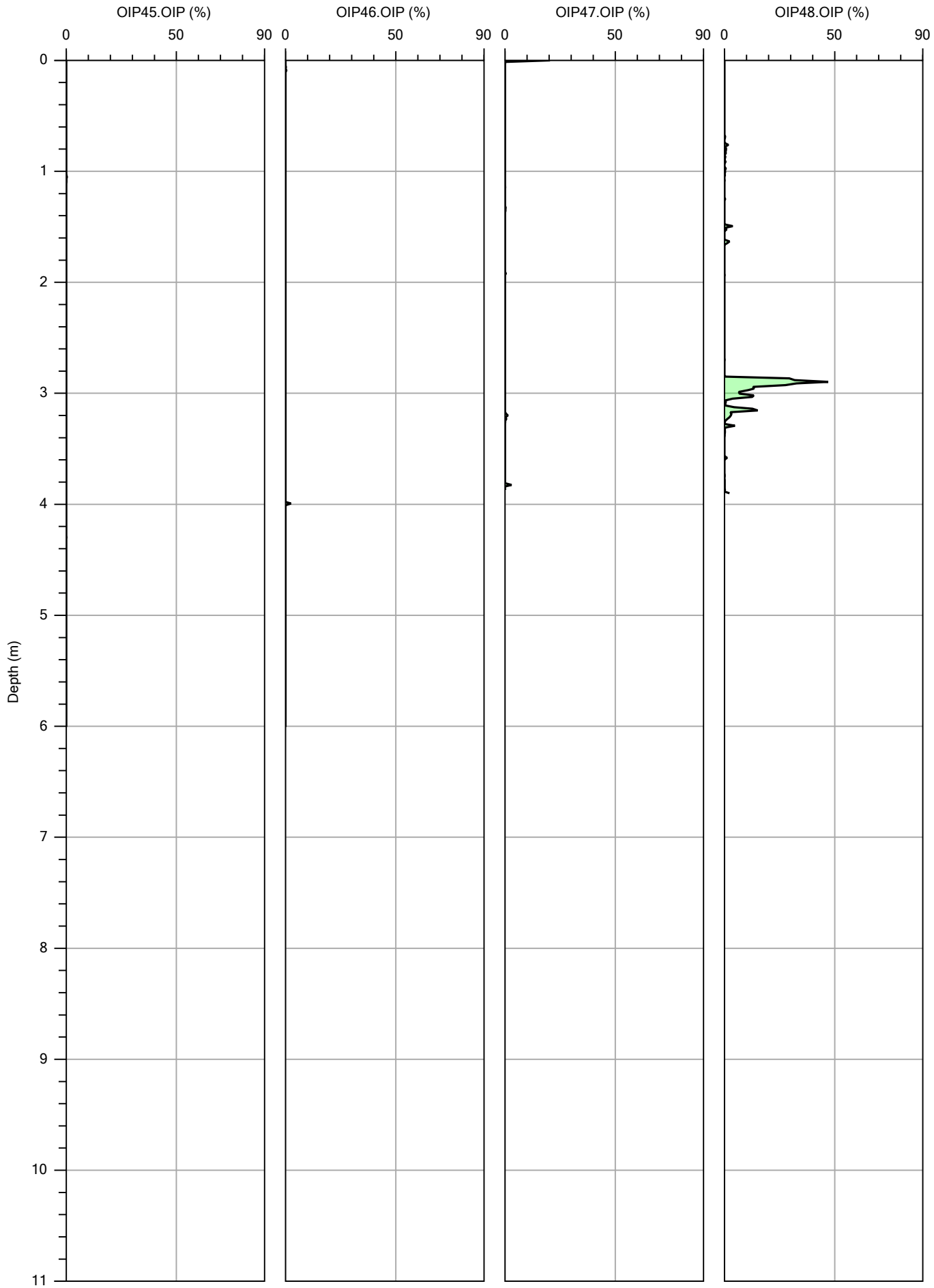


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP40.OIP	05/08/2021
OIP42.OIP	05/08/2021
OIP43.OIP	05/08/2021
OIP44.OIP	02/08/2021

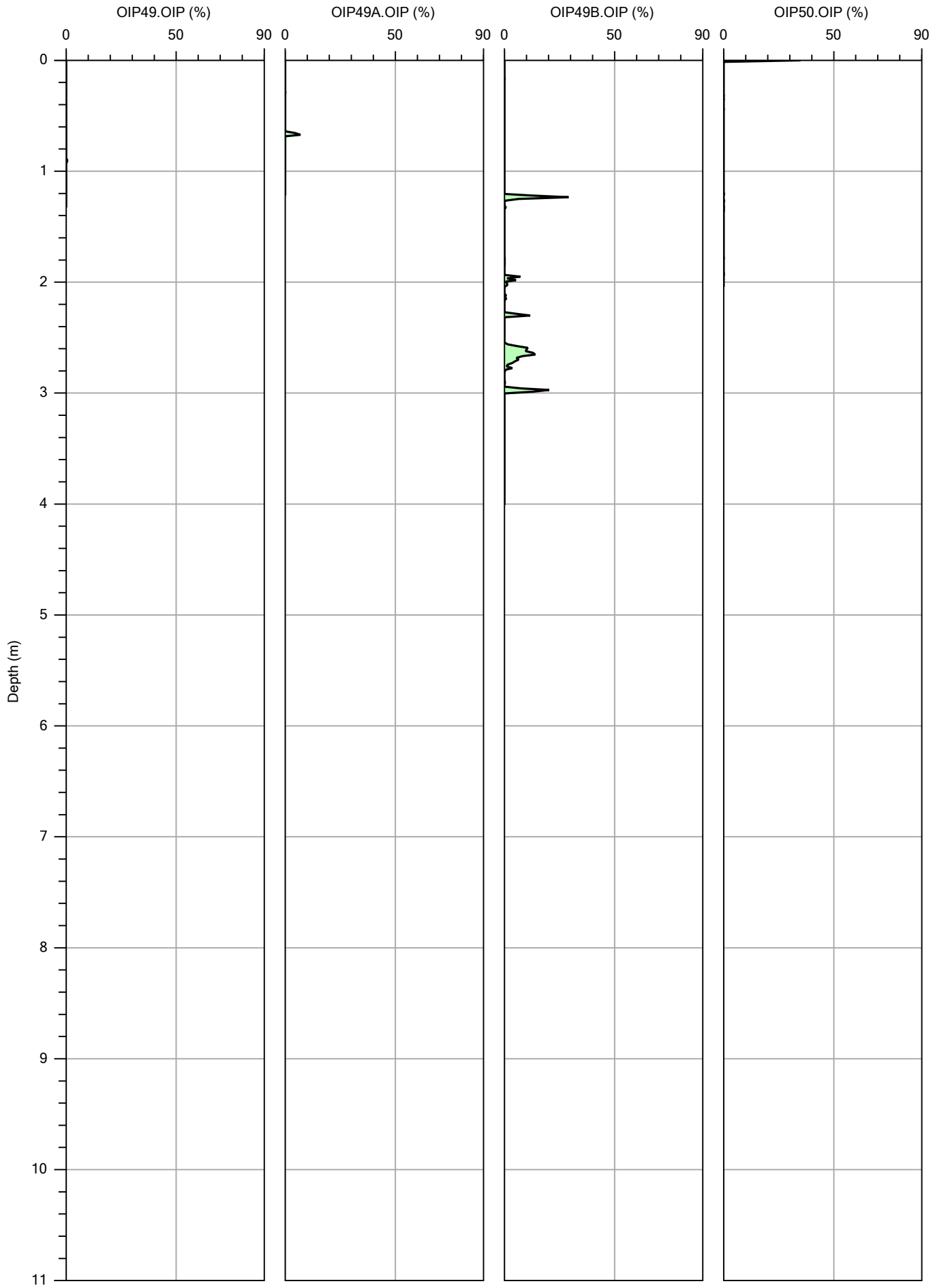


IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP45.OIP	02/08/2021
OIP46.OIP	02/08/2021
OIP47.OIP	03/08/2021
OIP48.OIP	03/08/2021



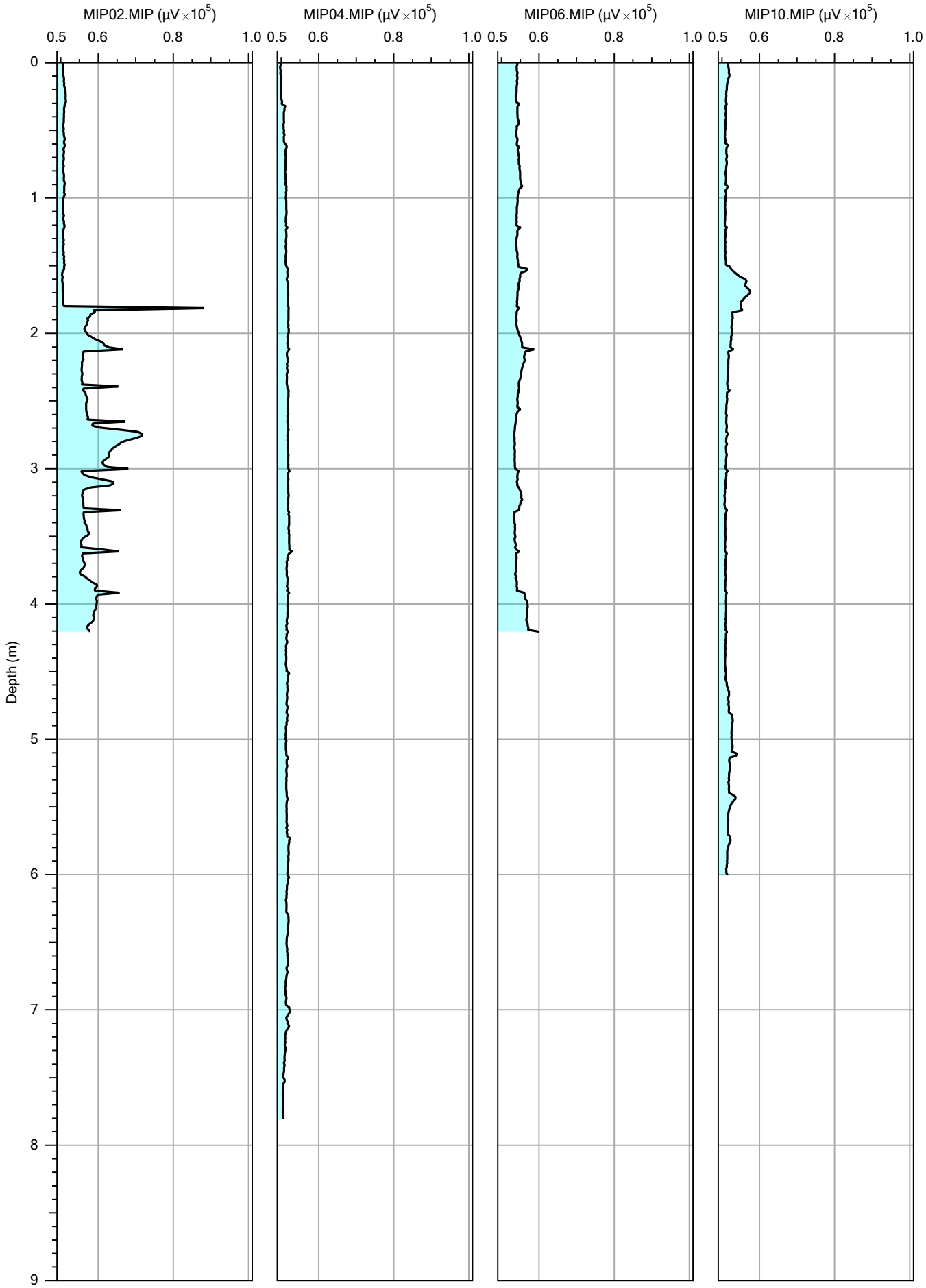
IN SITU
SITE INVESTIGATION

FLUOR [275GP01]

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP49.OIP	03/08/2021
OIP49A.OIP	03/08/2021
OIP49B.OIP	03/08/2021
OIP50.OIP	03/08/2021

12.0 MIHPT PID CROSS SECTIONS

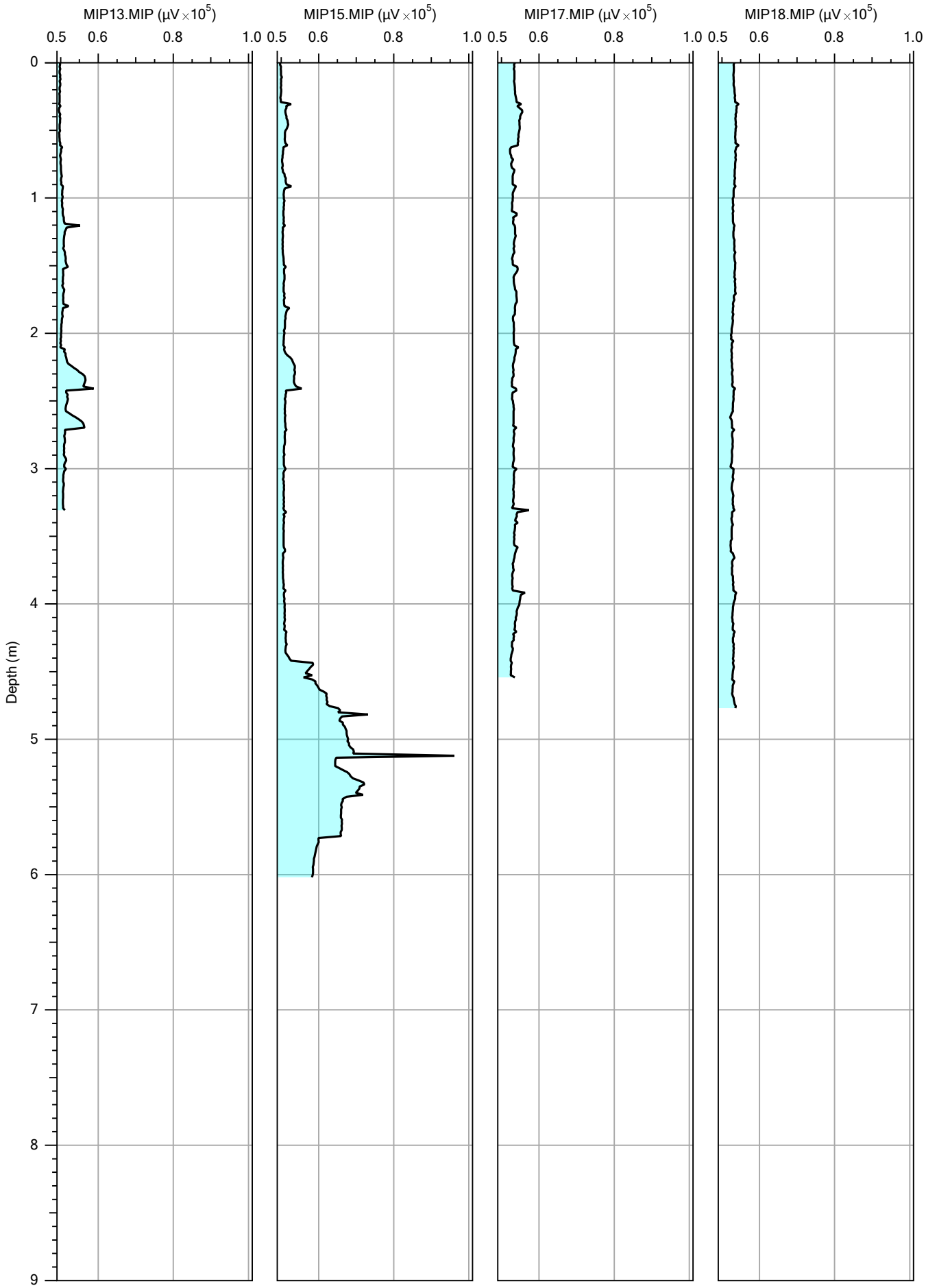


IN SITU
SITE INVESTIGATION

PID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP02.MIP	04/08/2021
MIP04.MIP	06/08/2021
MIP06.MIP	04/08/2021
MIP10.MIP	06/08/2021

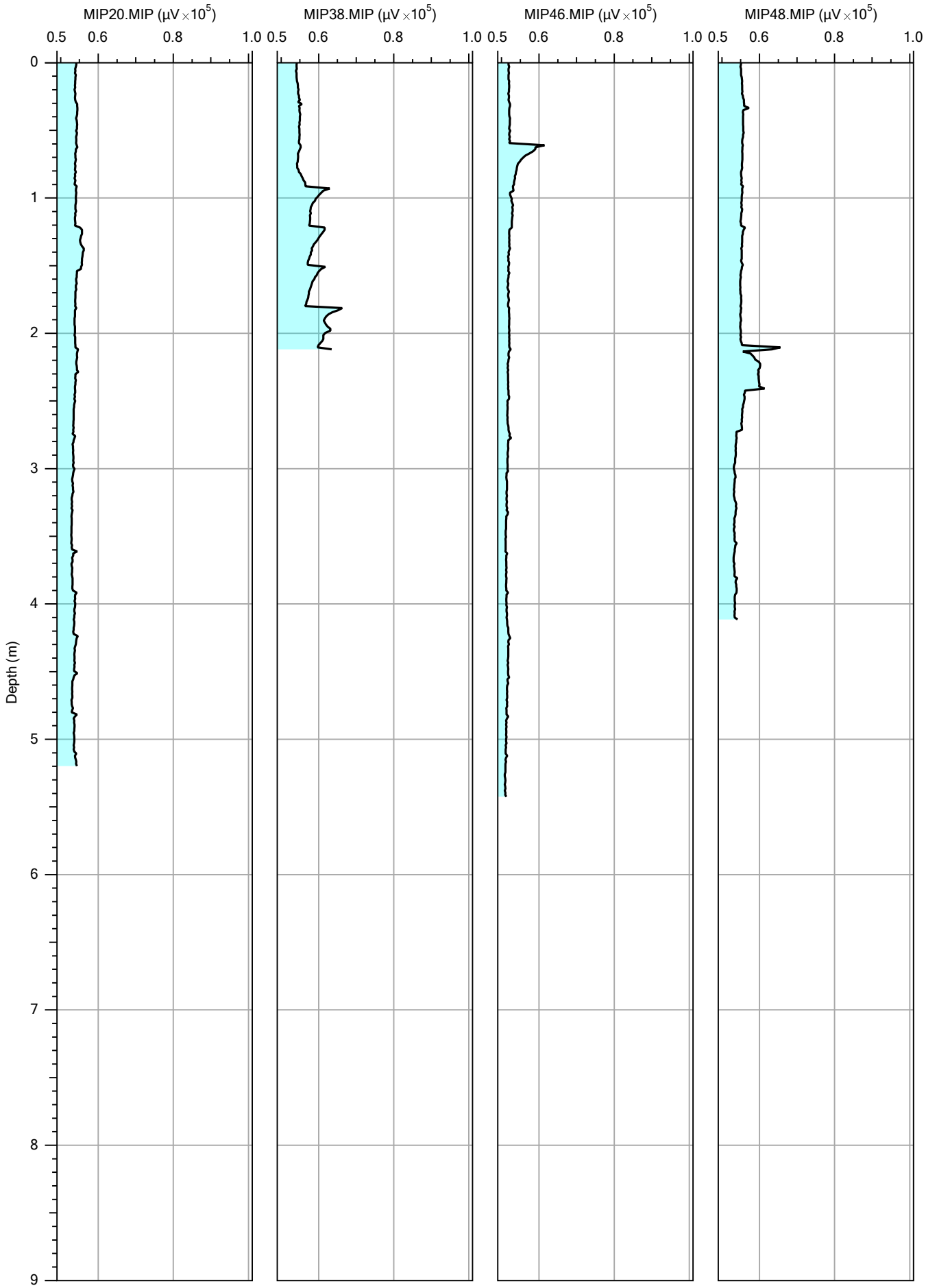


IN SITU
SITE INVESTIGATION

PID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP13.MIP	06/08/2021
MIP15.MIP	04/08/2021
MIP17.MIP	04/08/2021
MIP18.MIP	04/08/2021



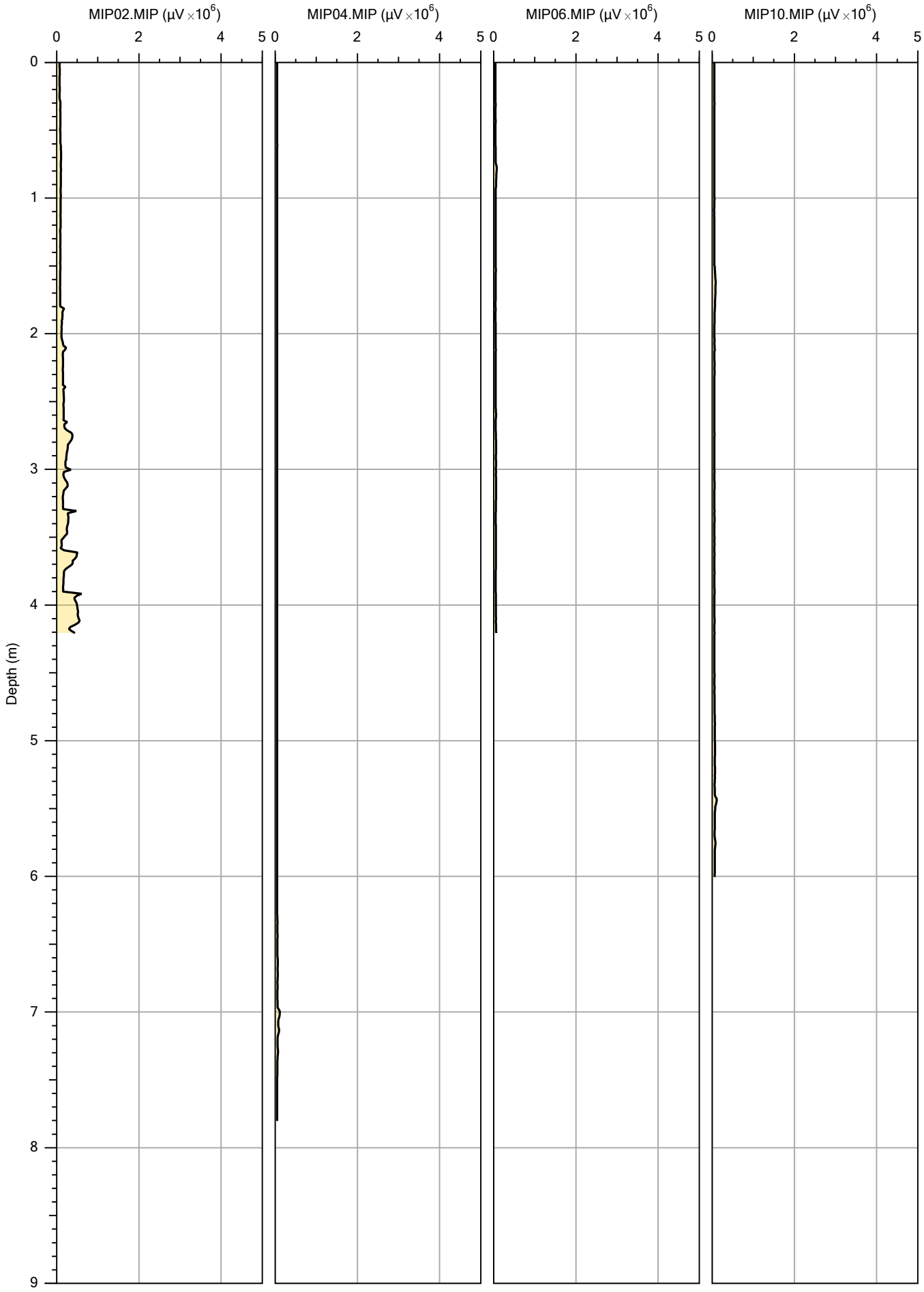
IN SITU
SITE INVESTIGATION

PID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP20.MIP	04/08/2021
MIP38.MIP	04/08/2021
MIP46.MIP	06/08/2021
MIP48.MIP	04/08/2021

13.0 MIHPT FID CROSS SECTIONS

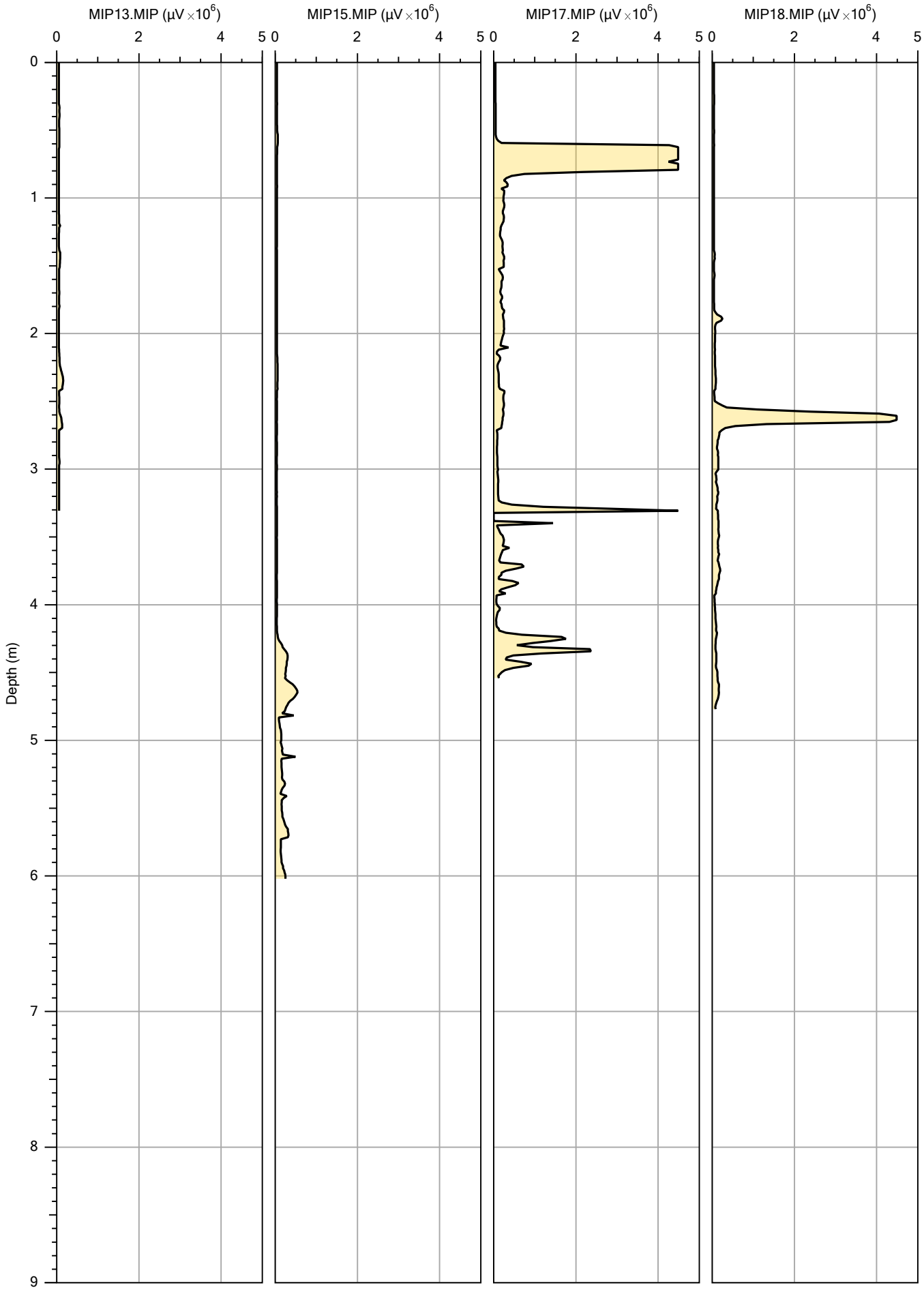


IN SITU
SITE INVESTIGATION

FID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP02.MIP	04/08/2021
MIP04.MIP	06/08/2021
MIP06.MIP	04/08/2021
MIP10.MIP	06/08/2021

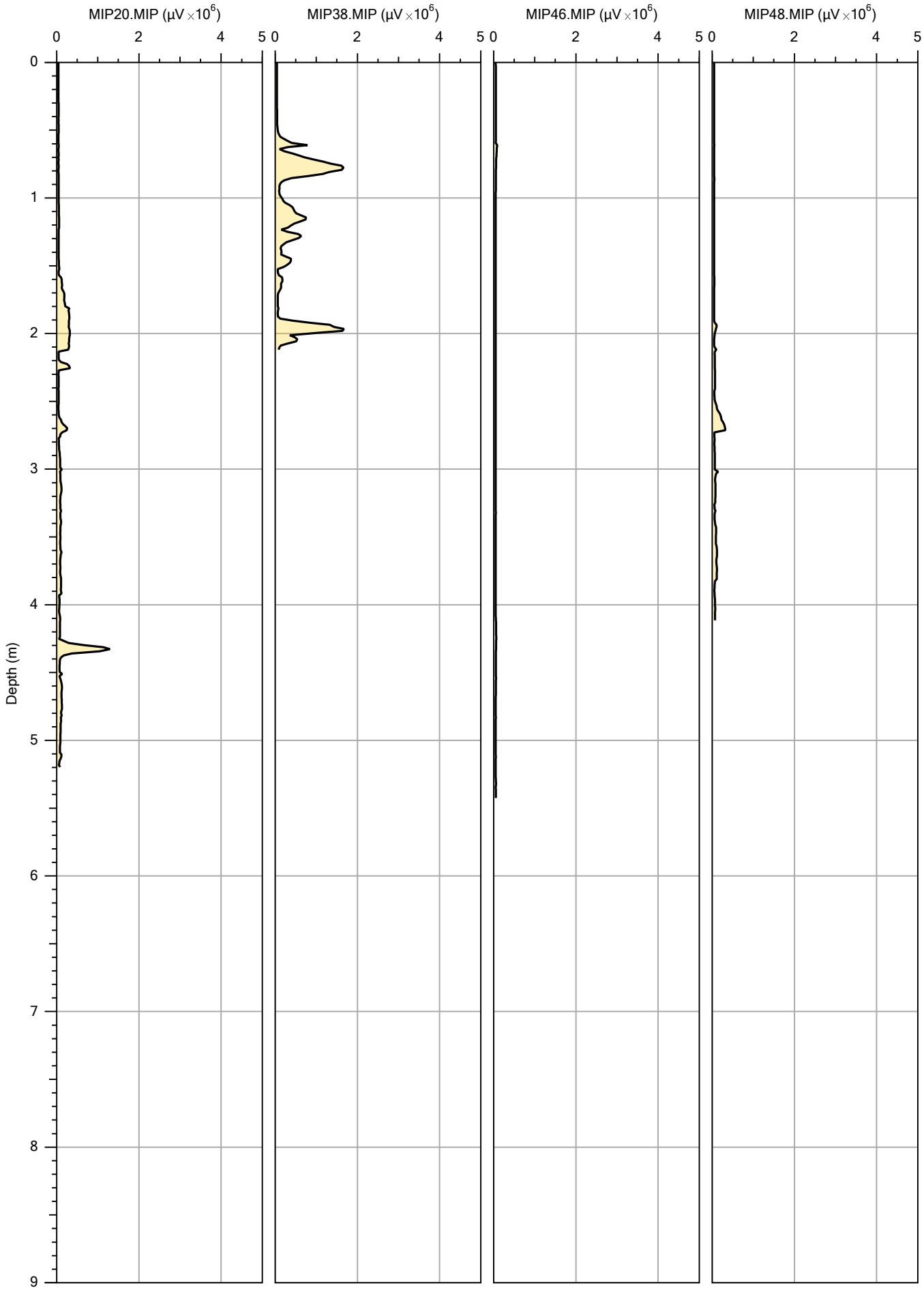


IN SITU
SITE INVESTIGATION

FID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP13.MIP	06/08/2021
MIP15.MIP	04/08/2021
MIP17.MIP	04/08/2021
MIP18.MIP	04/08/2021



IN SITU
SITE INVESTIGATION

FID Max

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

MIP20.MIP	04/08/2021
MIP38.MIP	04/08/2021
MIP46.MIP	06/08/2021
MIP48.MIP	04/08/2021

14.0 OIP PROFILES

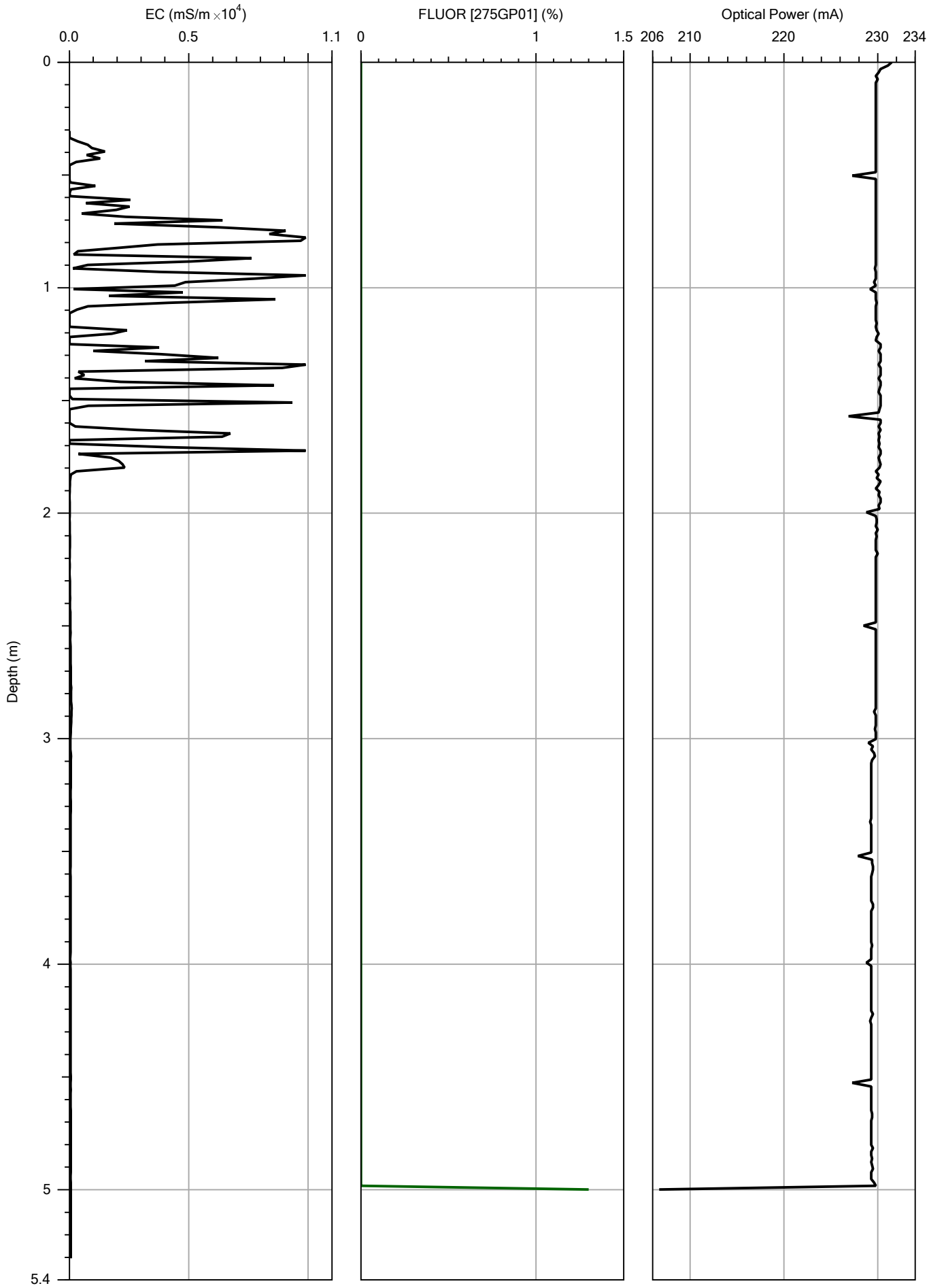
All OIP visual, UV and reference check images are included alongside this report in individual ZIP files.

Please note:

Images with the suffix .vis are optical light images

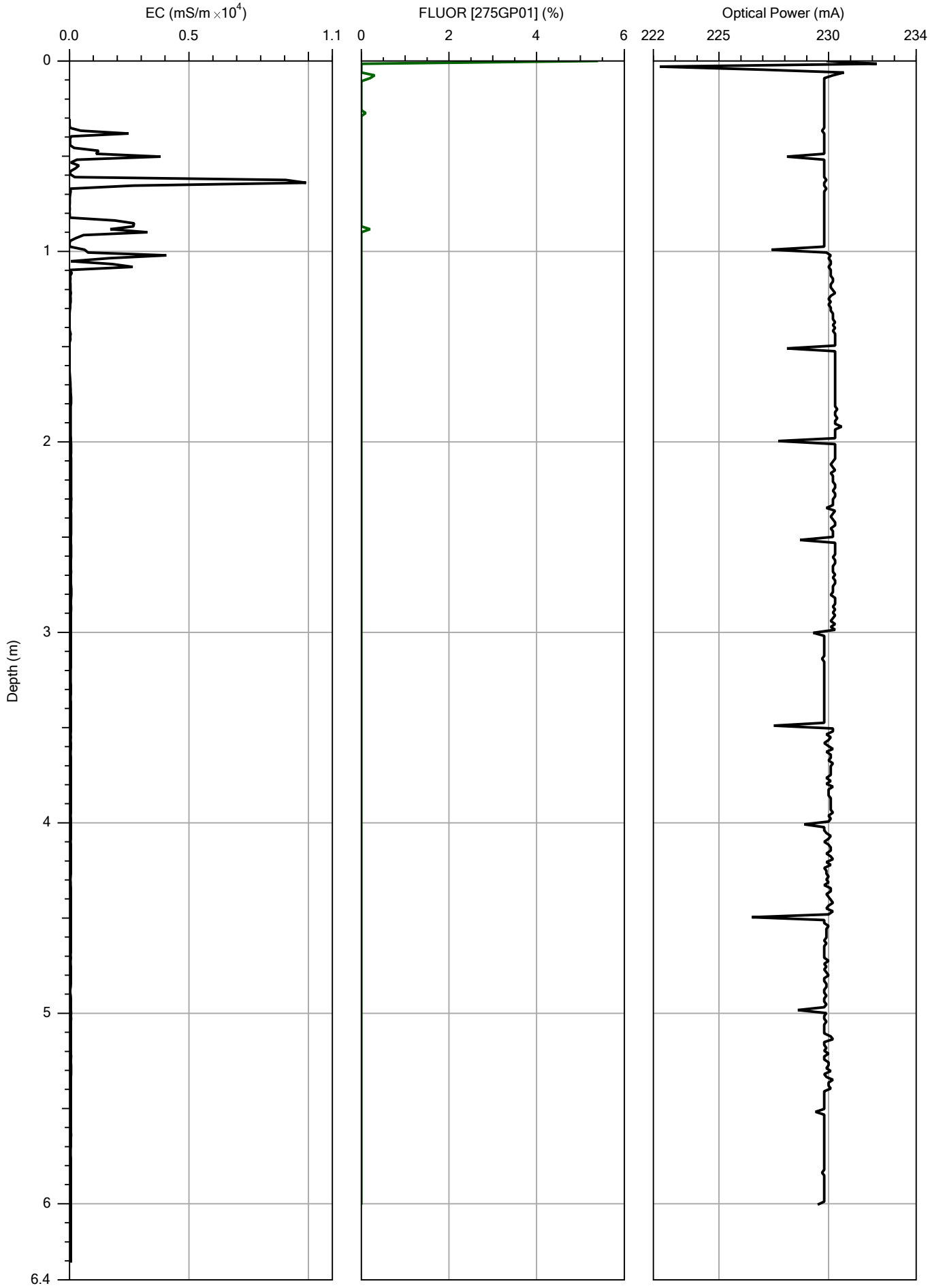
Images with the suffix .275 are UV stills

All depths recorded in the photos are in feet.



IN SITU
SITE INVESTIGATION

		File: OIP01.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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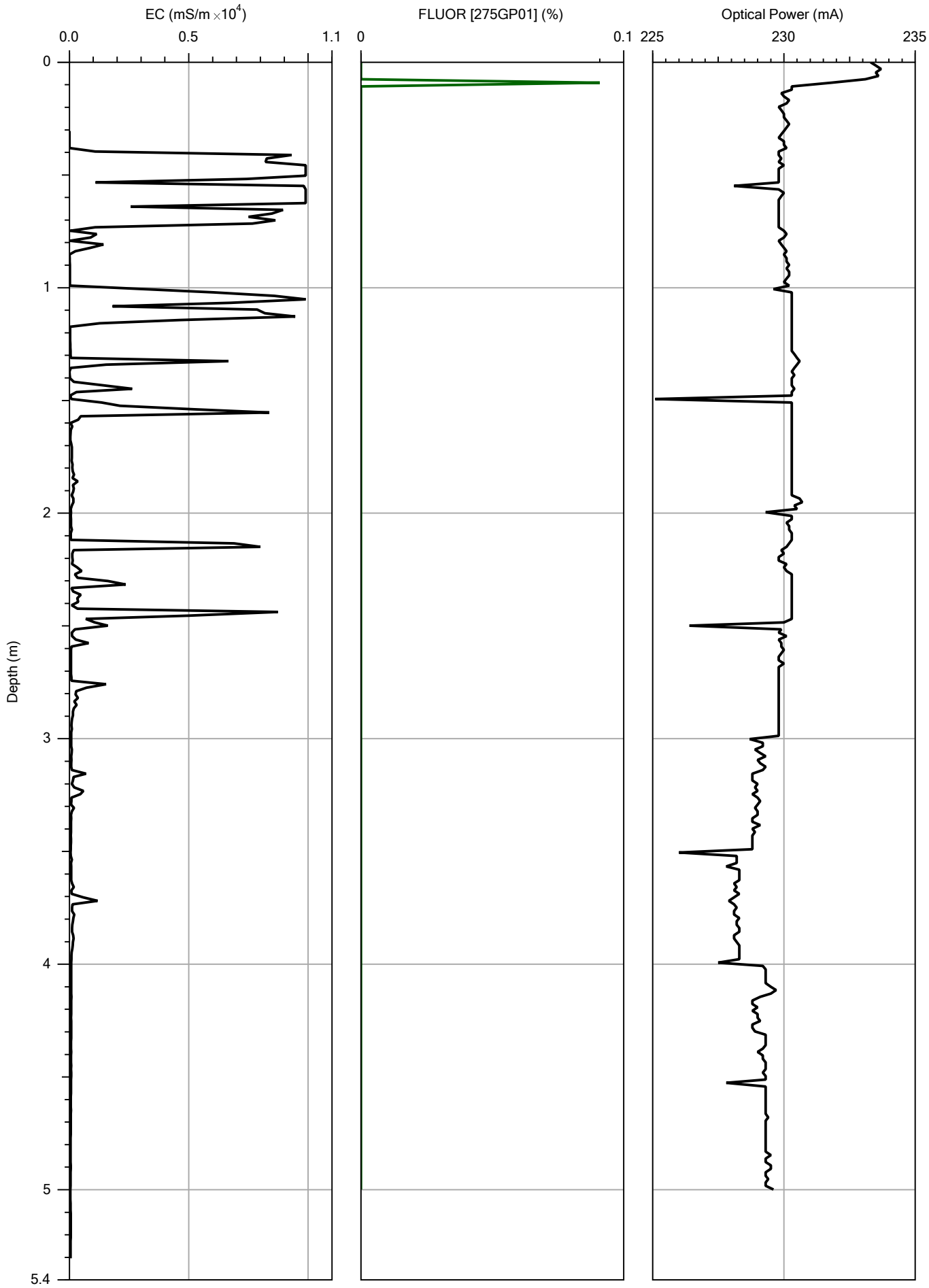
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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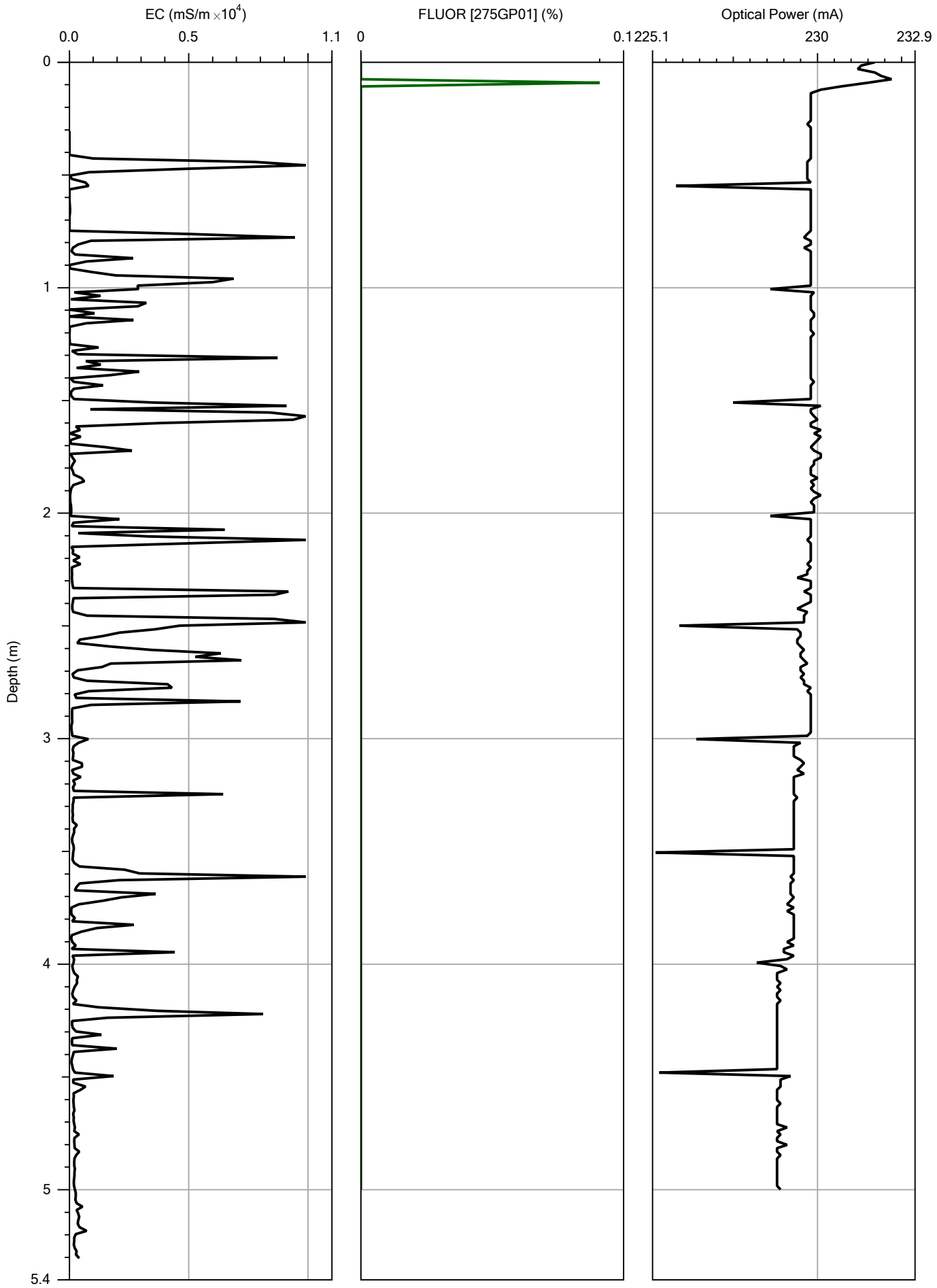
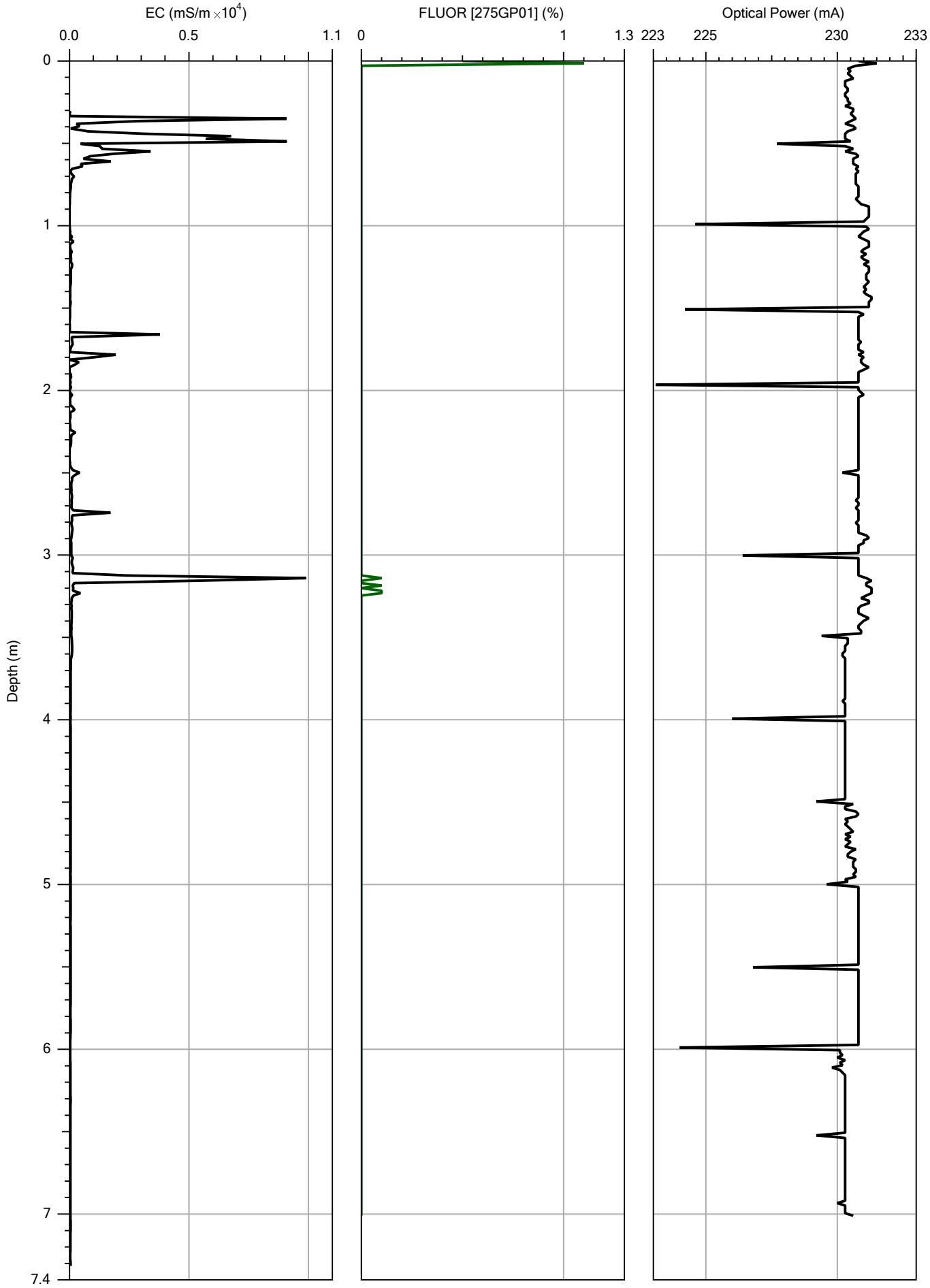
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



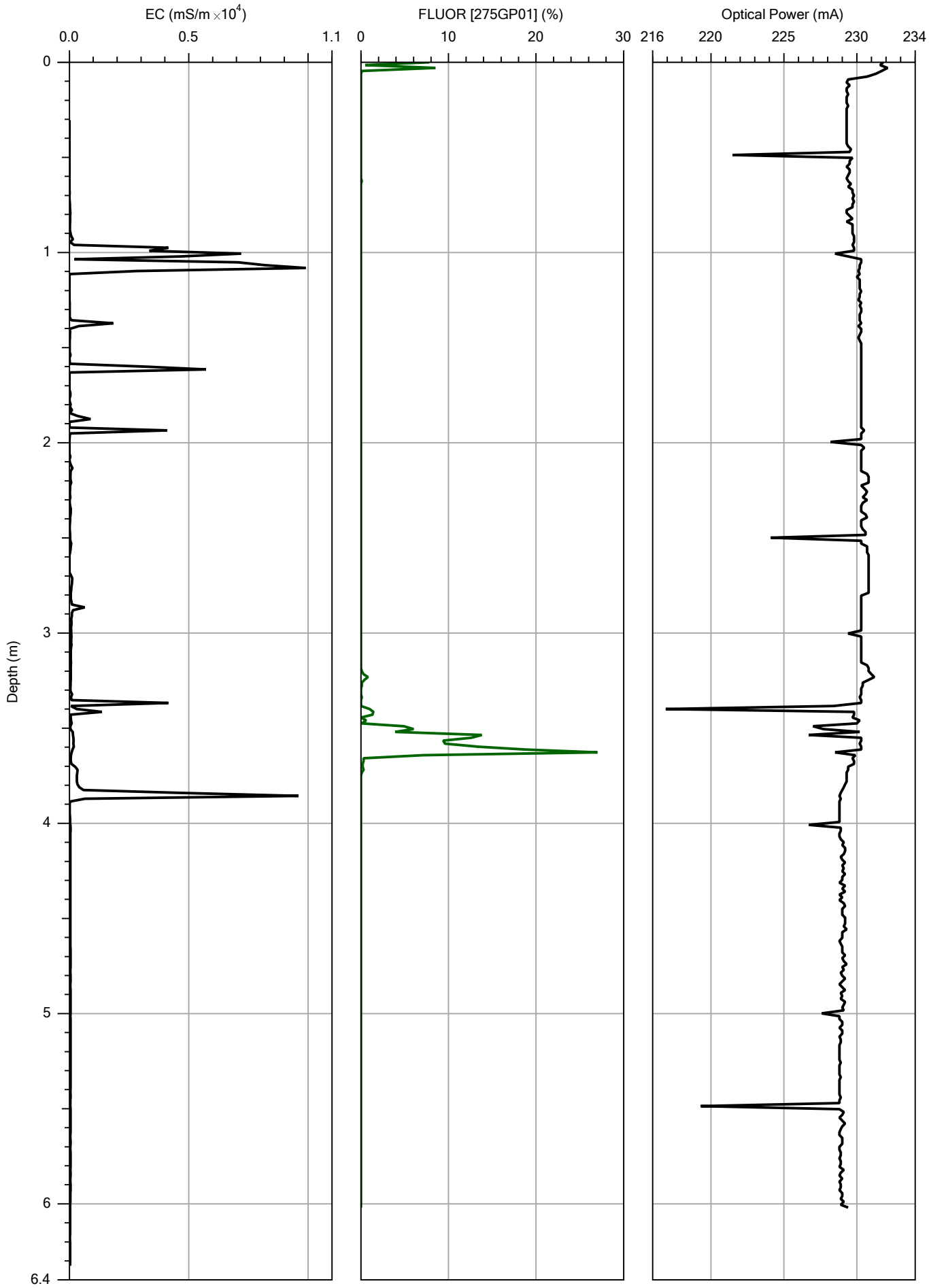
IN SITU
SITE INVESTIGATION

		File: OIP04.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP05.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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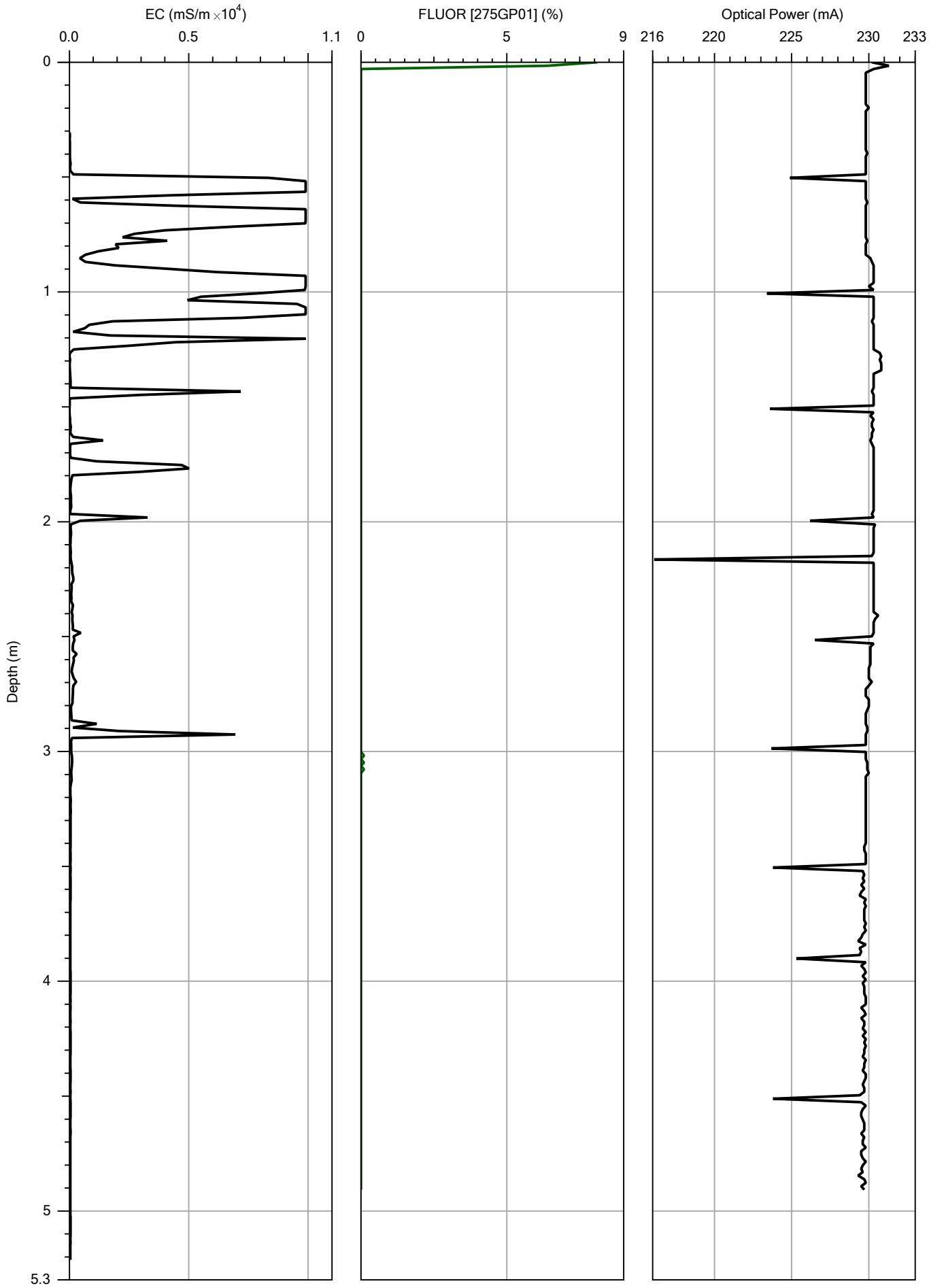
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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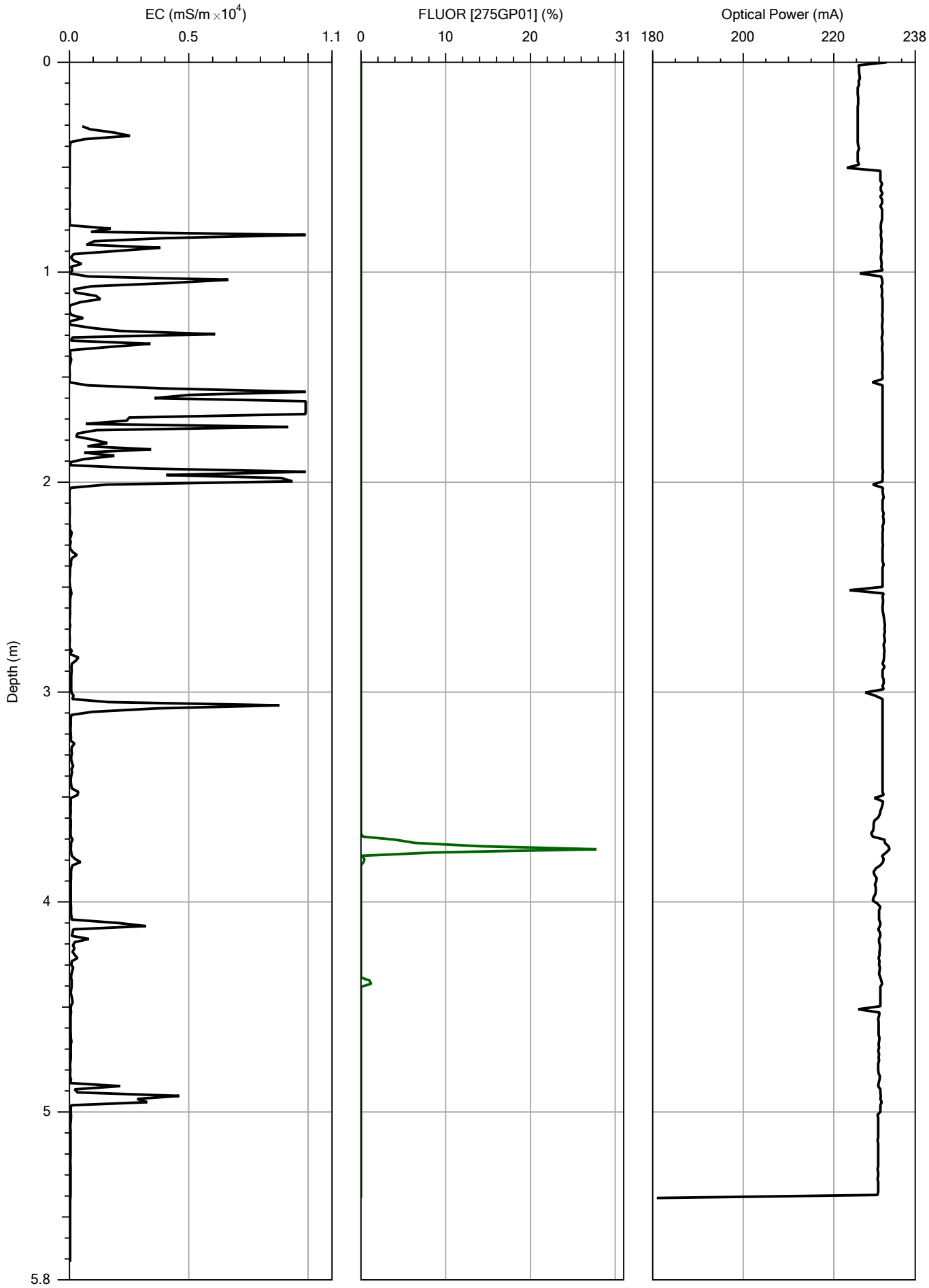
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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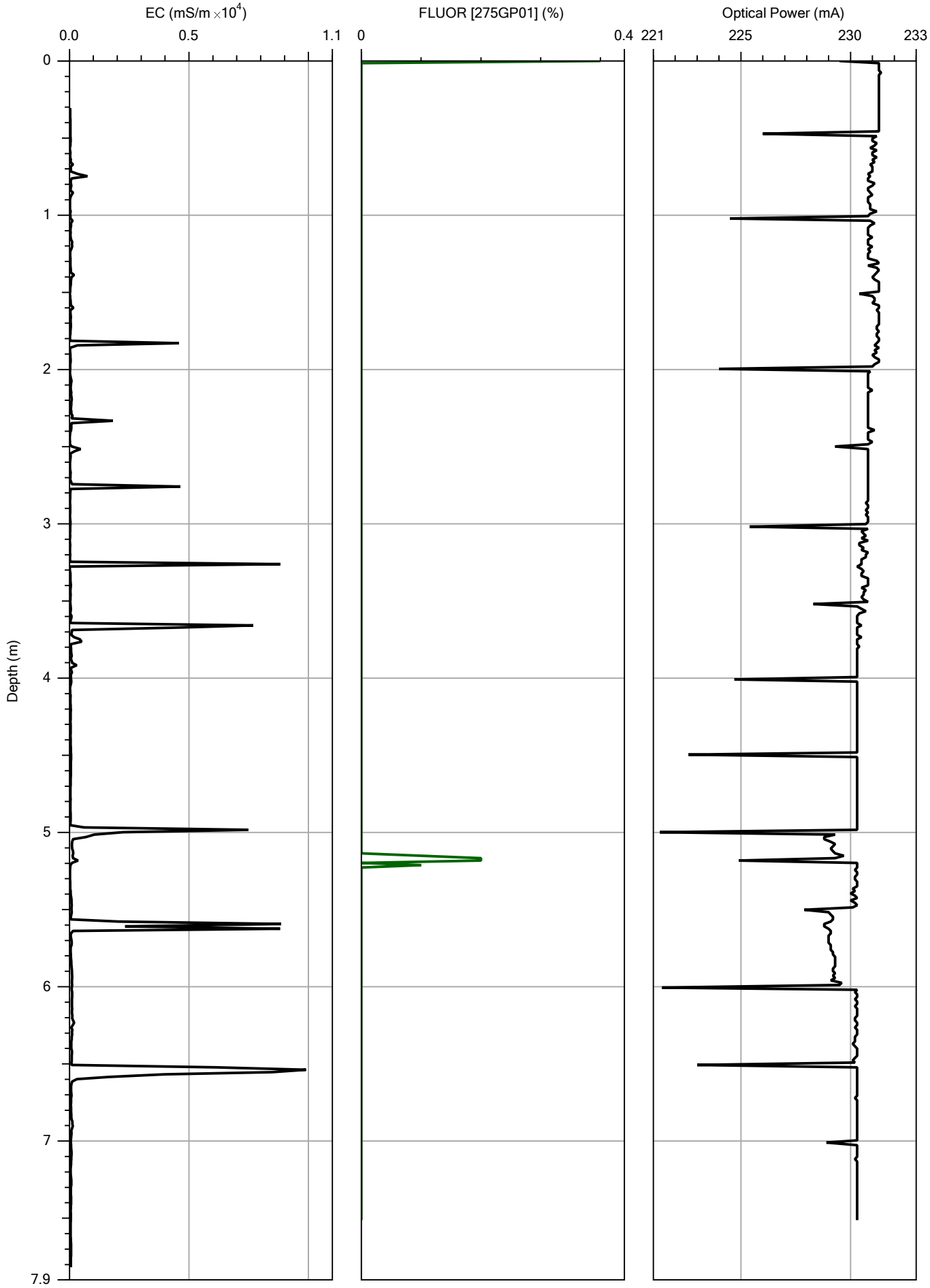
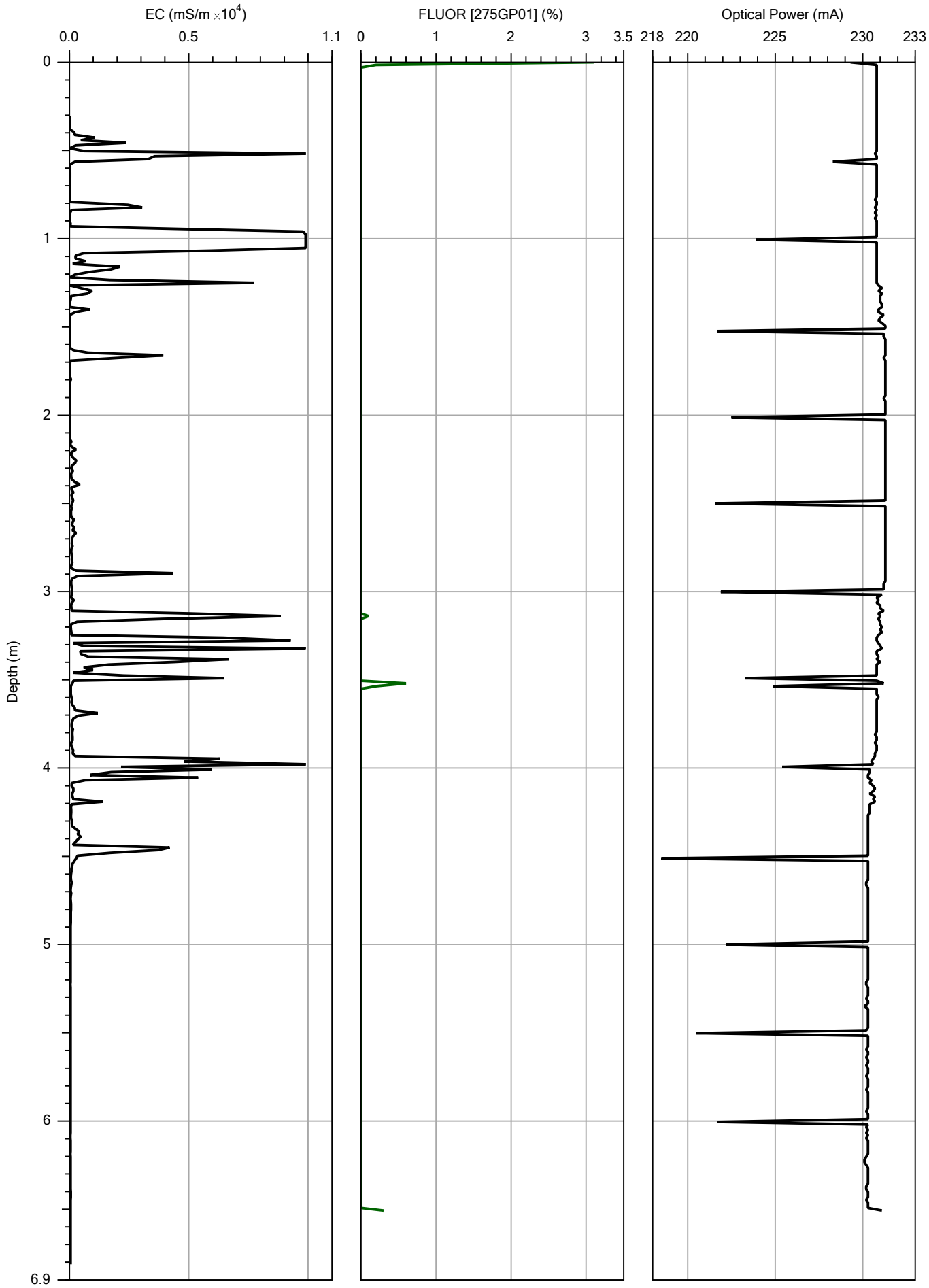
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP09.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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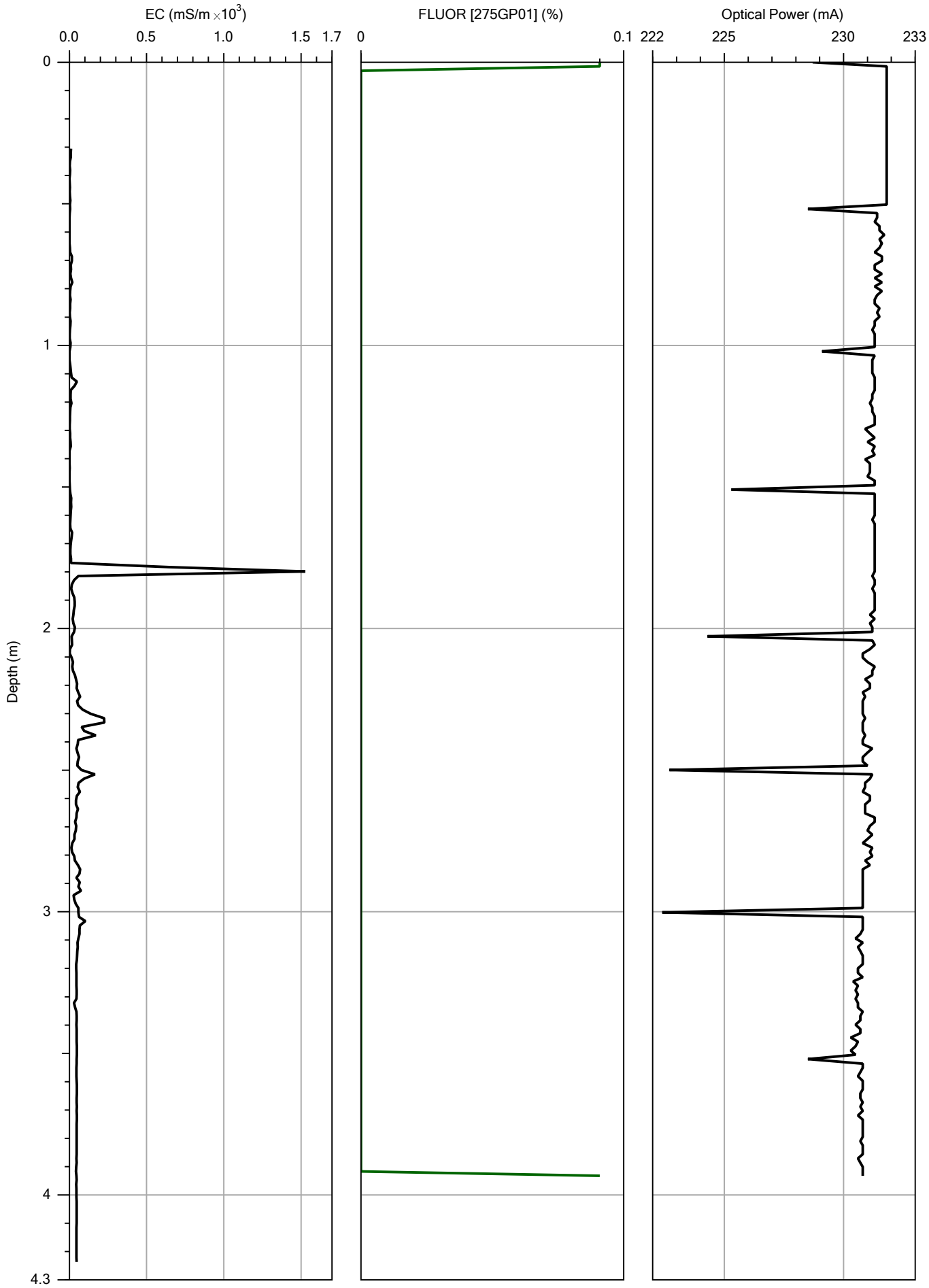
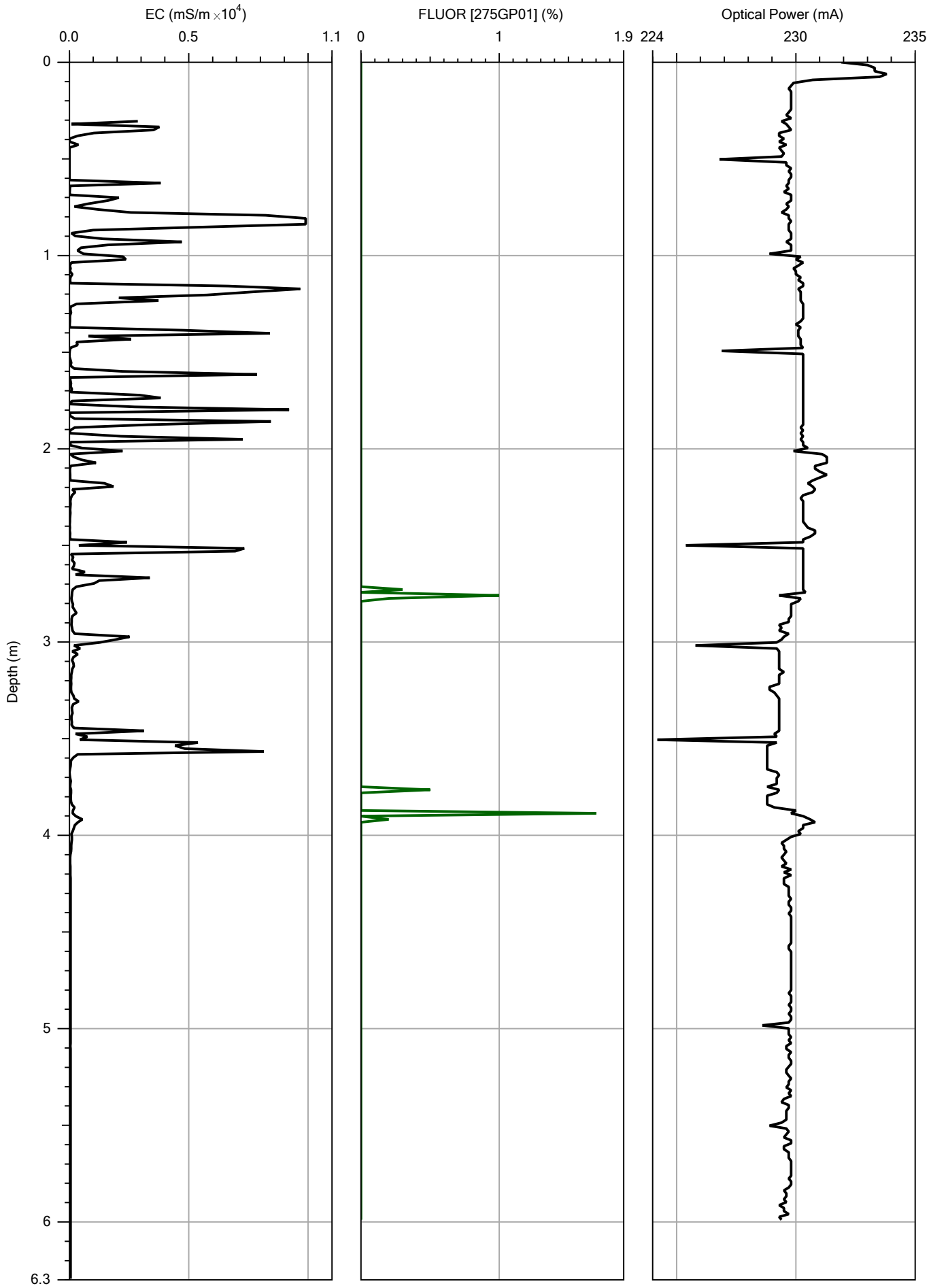
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



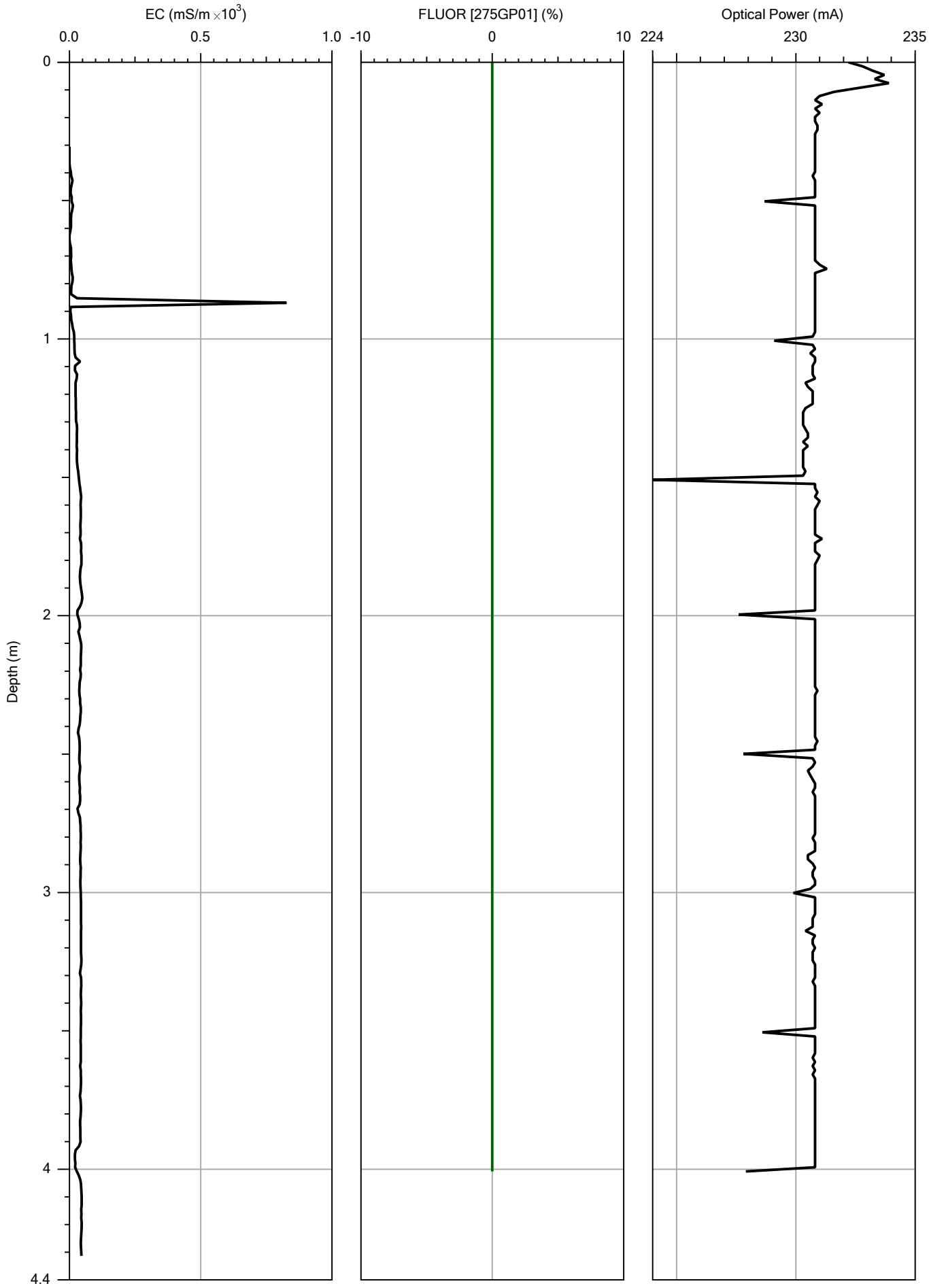
IN SITU
SITE INVESTIGATION

		File: OIP11.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



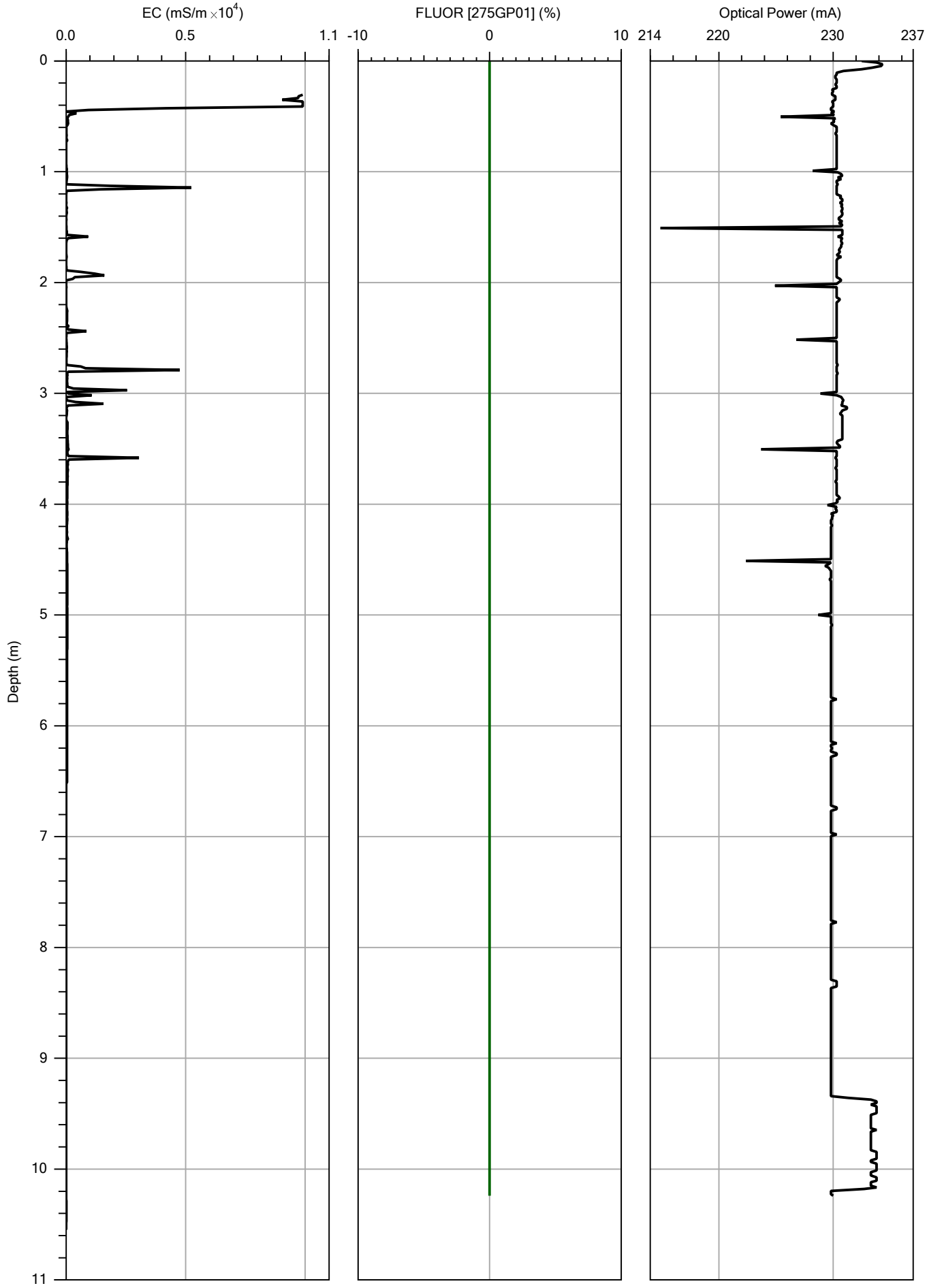
IN SITU
SITE INVESTIGATION

		File: OIP12.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



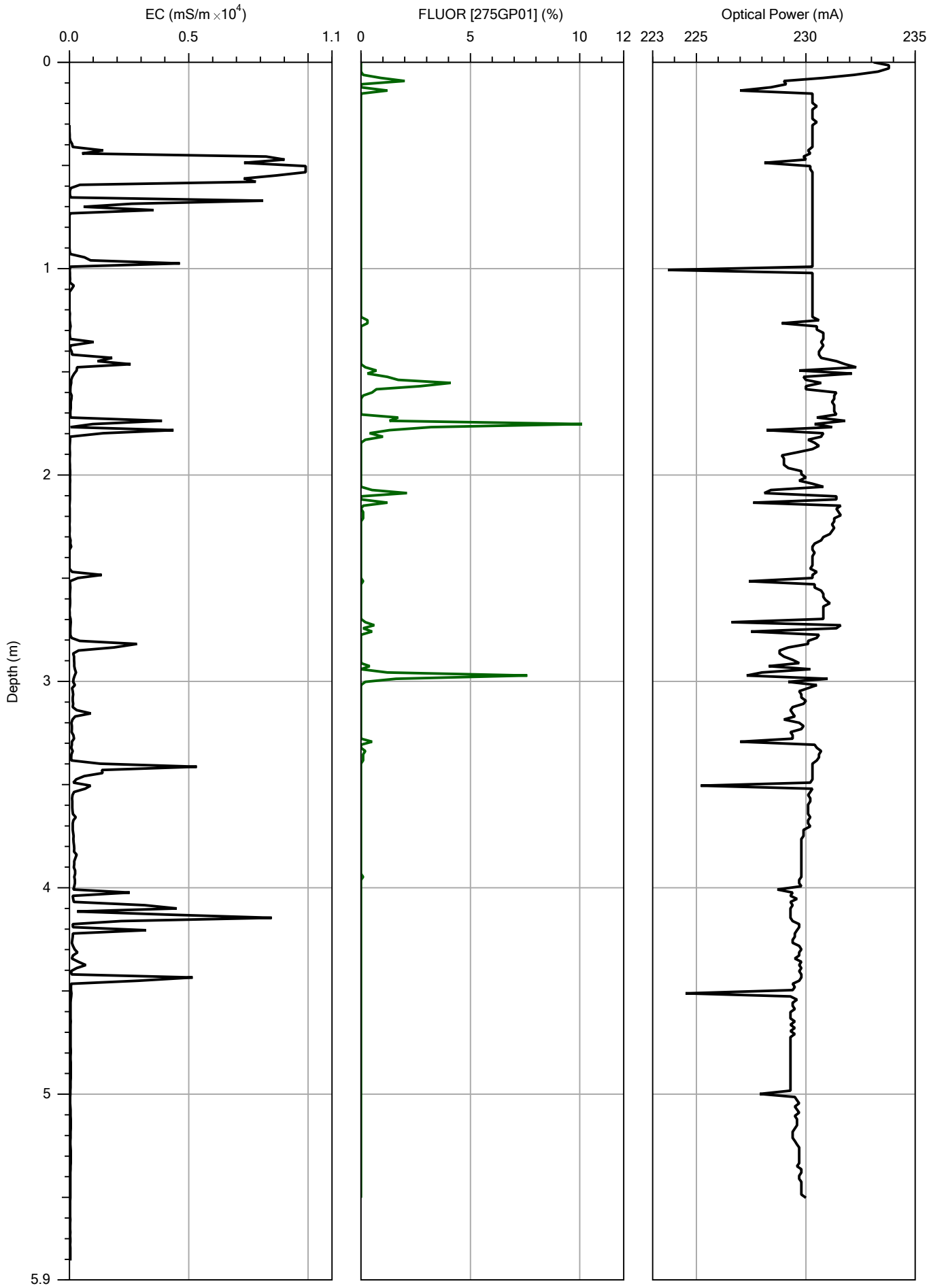
IN SITU
SITE INVESTIGATION

		File: OIP13.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



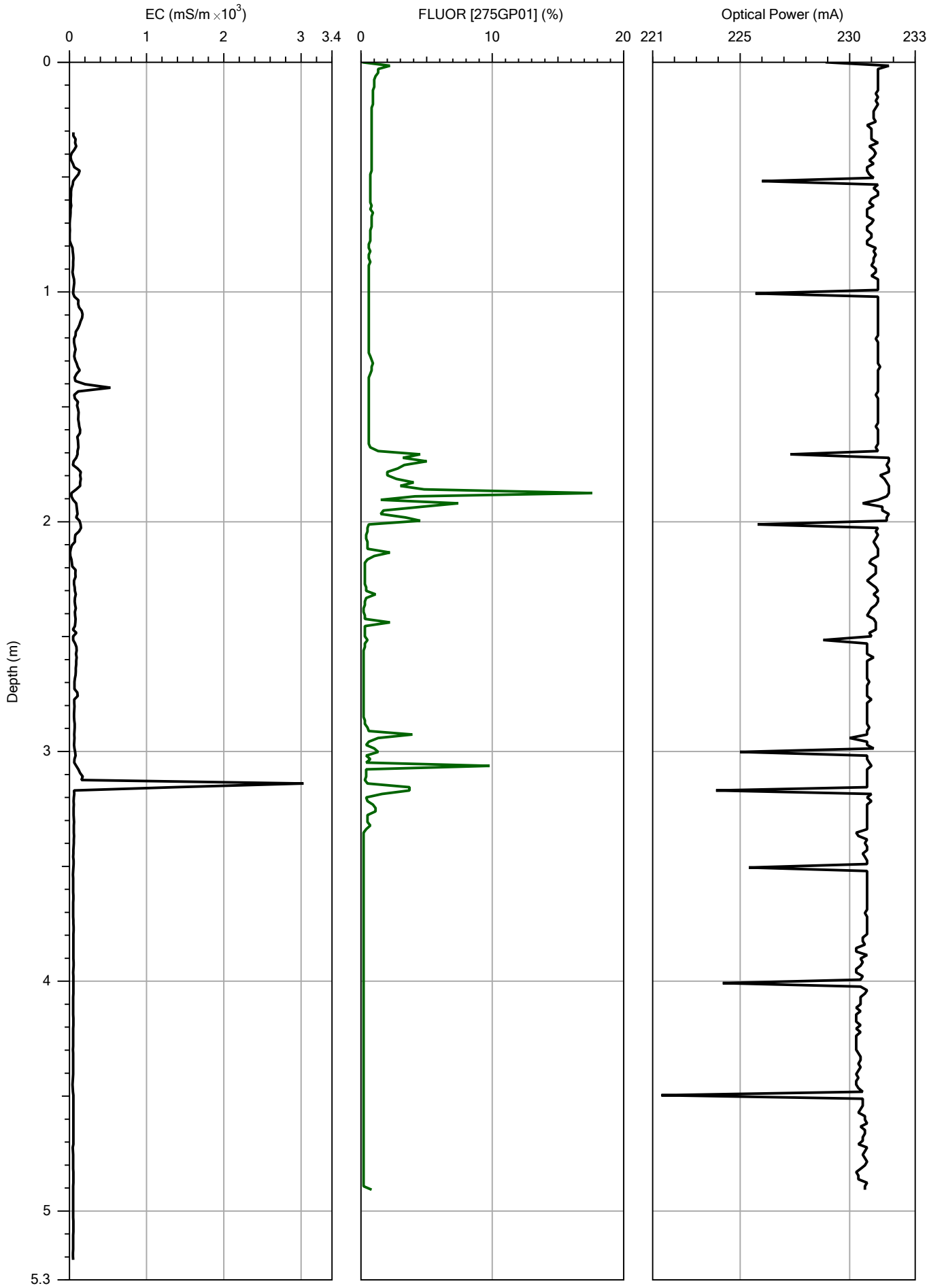
IN SITU
SITE INVESTIGATION

		File: OIP14.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



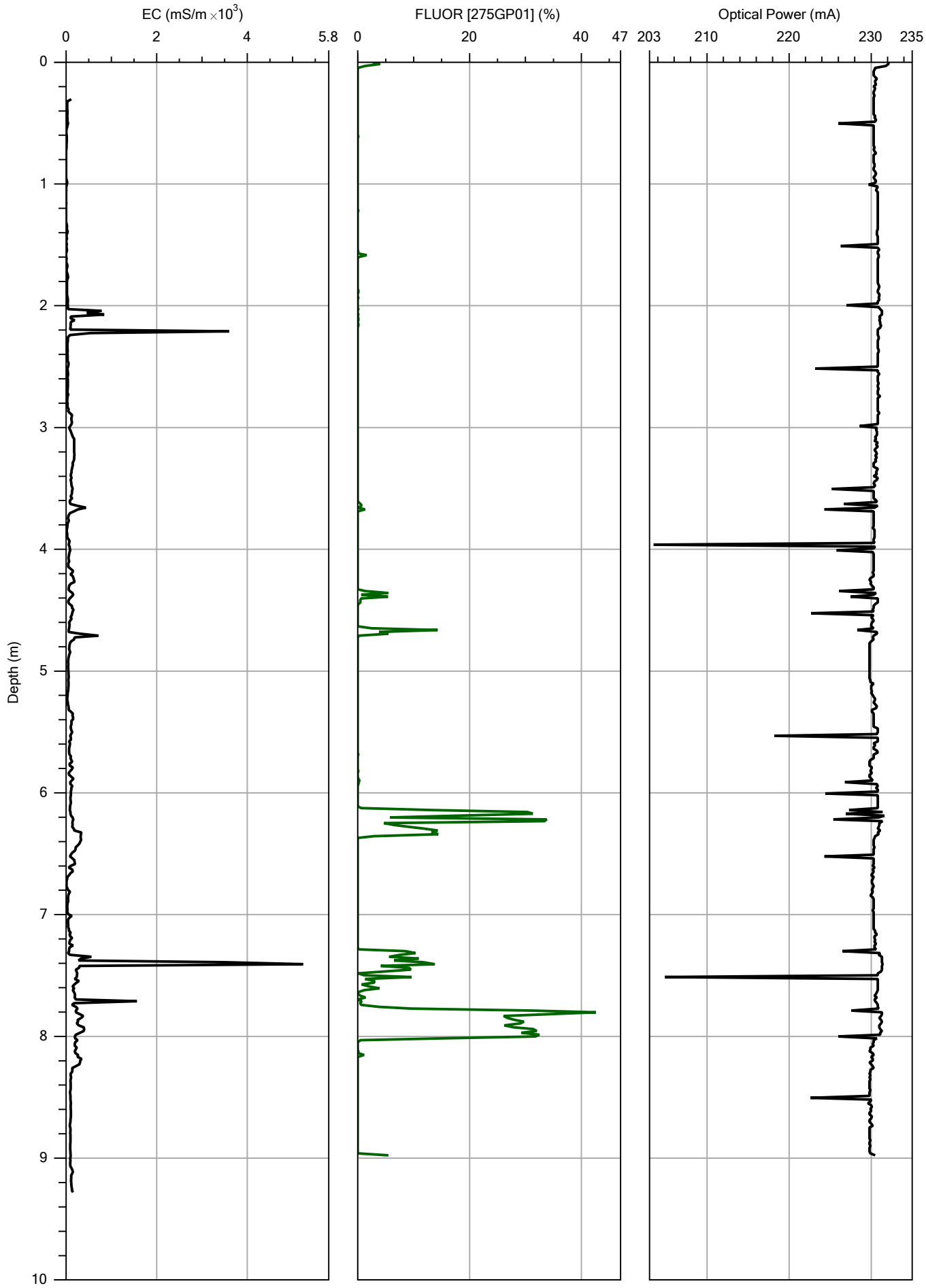
IN SITU
SITE INVESTIGATION

		File: OIP15.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP17.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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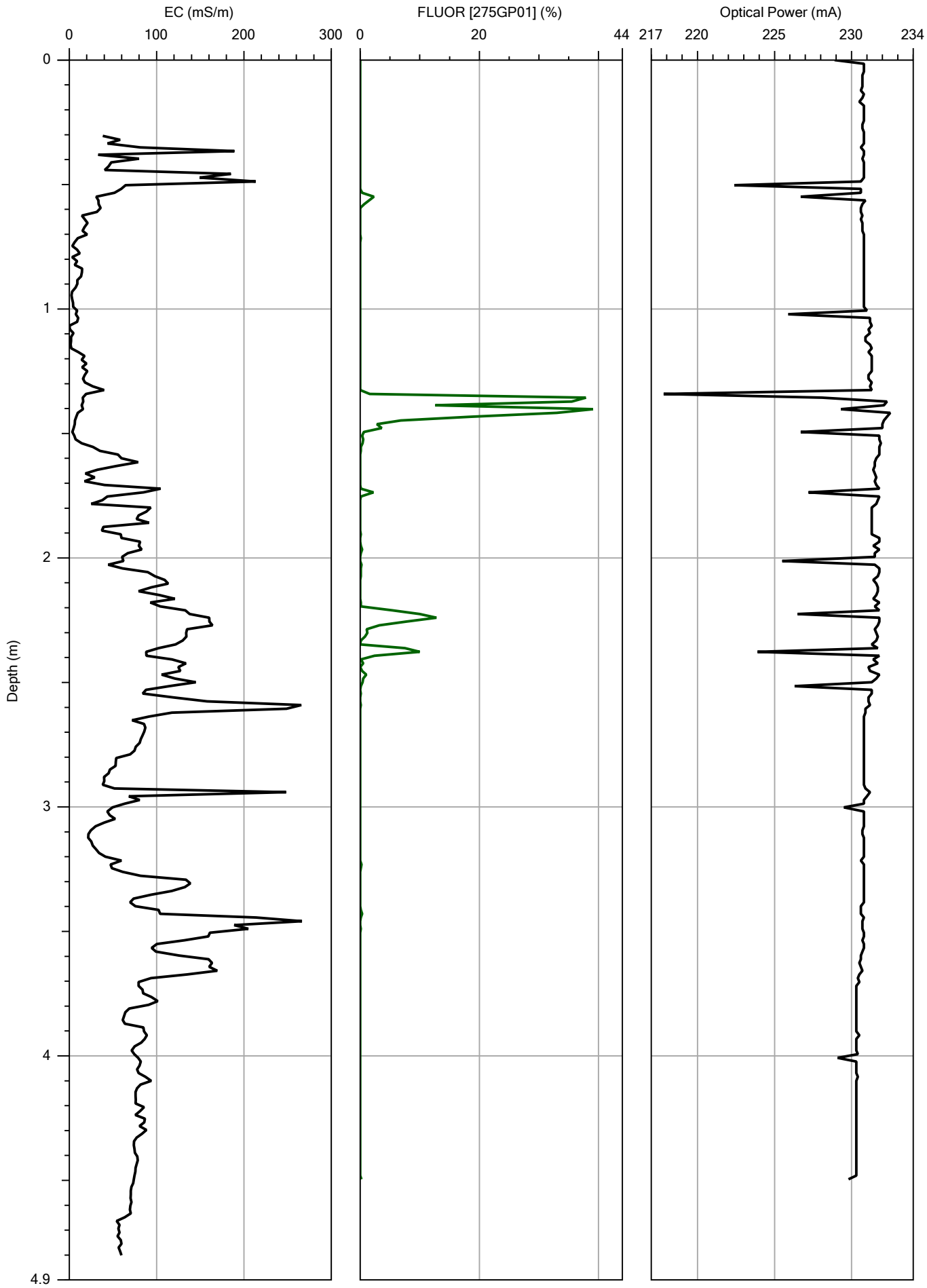
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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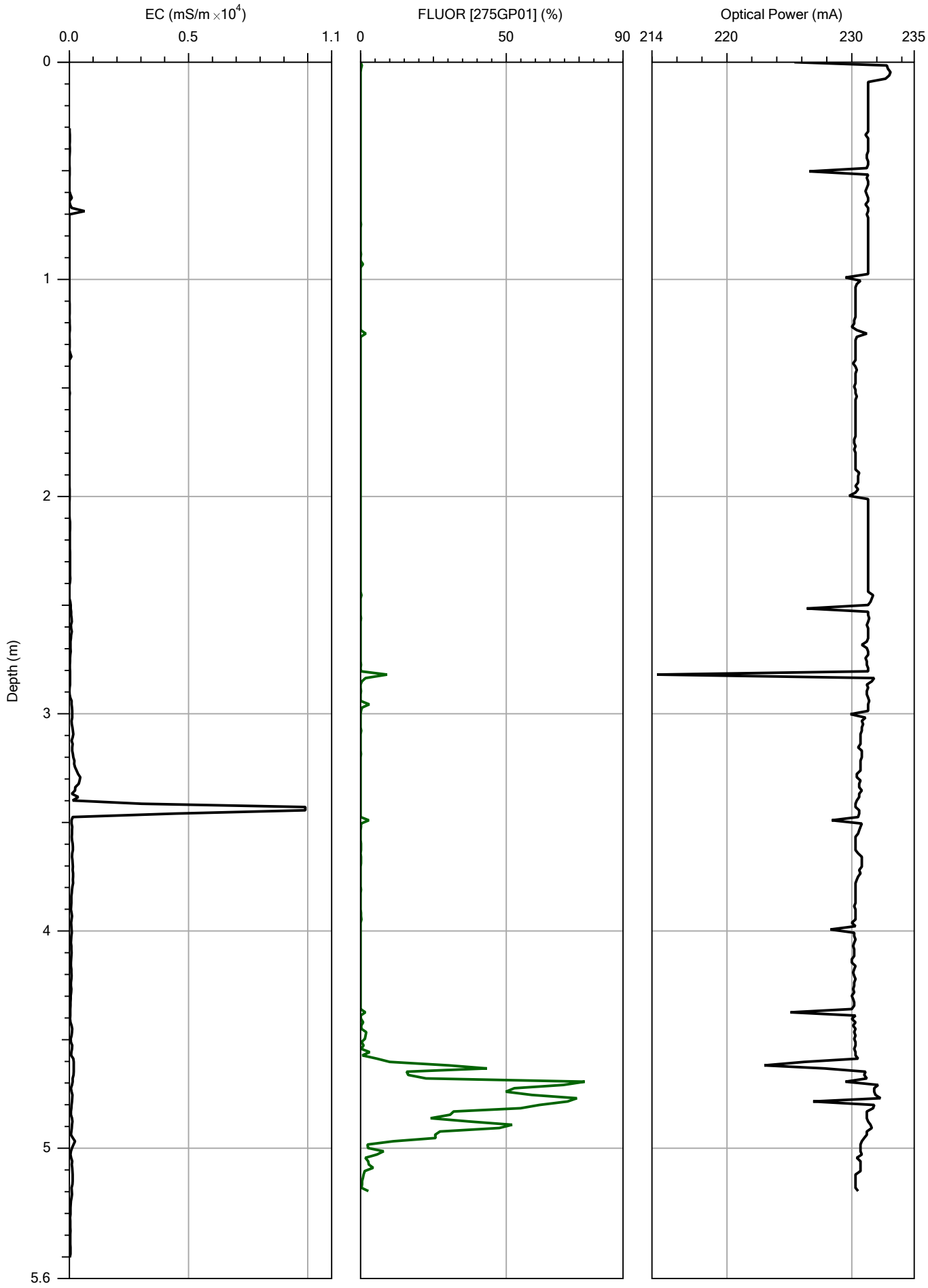
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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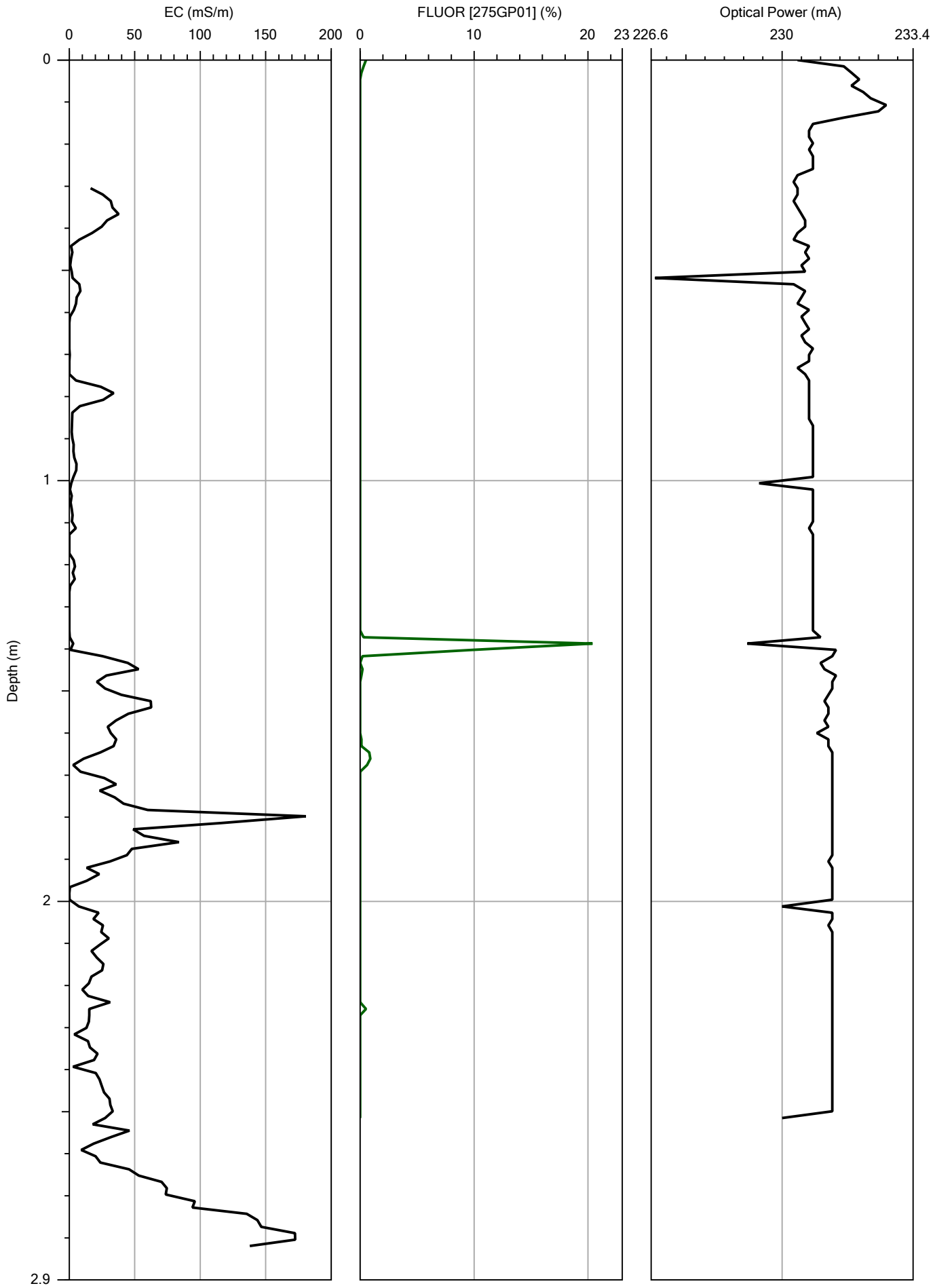
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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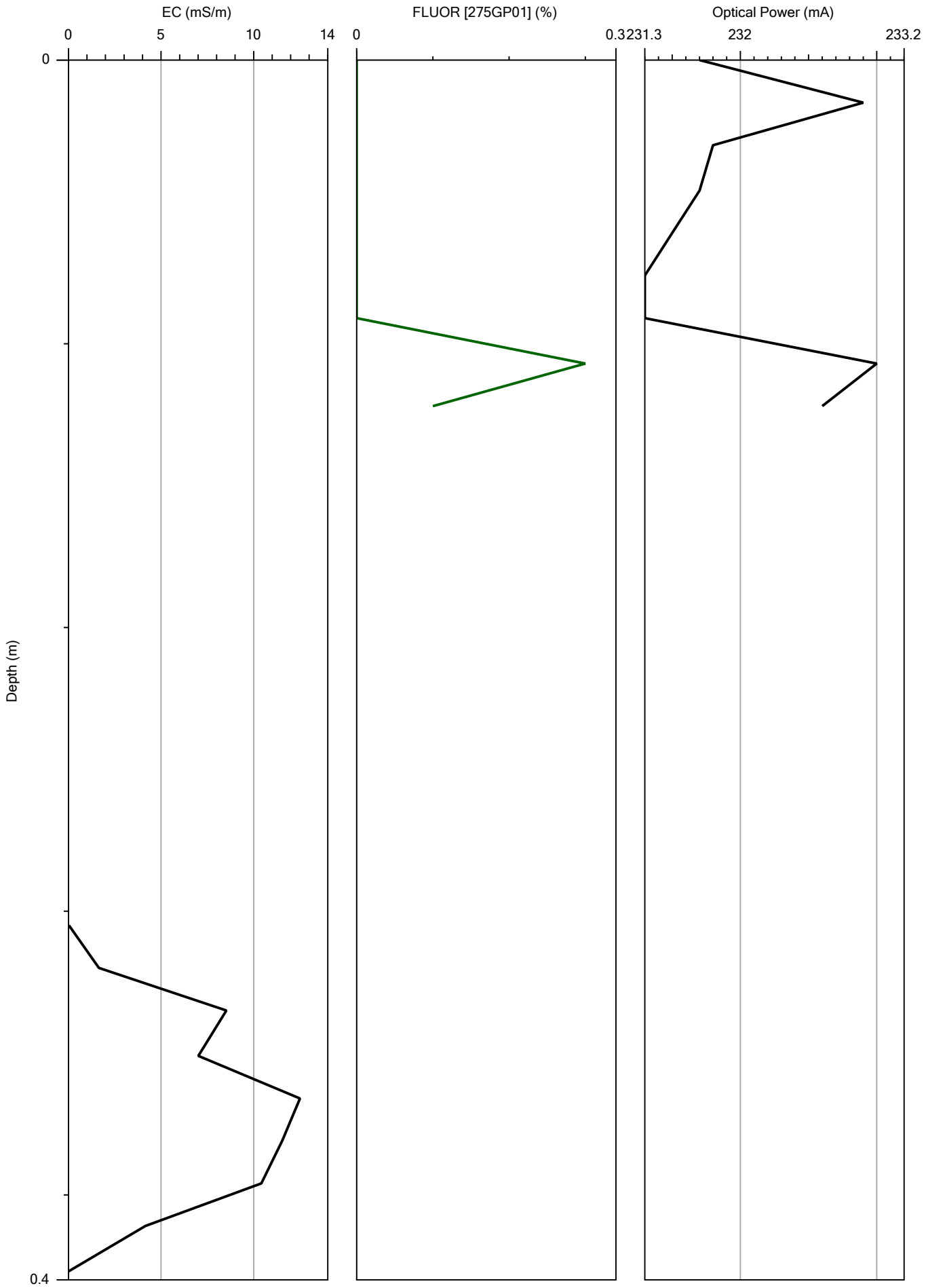
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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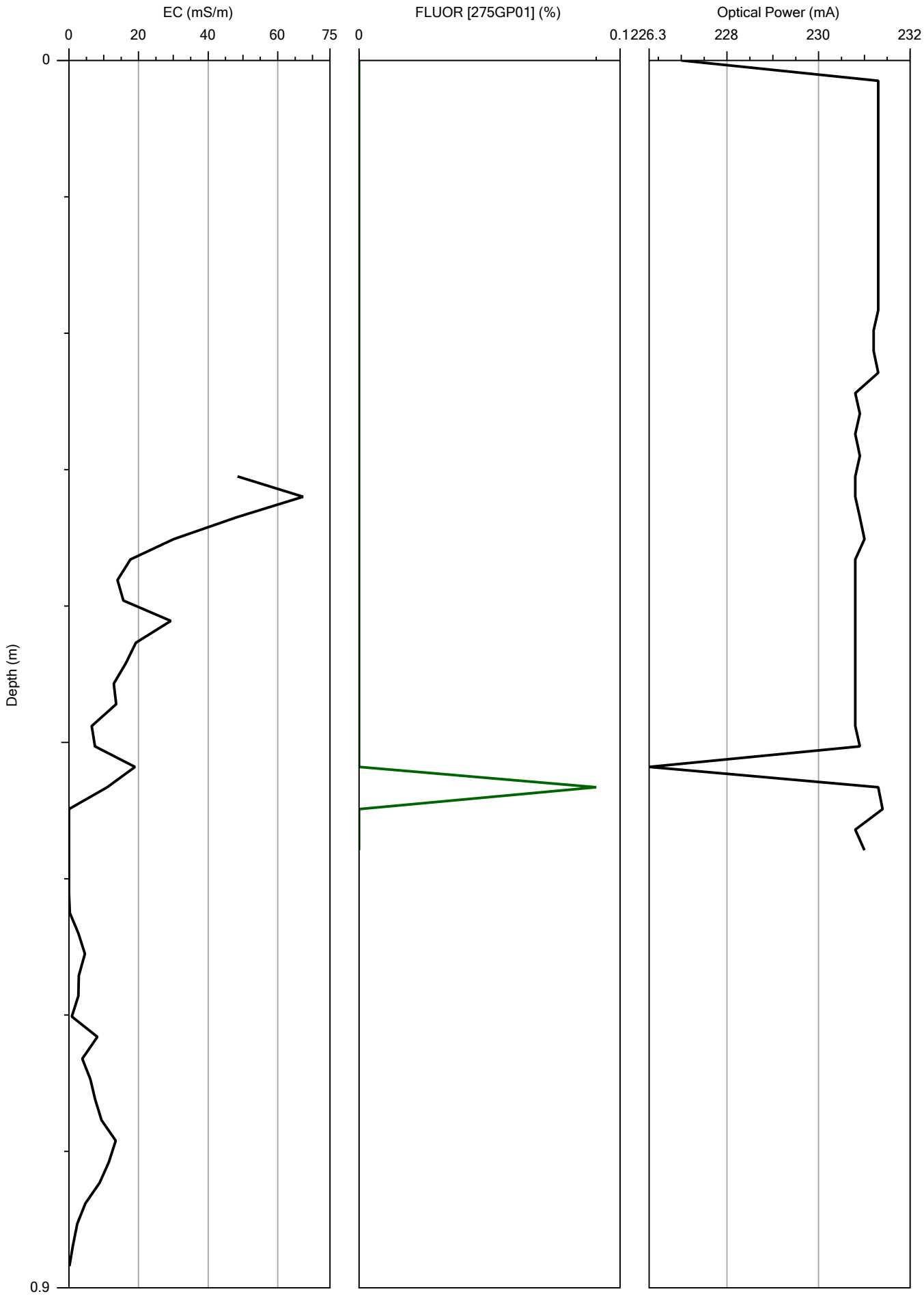
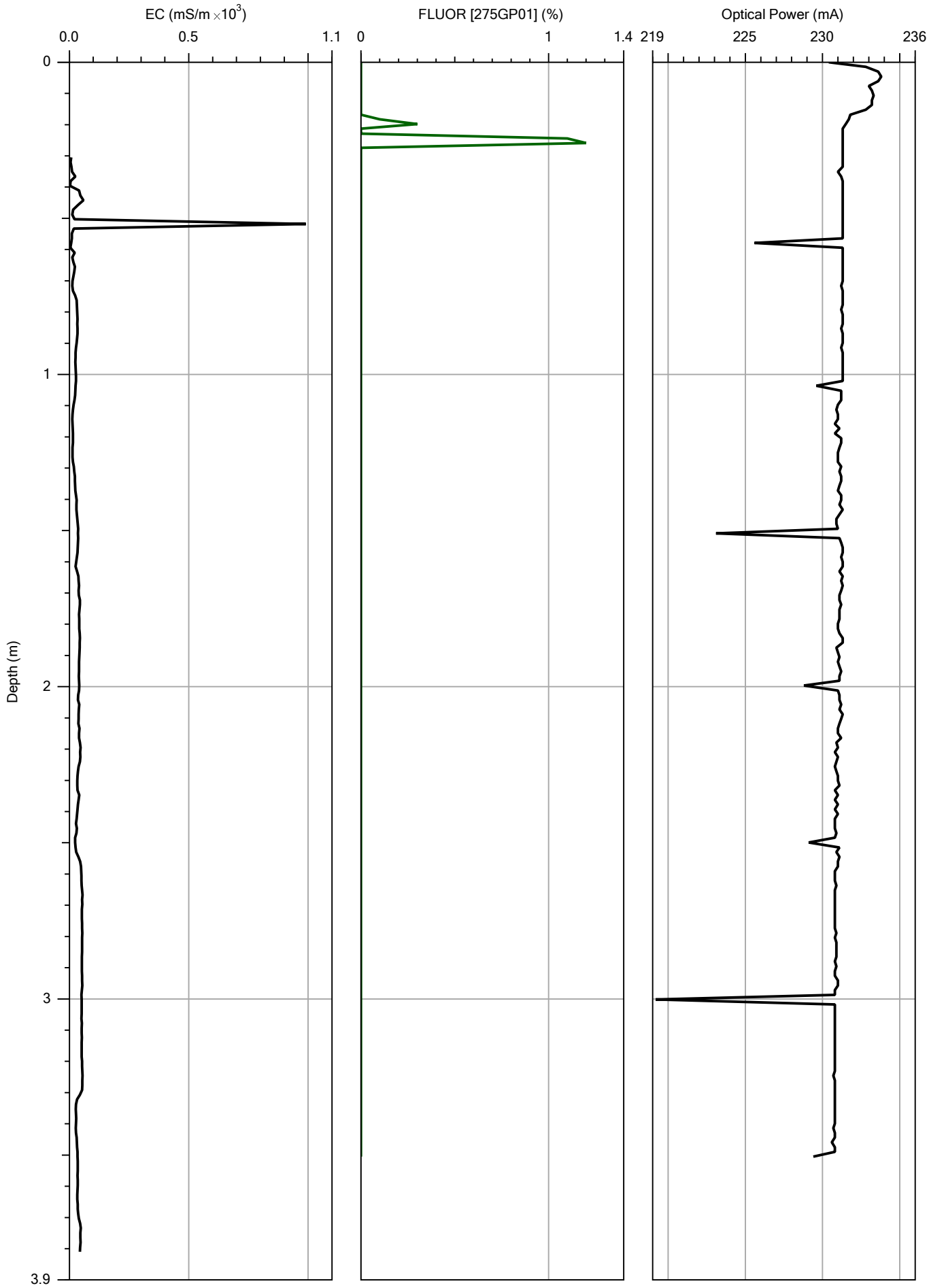
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP23.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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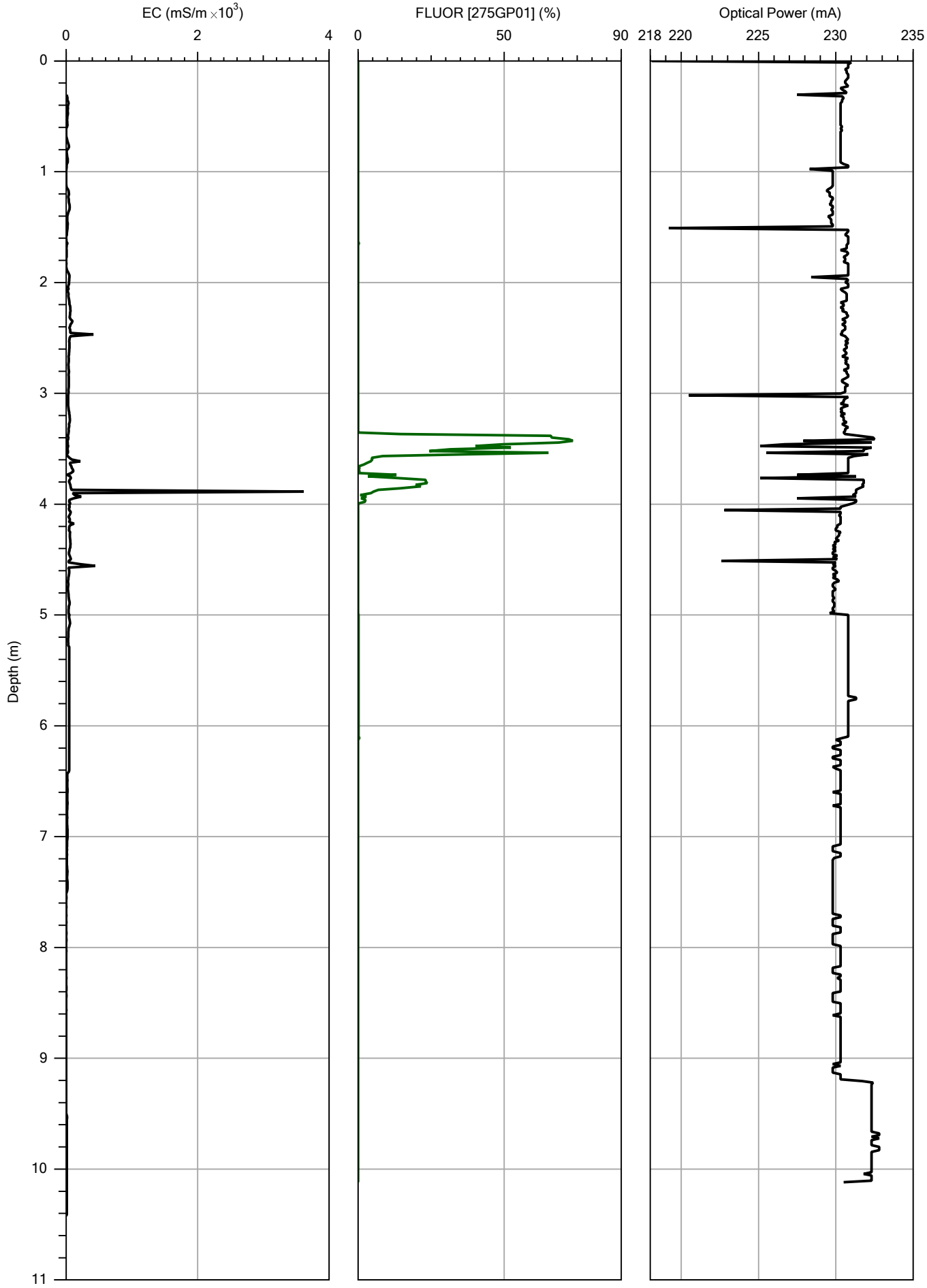
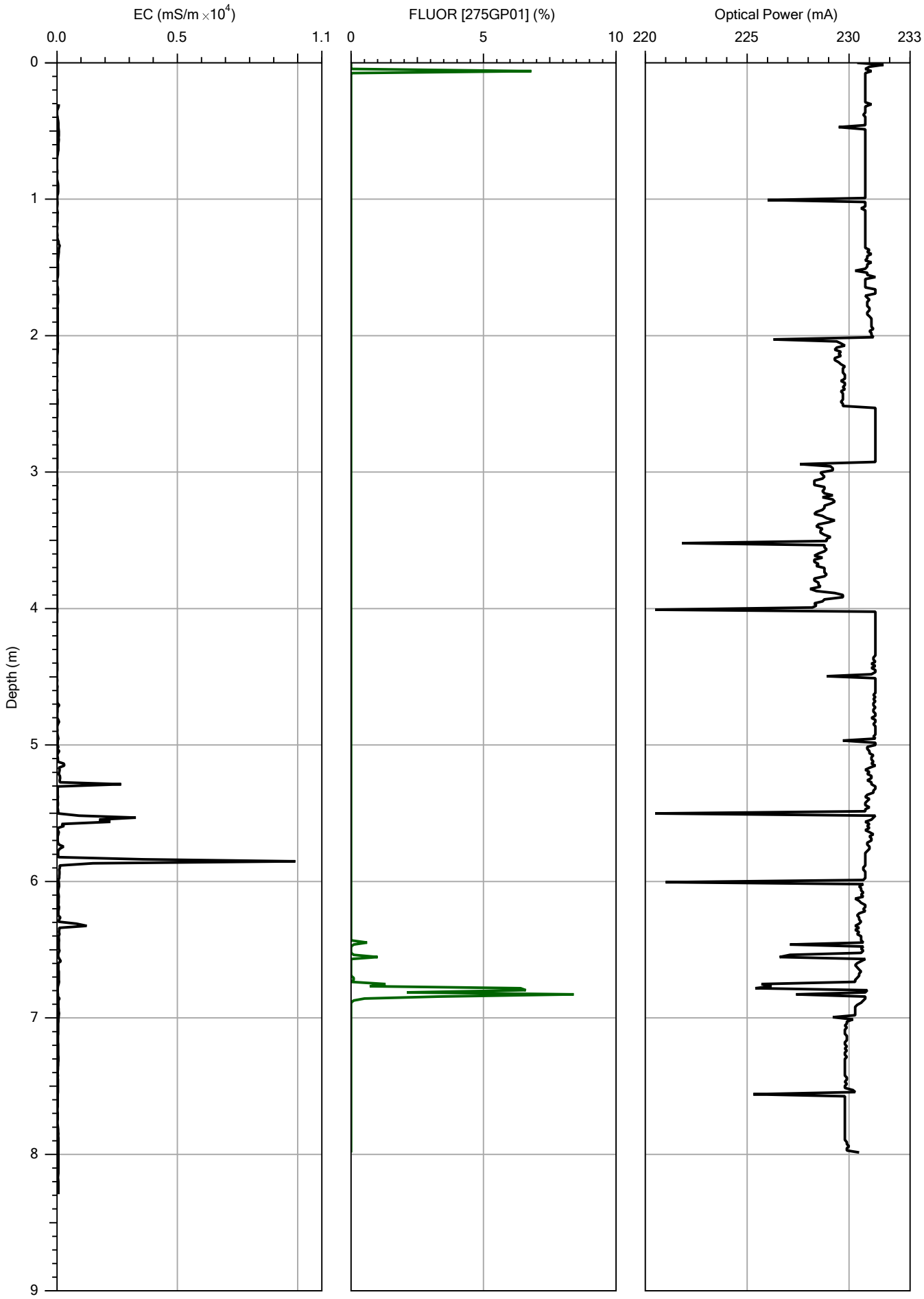
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



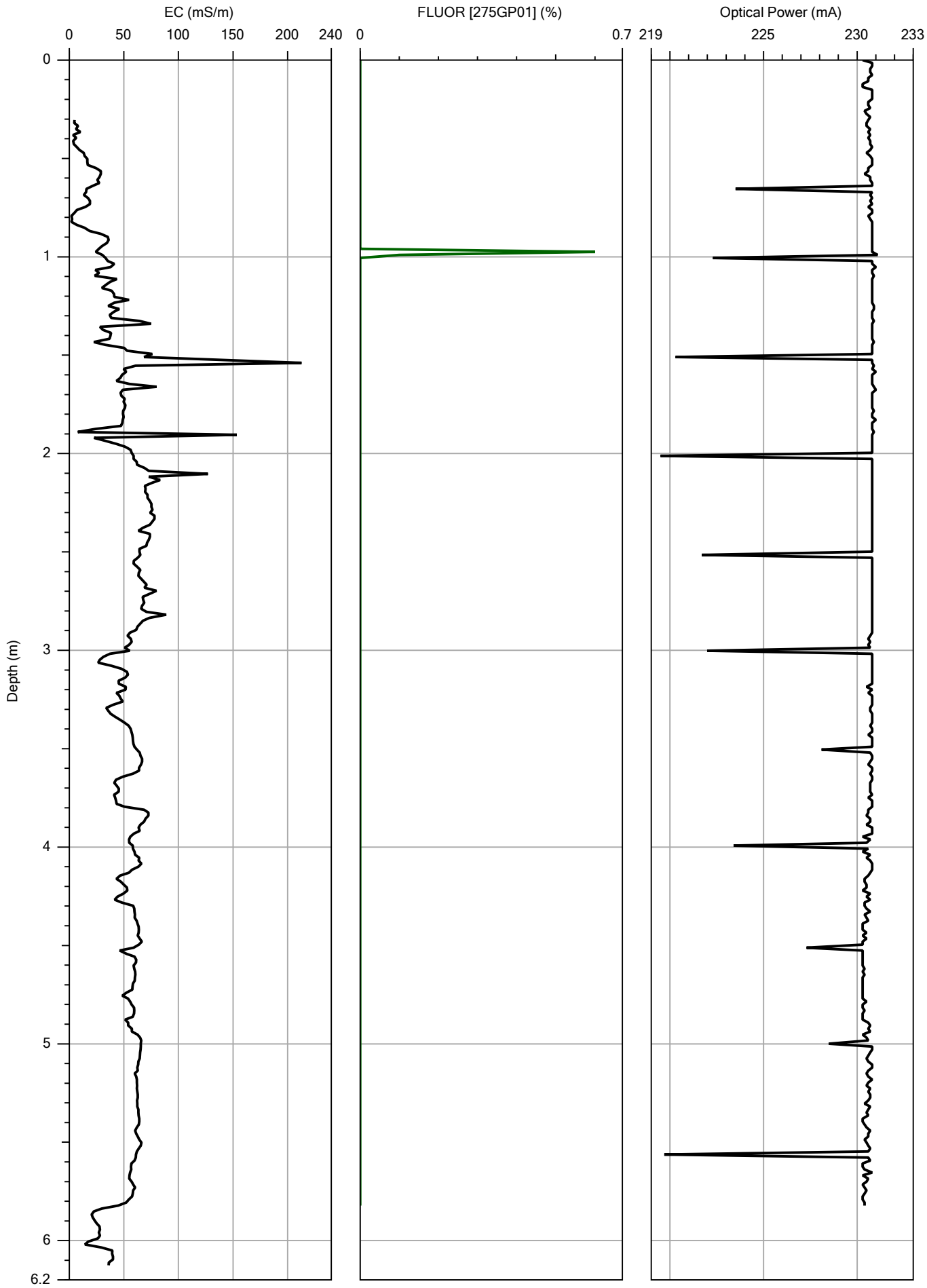
IN SITU
SITE INVESTIGATION

		File: OIP25.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP27.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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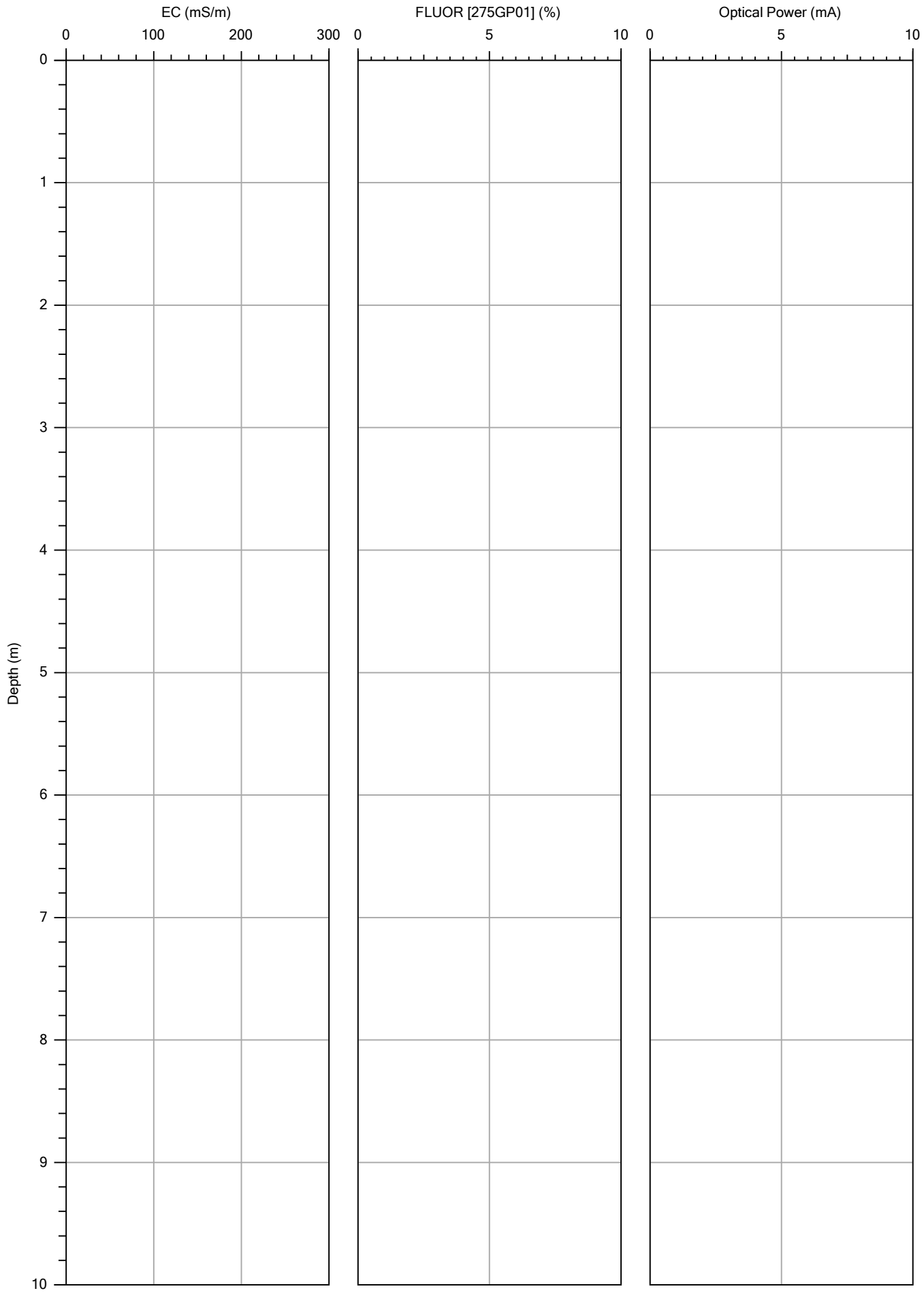
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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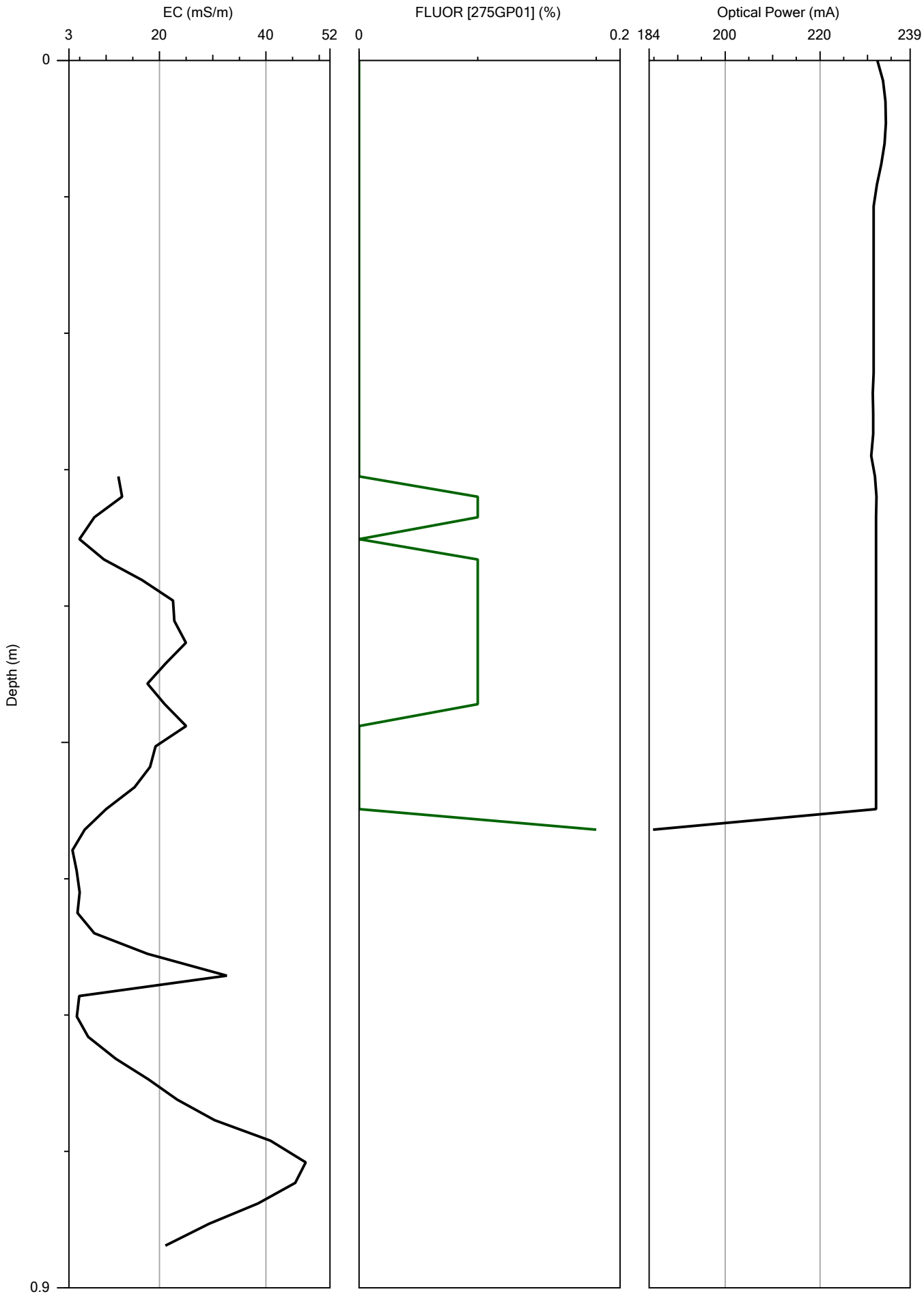
Company: In Situ SI	Operator: Darren Hughes	Date:
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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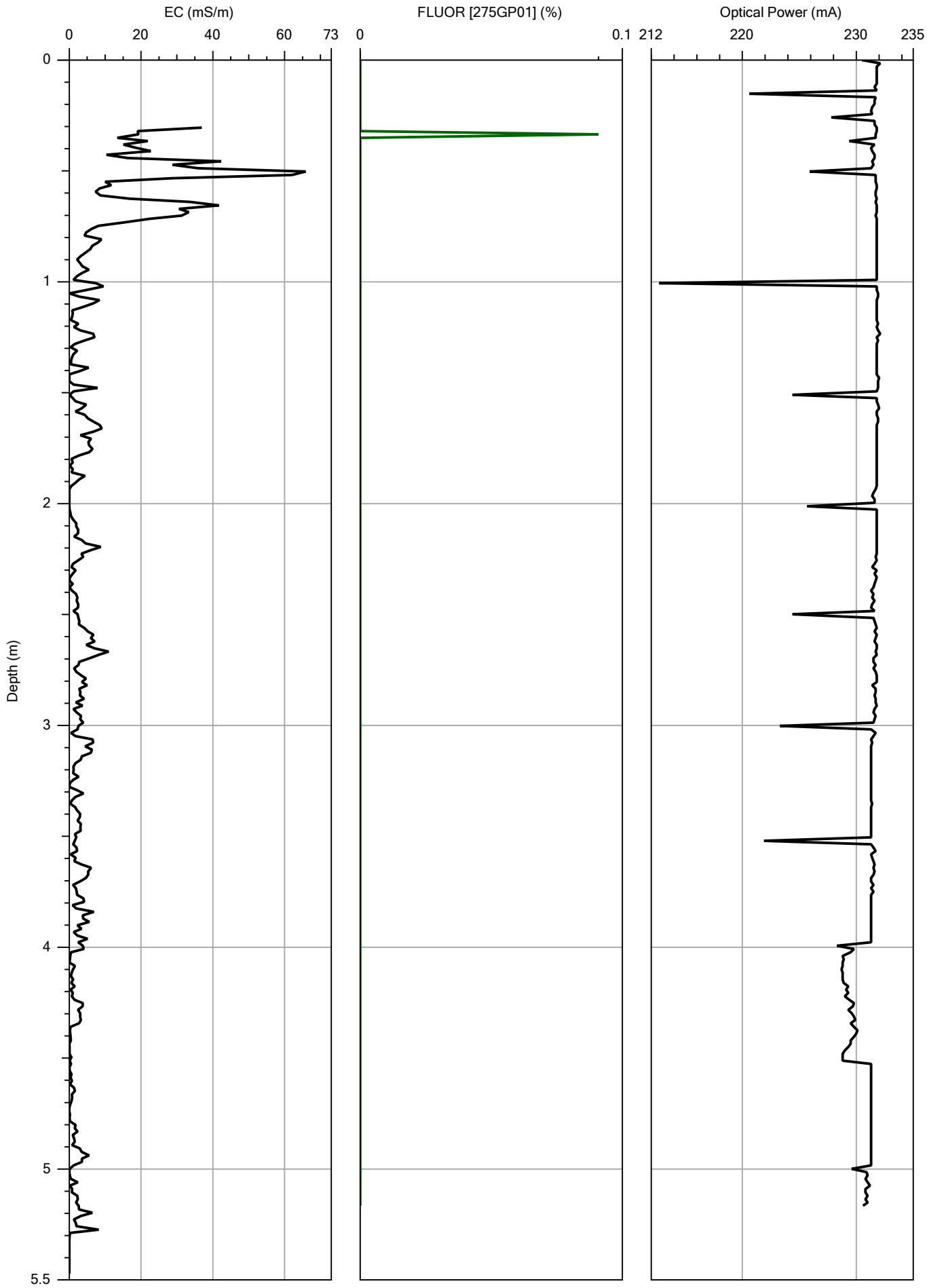
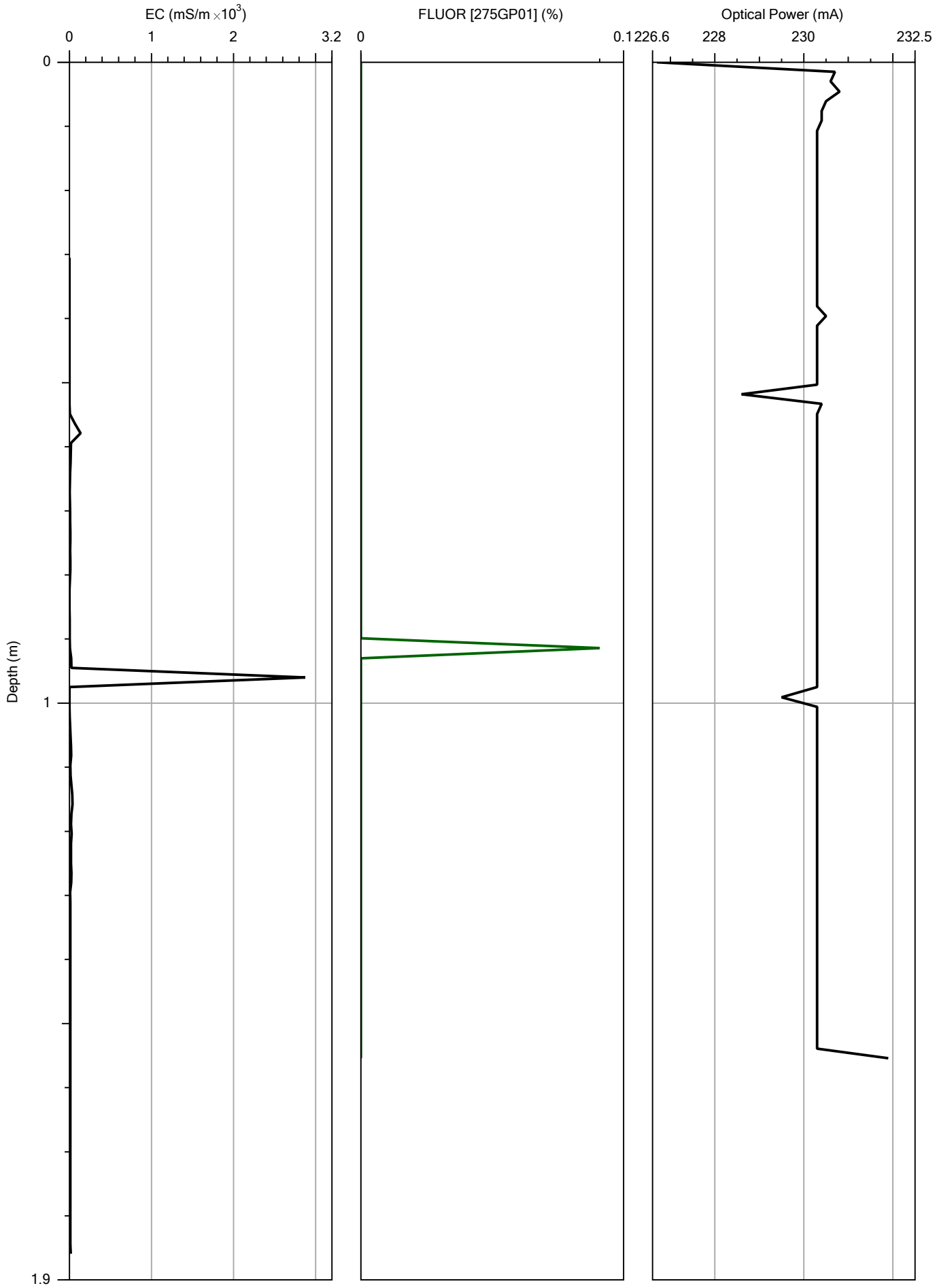
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



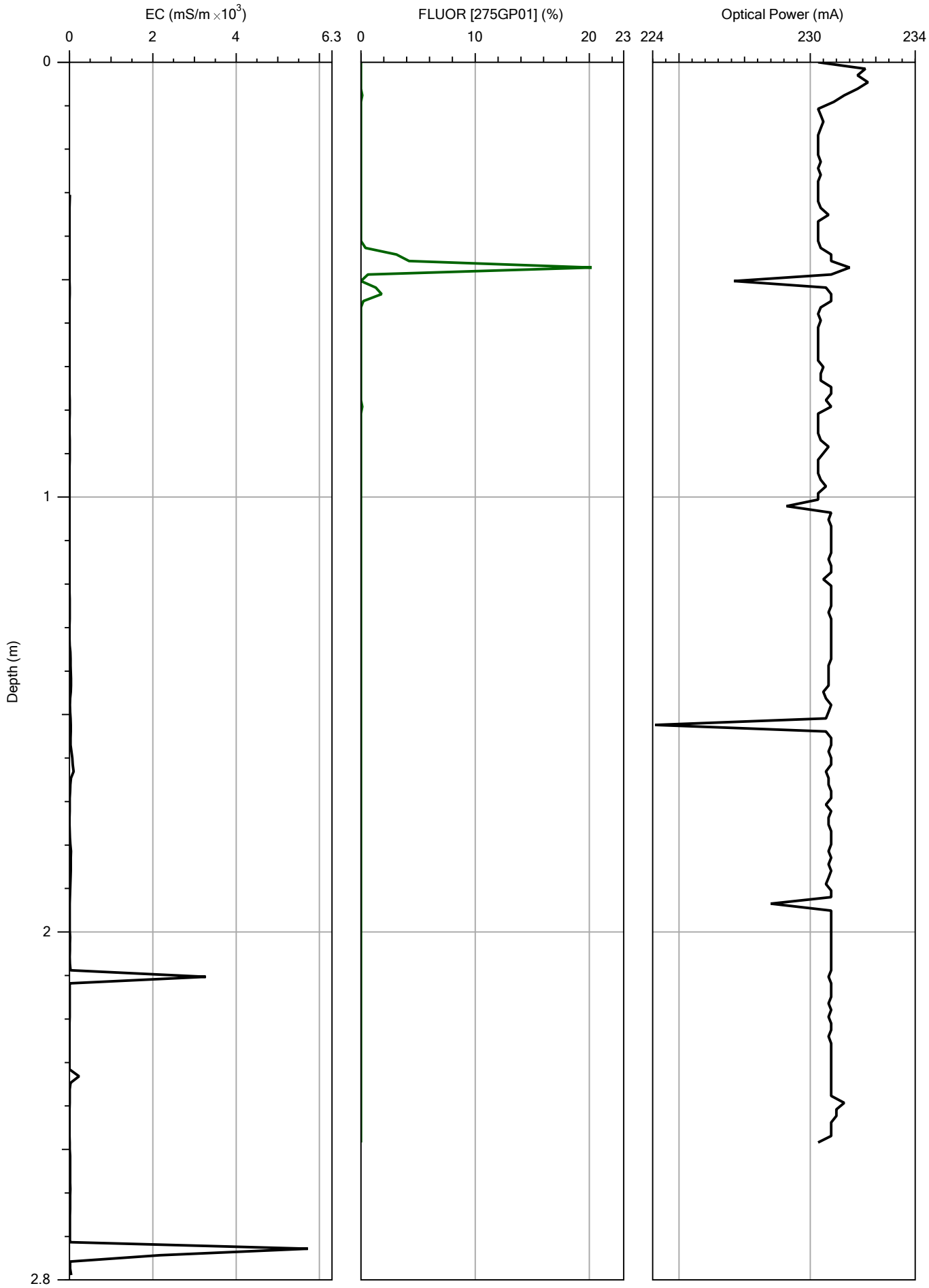
IN SITU
SITE INVESTIGATION

		File: OIP31A.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



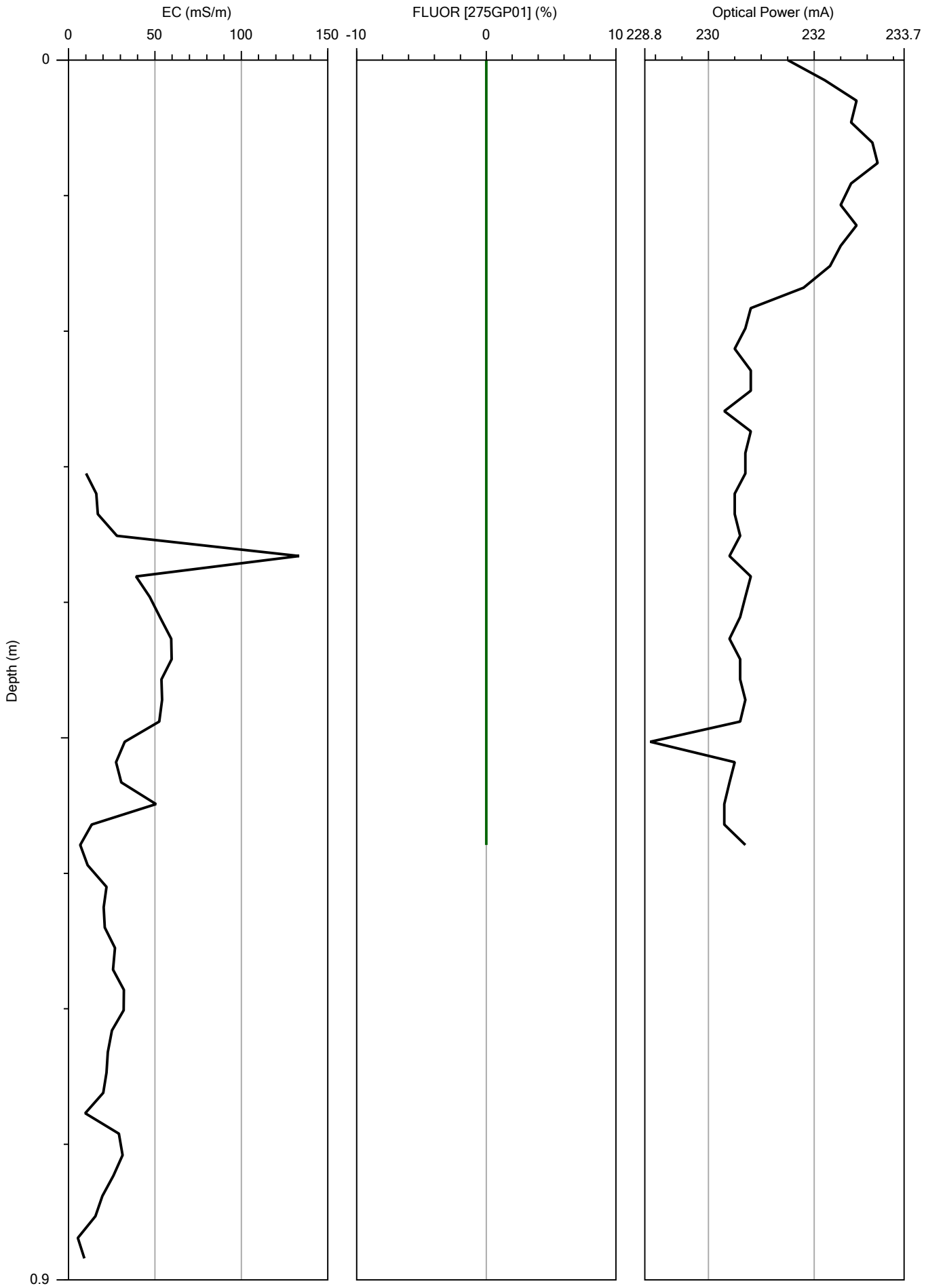
IN SITU
SITE INVESTIGATION

		File: OIP33.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



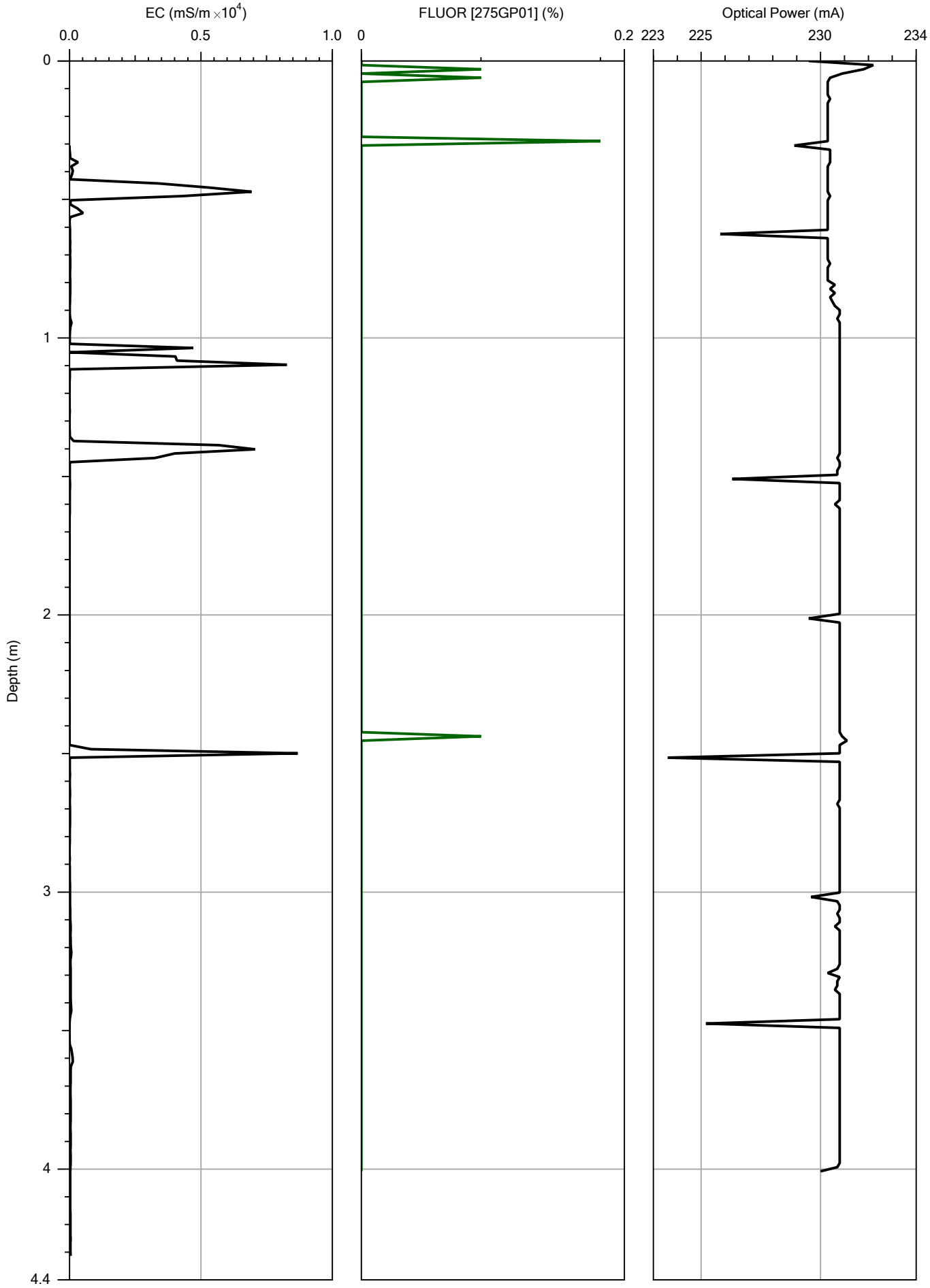
IN SITU
SITE INVESTIGATION

		File: OIP33A.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP34.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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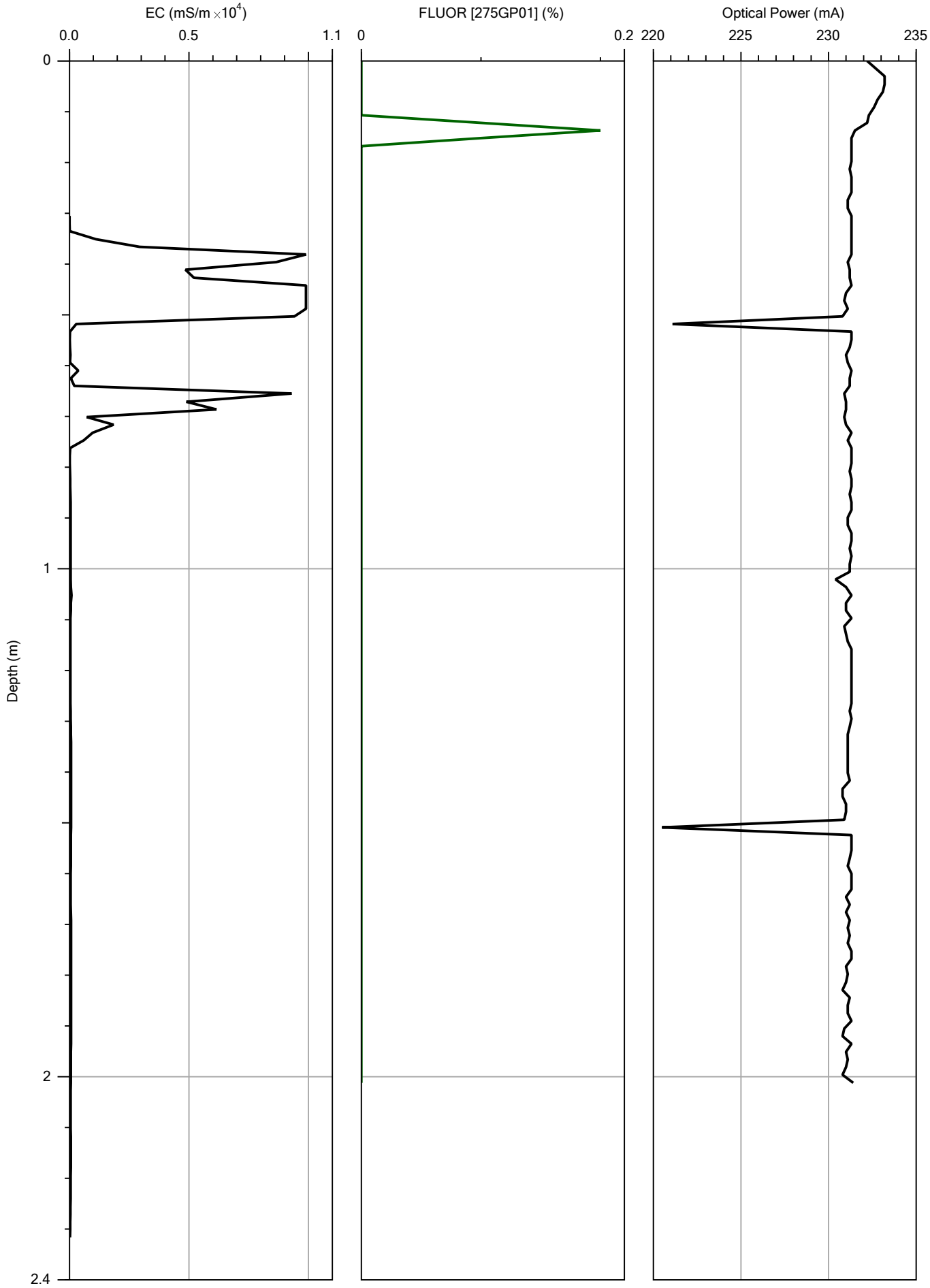
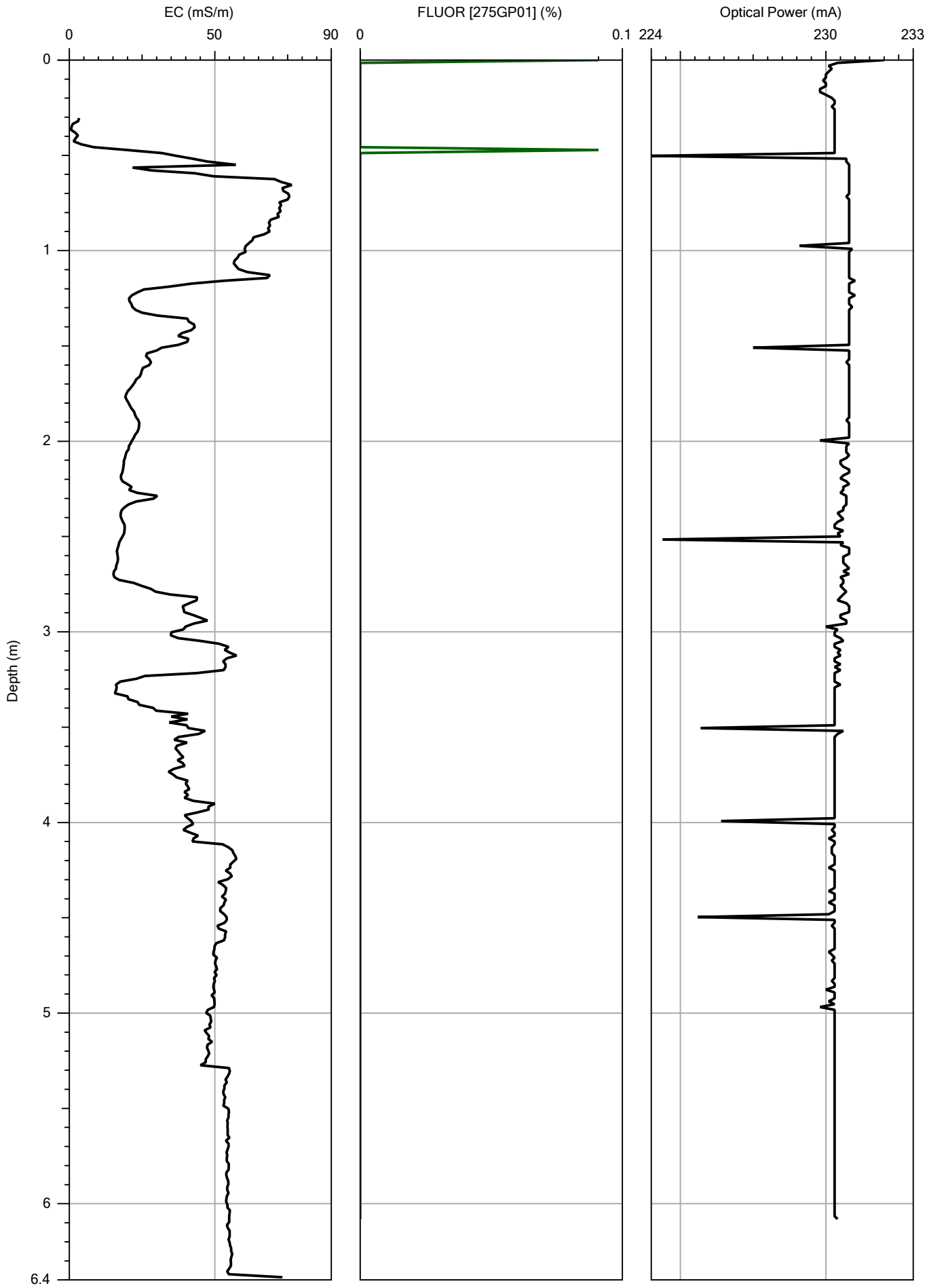
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



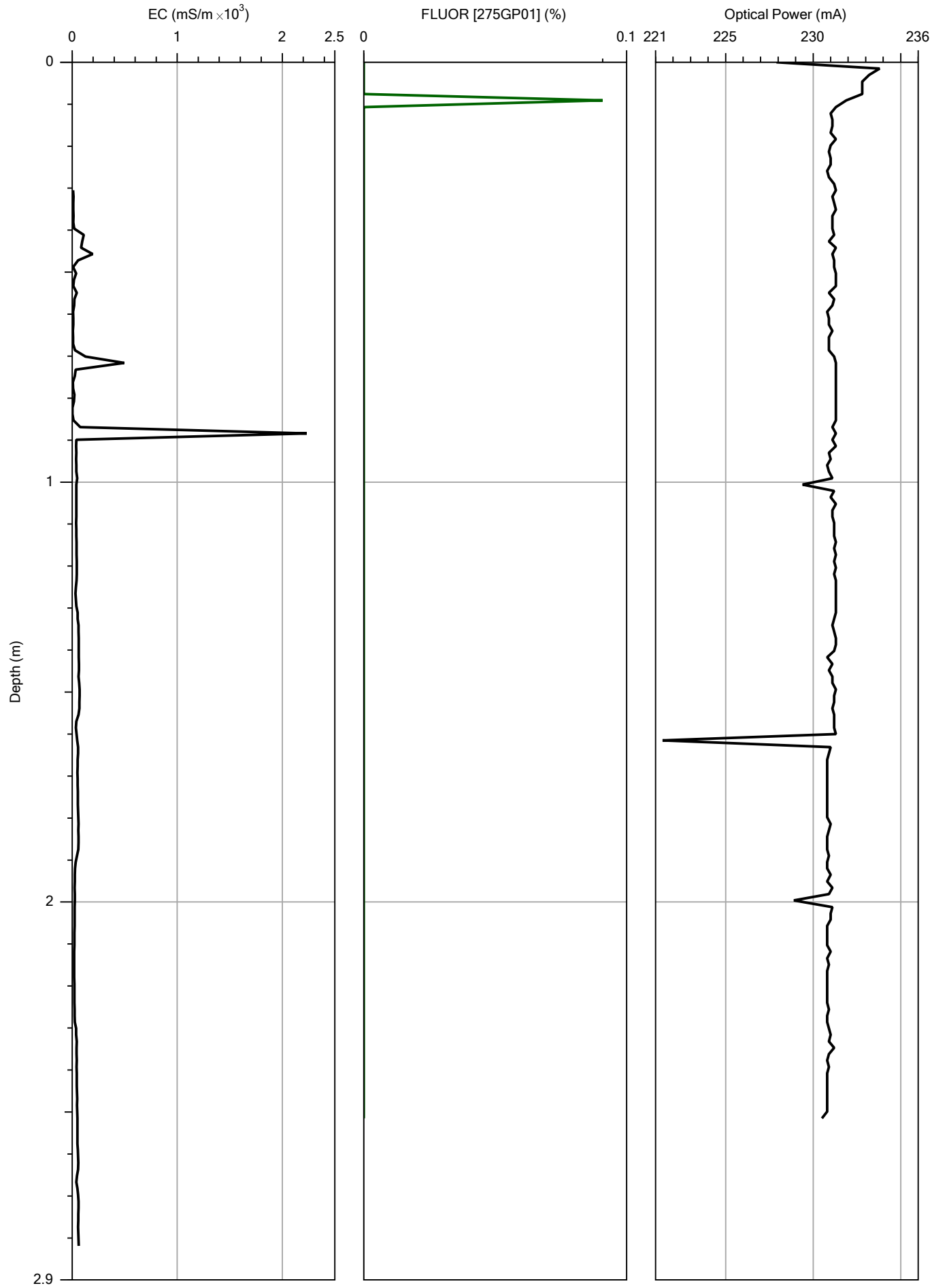
IN SITU
SITE INVESTIGATION

		File: OIP36.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



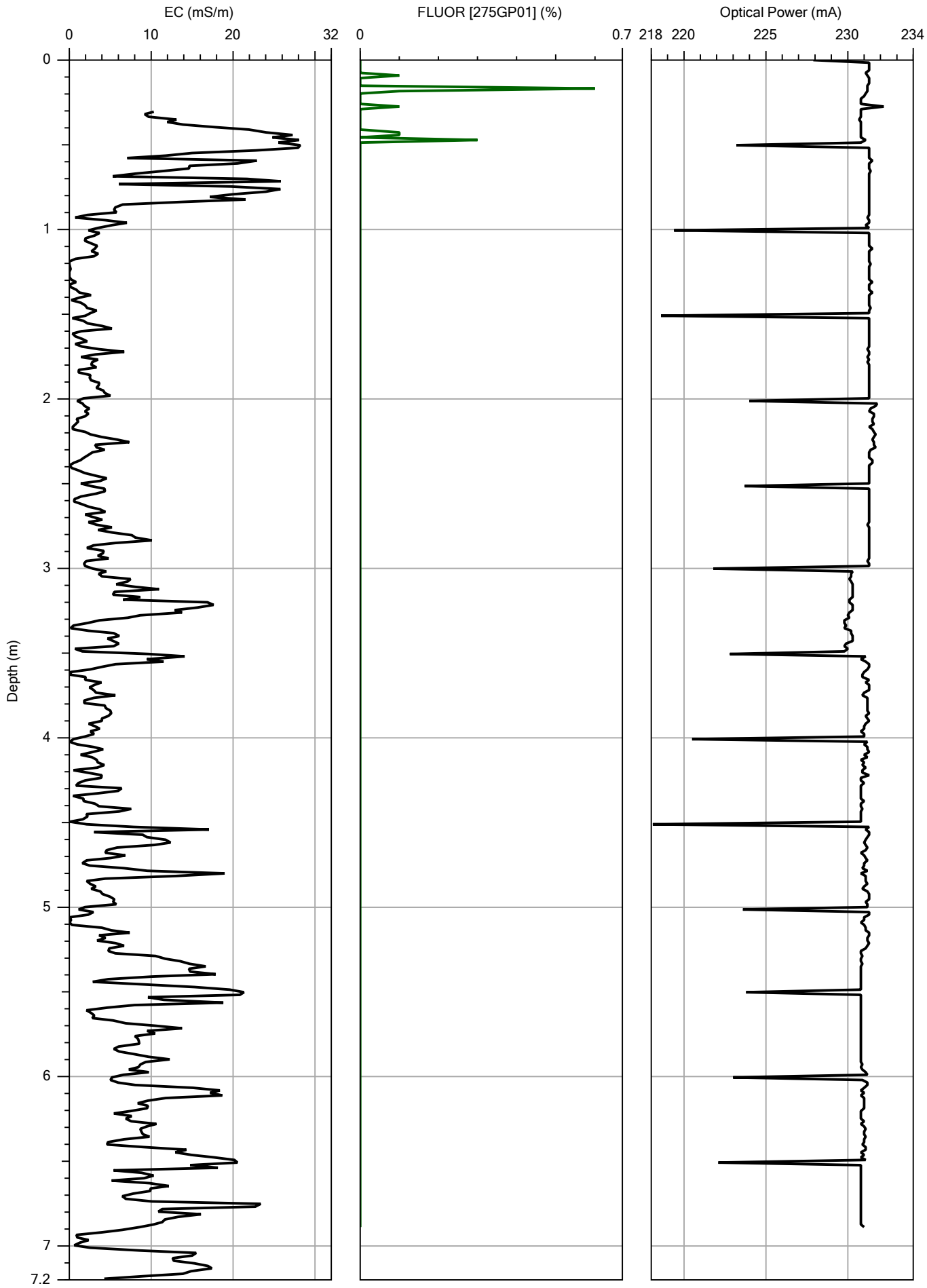
IN SITU
SITE INVESTIGATION

		File: OIP37.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP38.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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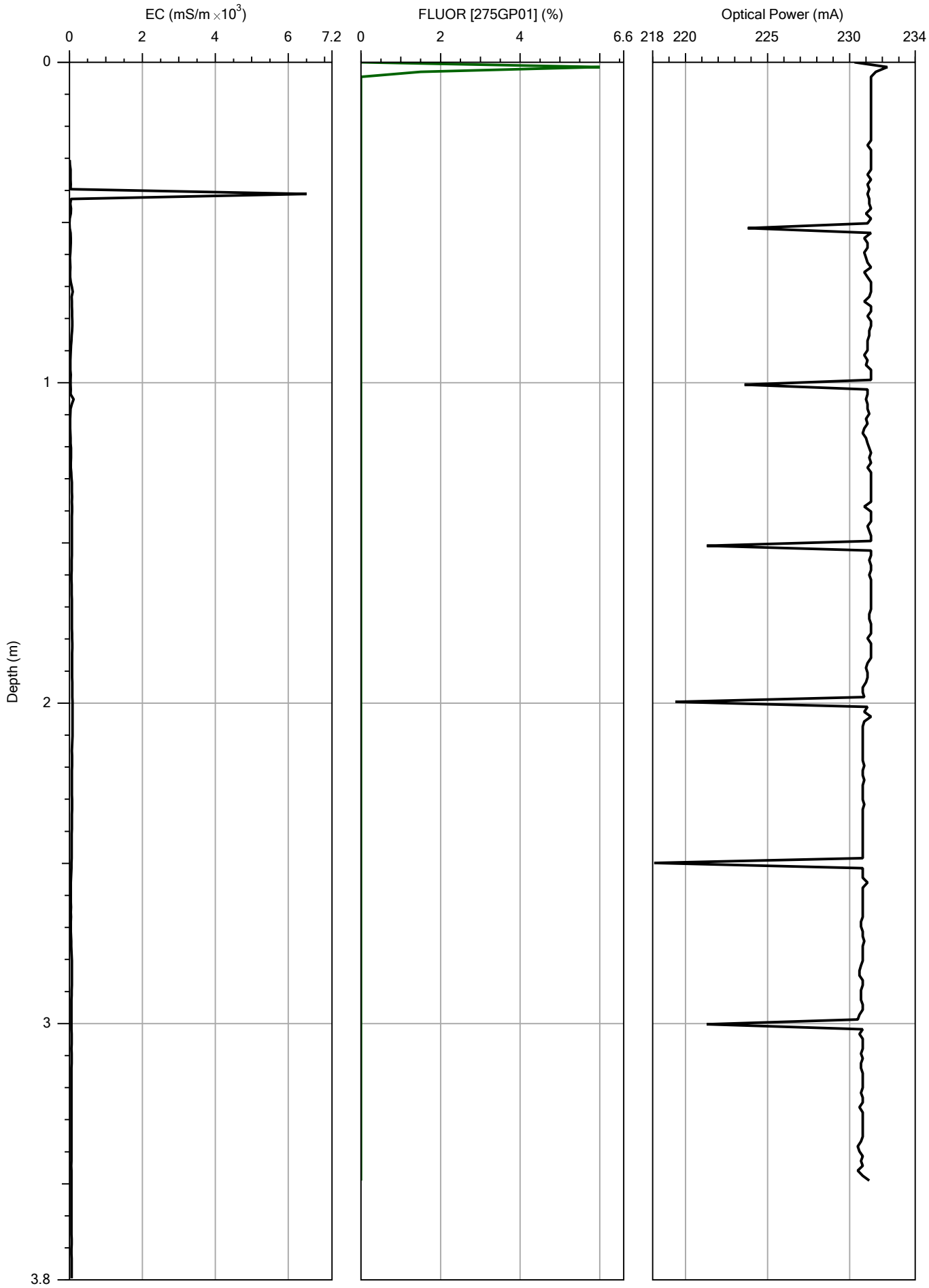
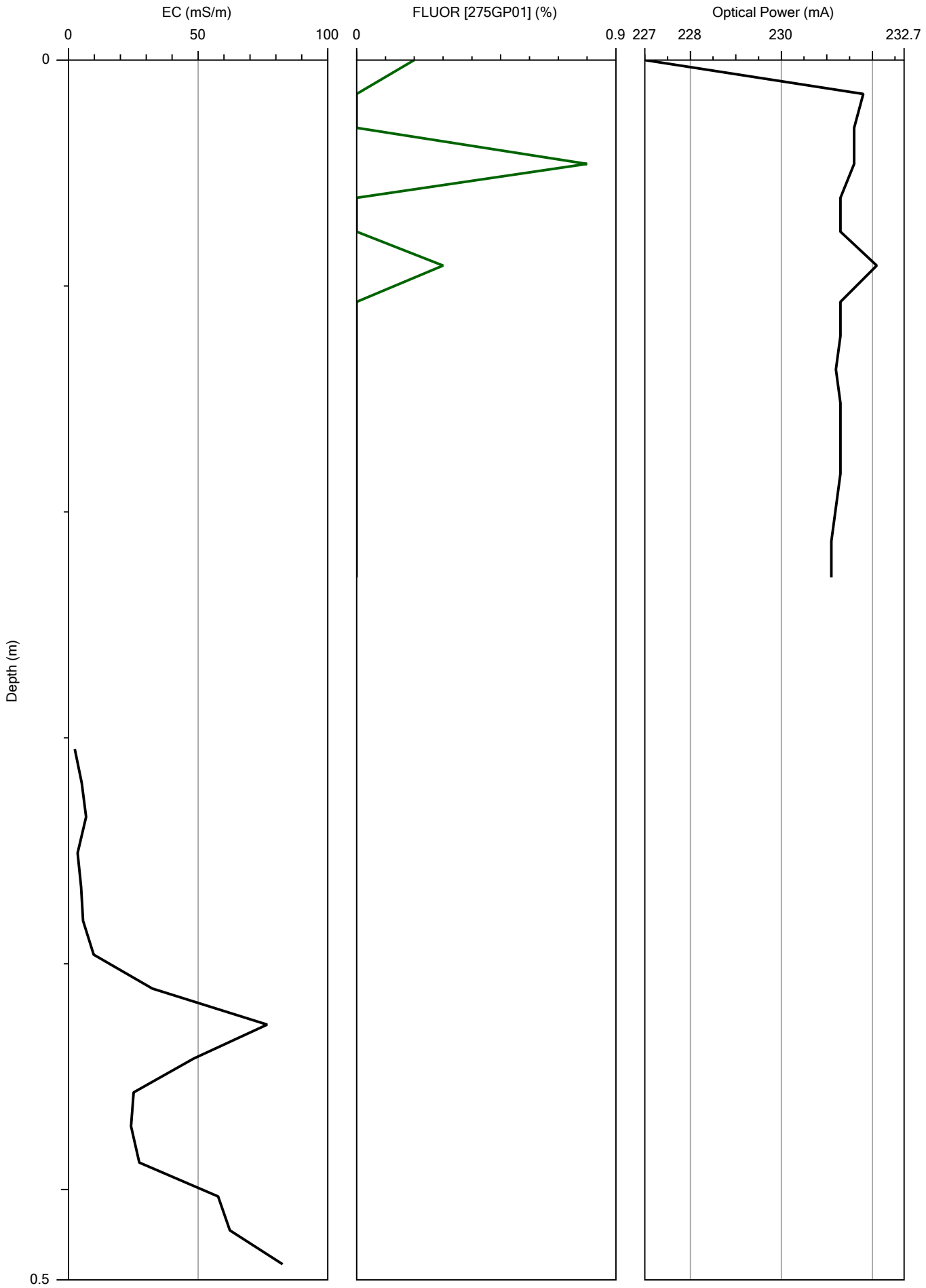
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP42.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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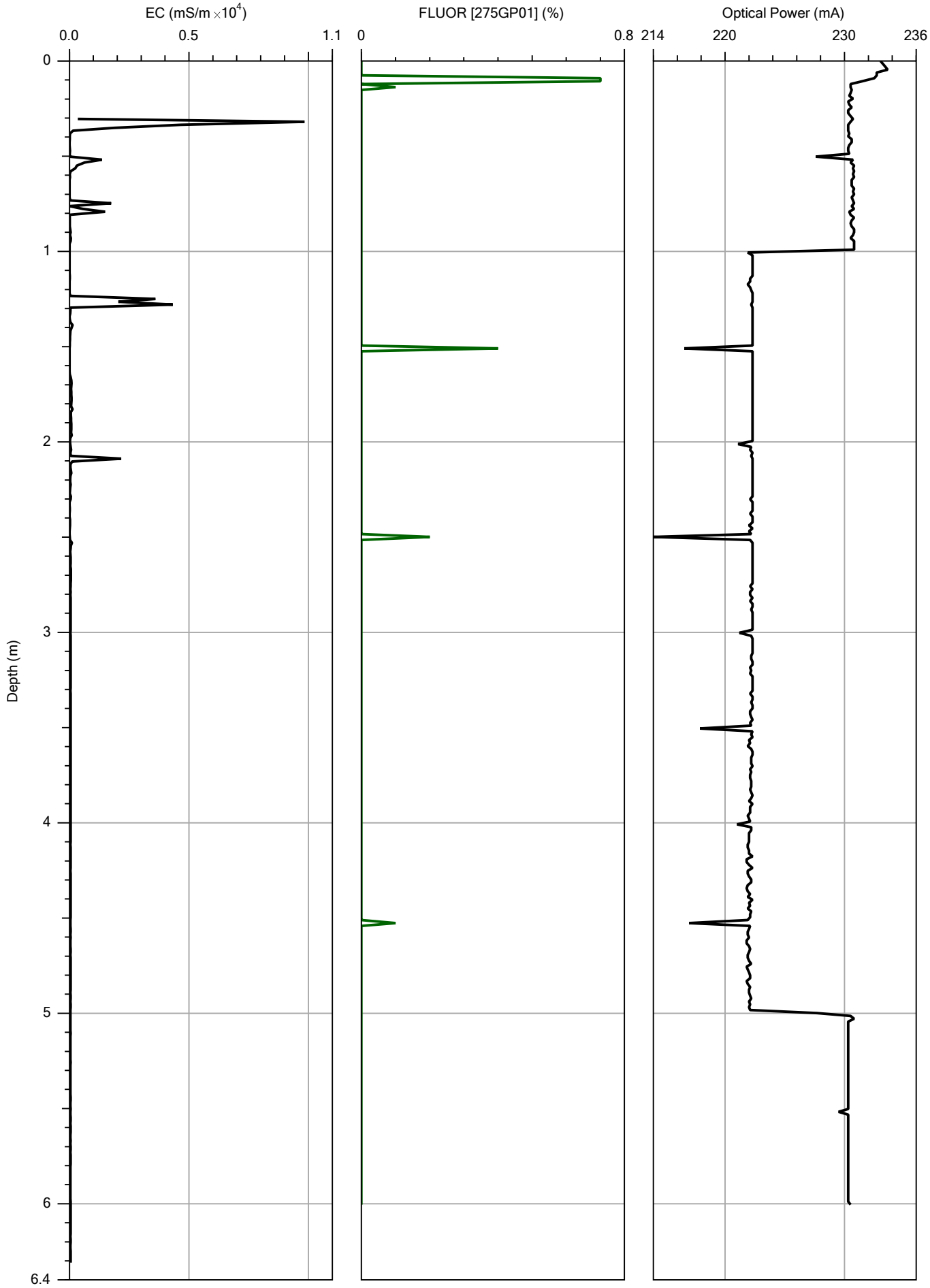
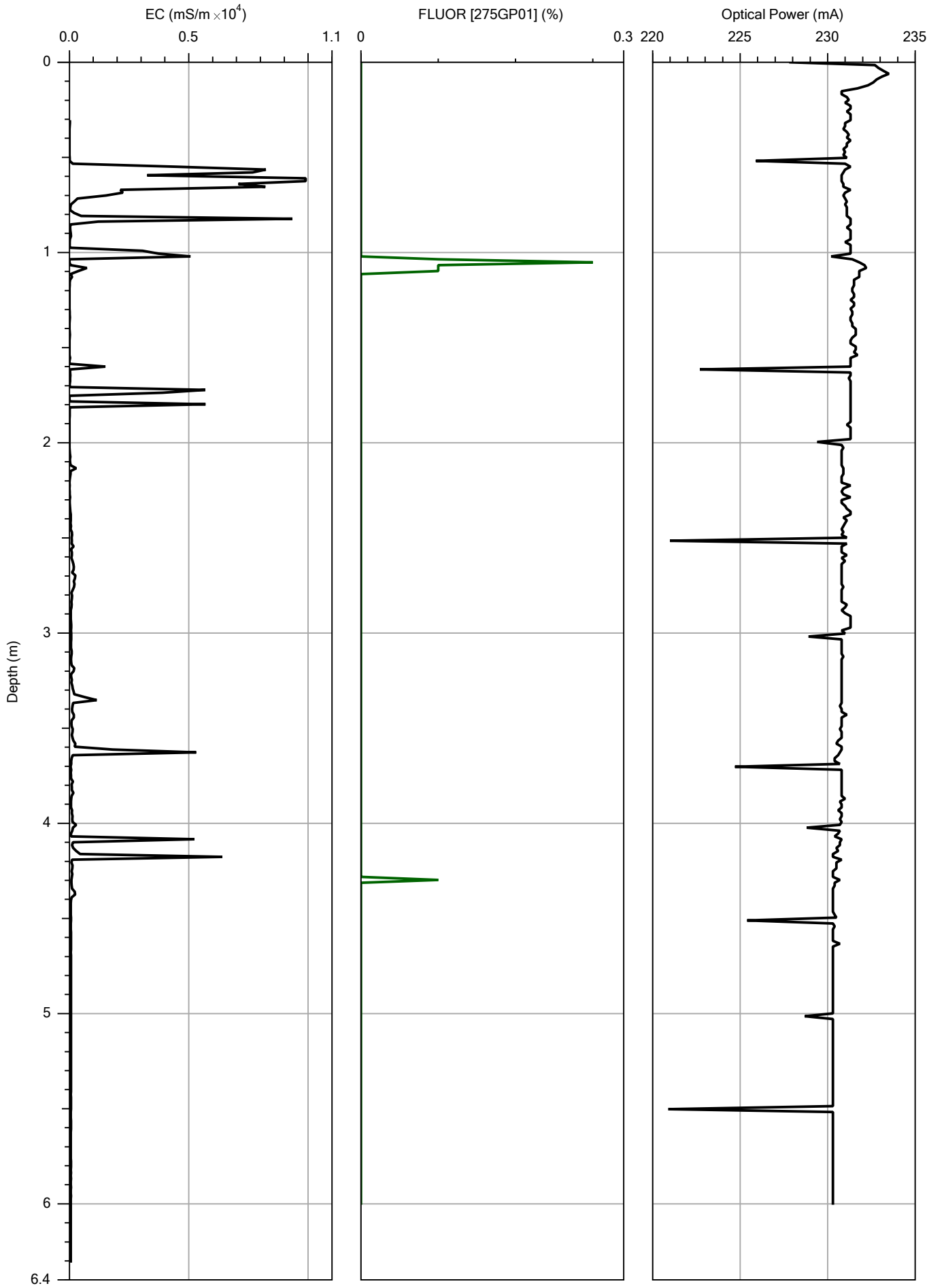
Company: In Situ SI	Operator: Darren Hughes	Date: 05/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

		File: OIP44.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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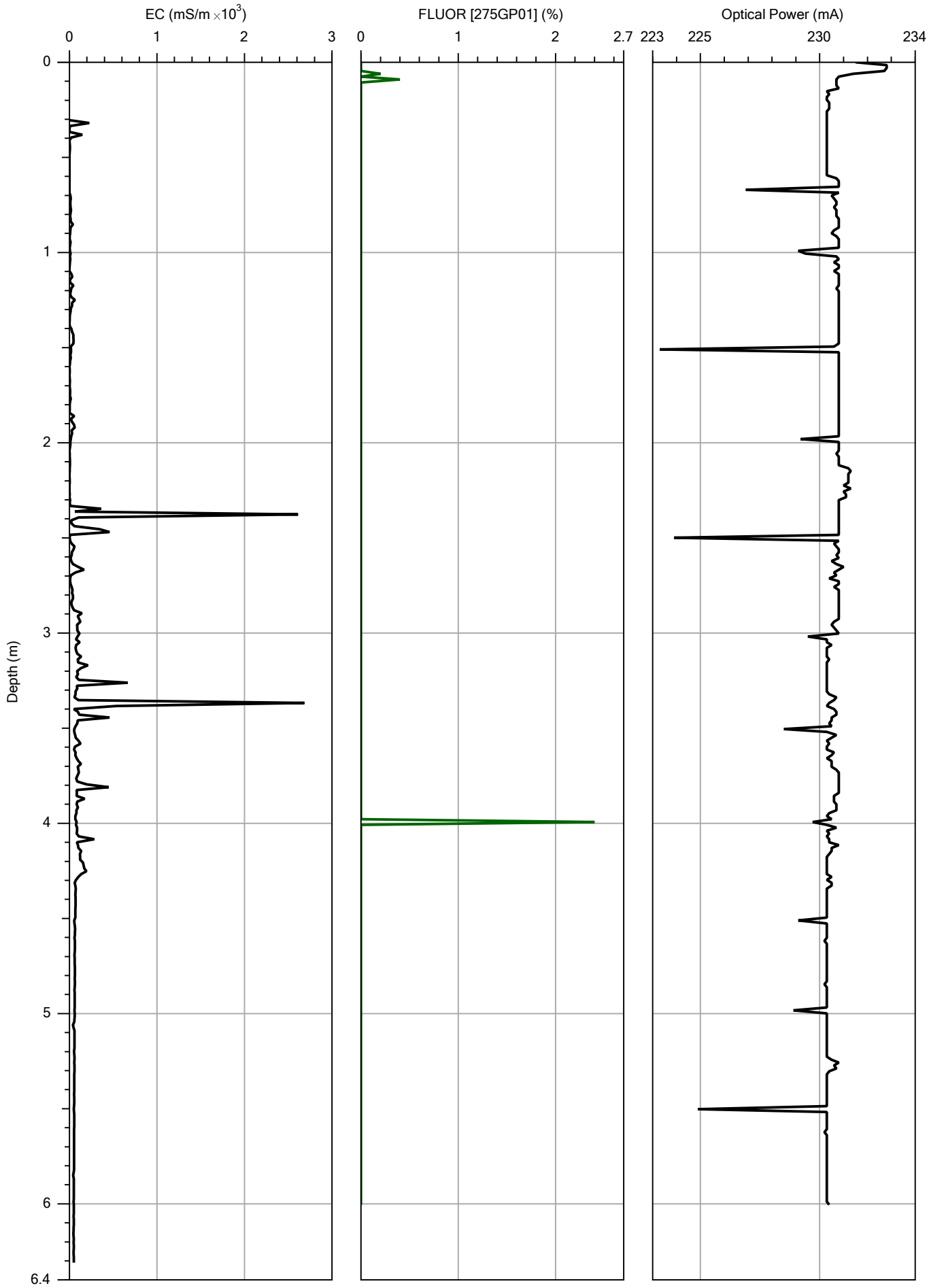
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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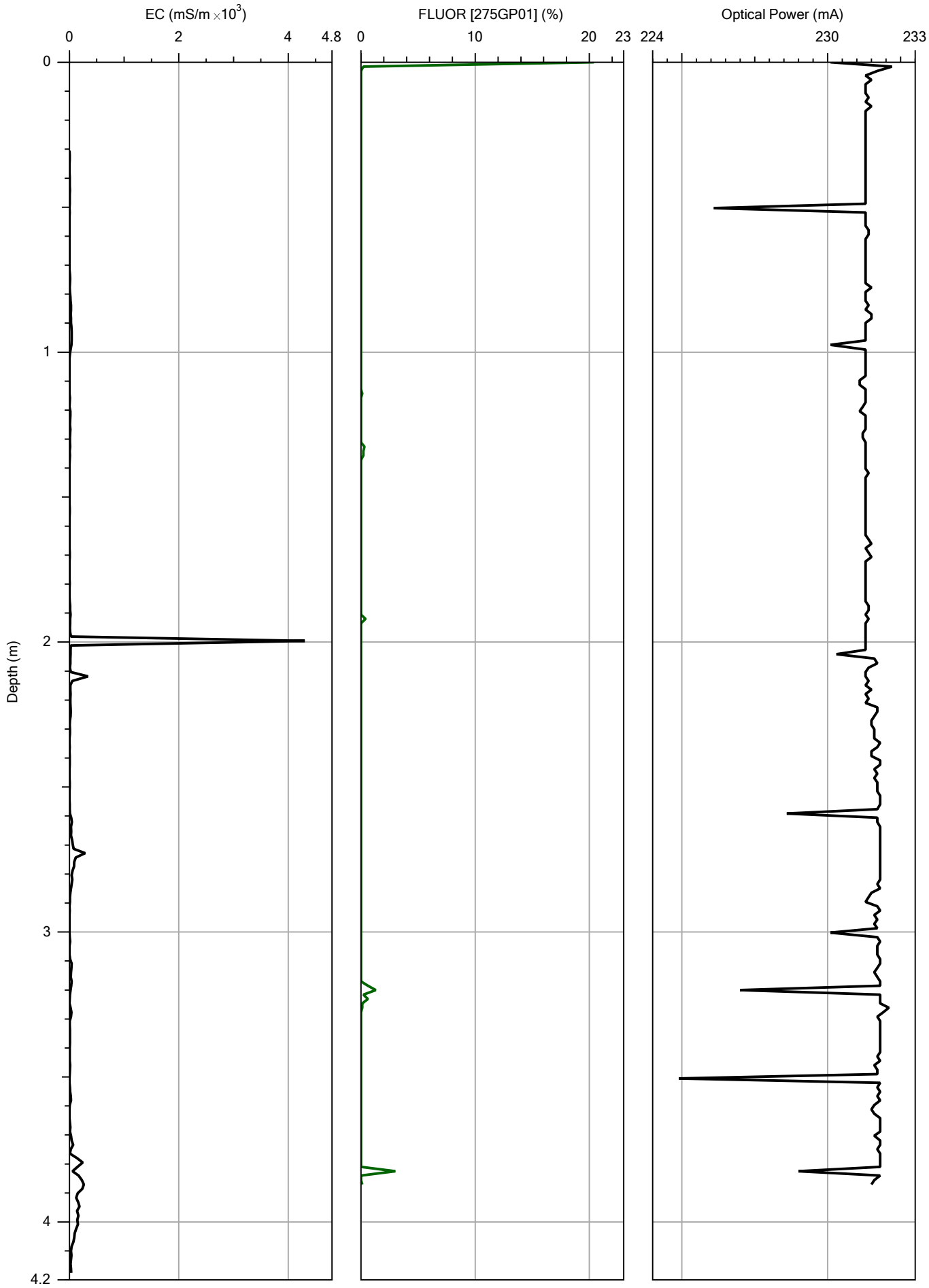
Company: In Situ SI	Operator: Darren Hughes	Date: 02/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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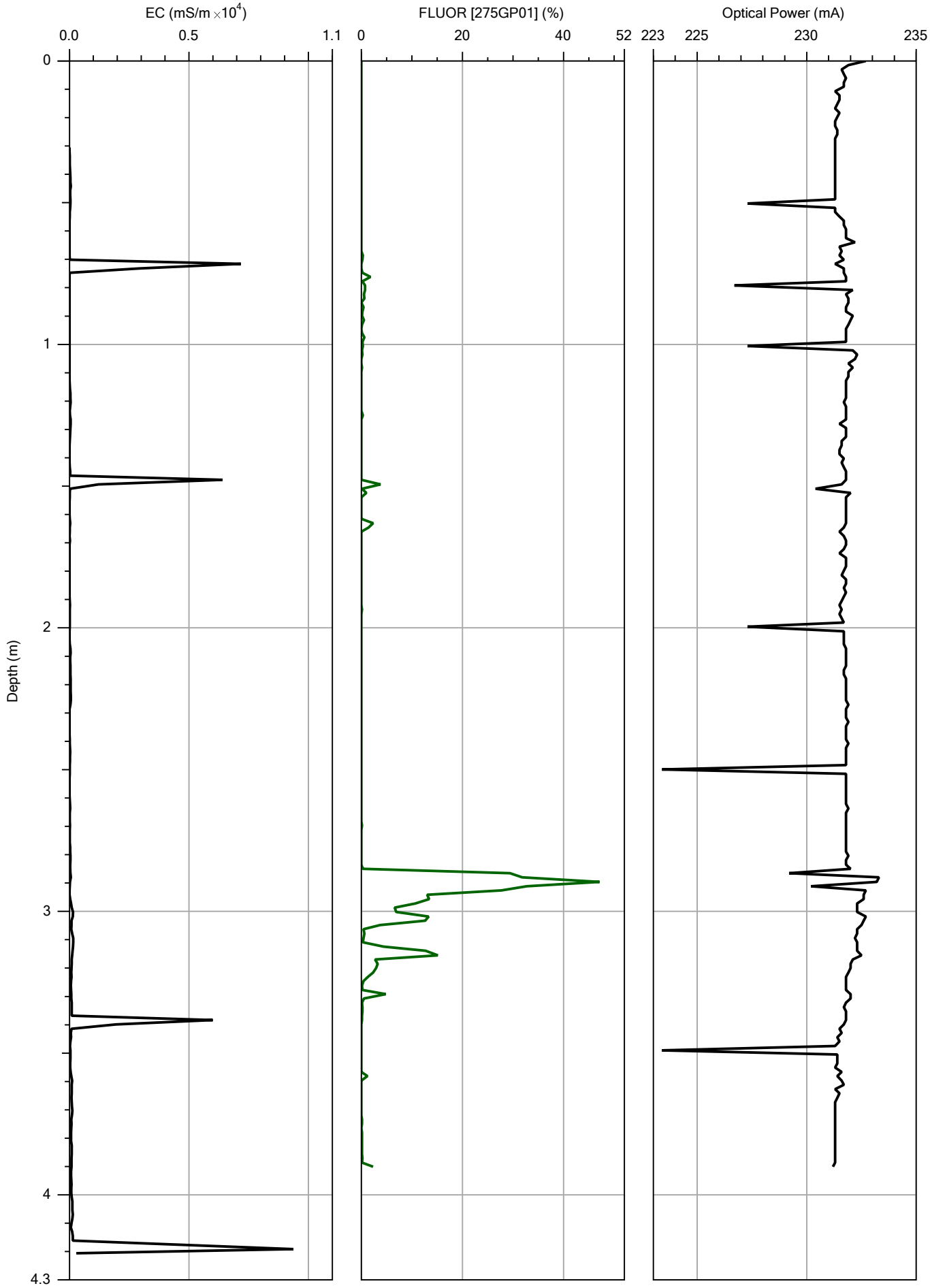
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

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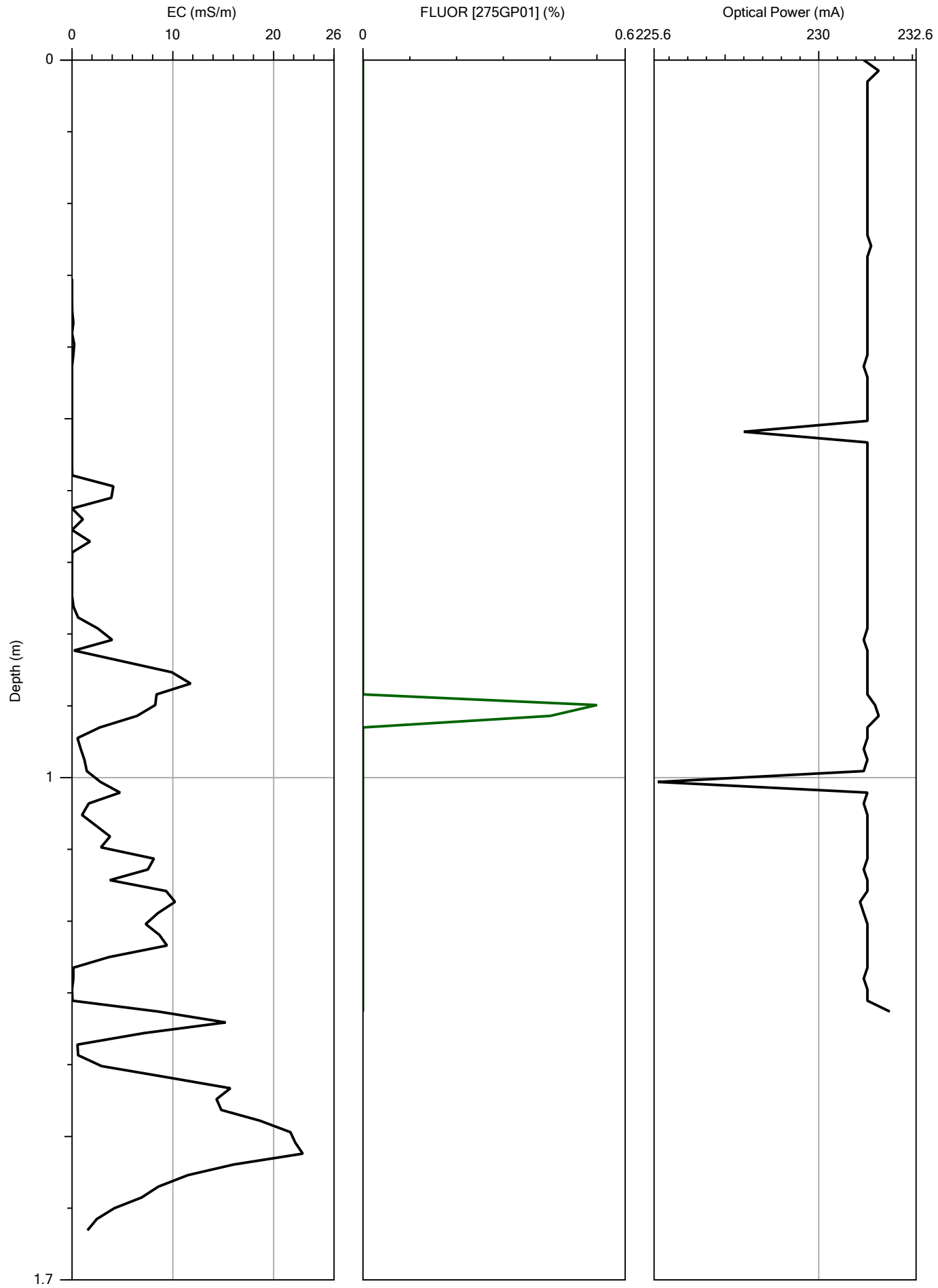
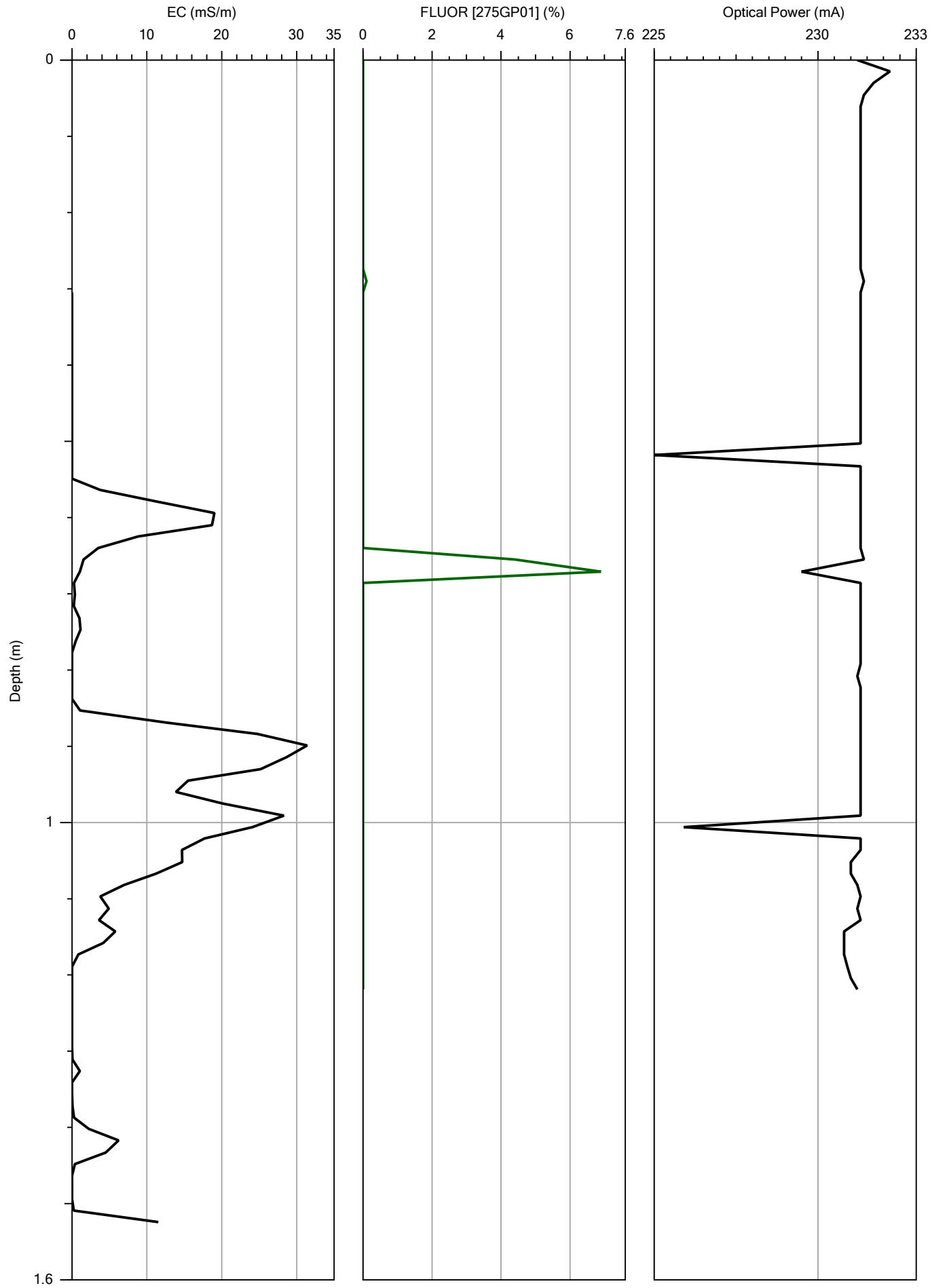
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



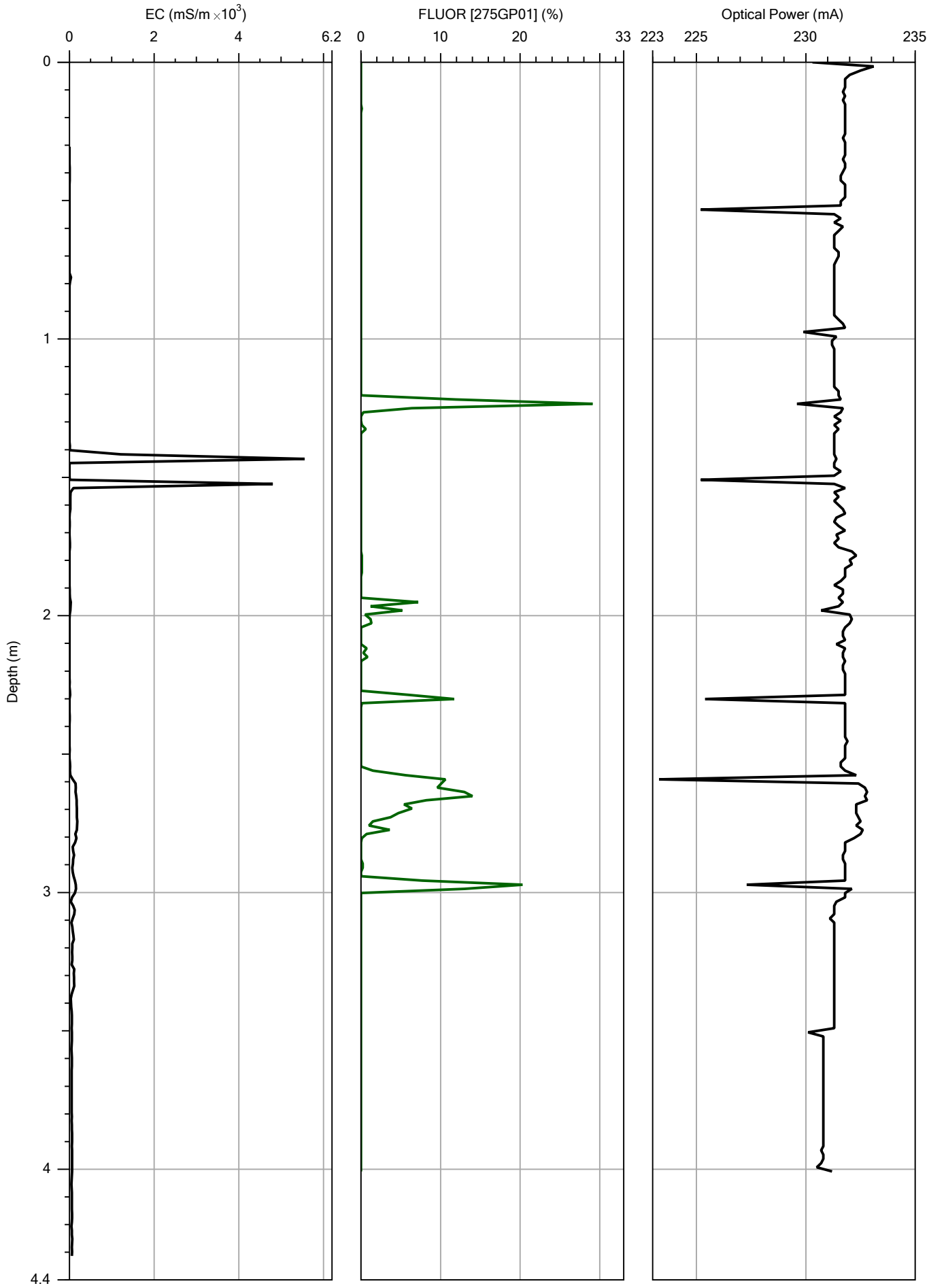
IN SITU
SITE INVESTIGATION

		File: OIP49.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



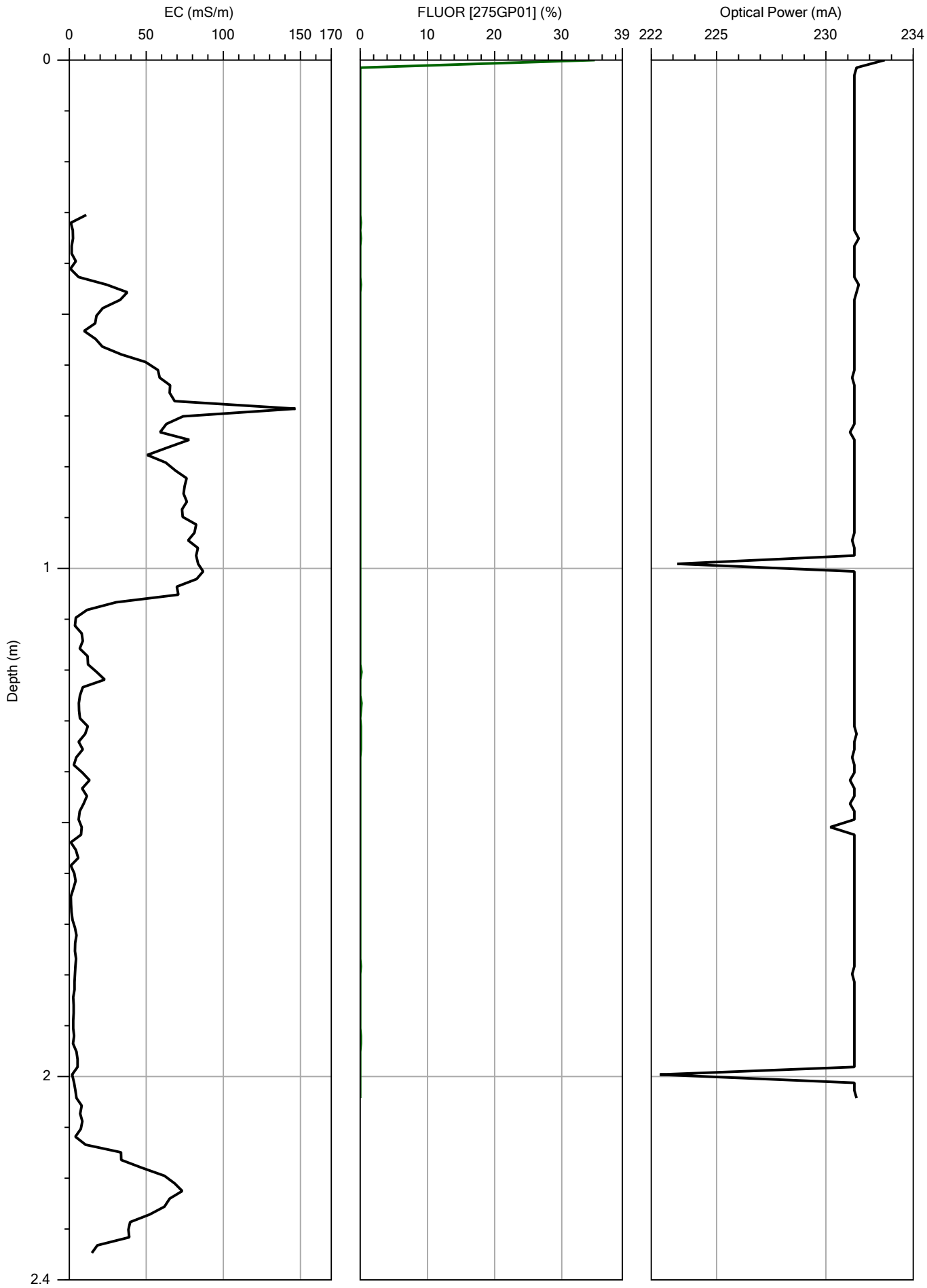
IN SITU
SITE INVESTIGATION

		File: OIP49A.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

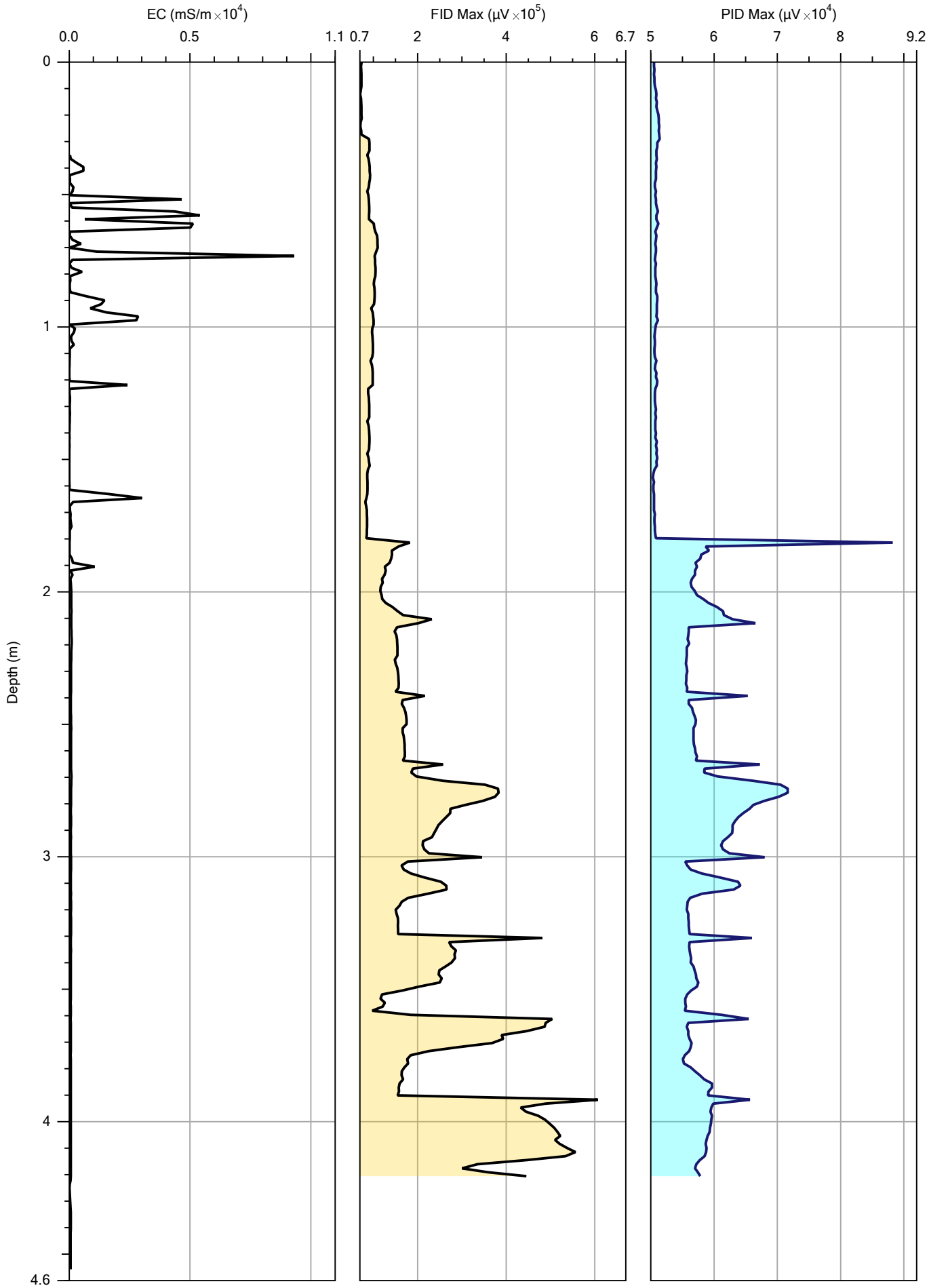
		File: OIP49B.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane



IN SITU
SITE INVESTIGATION

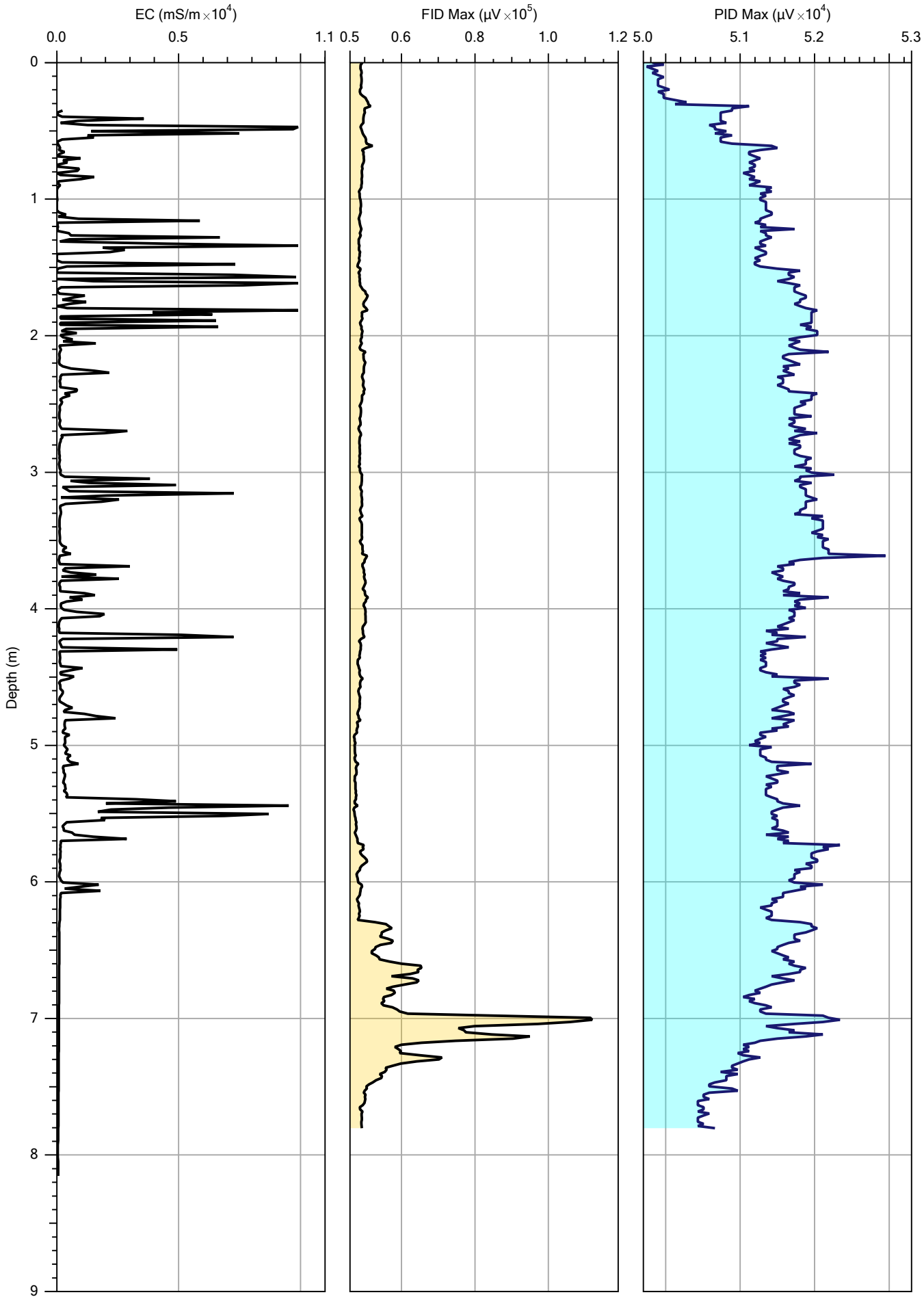
		File: OIP50.OIP
Company: In Situ SI	Operator: Darren Hughes	Date: 03/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane

15.0 MIHPT PROFILES AND RESPONSE TESTING DATA



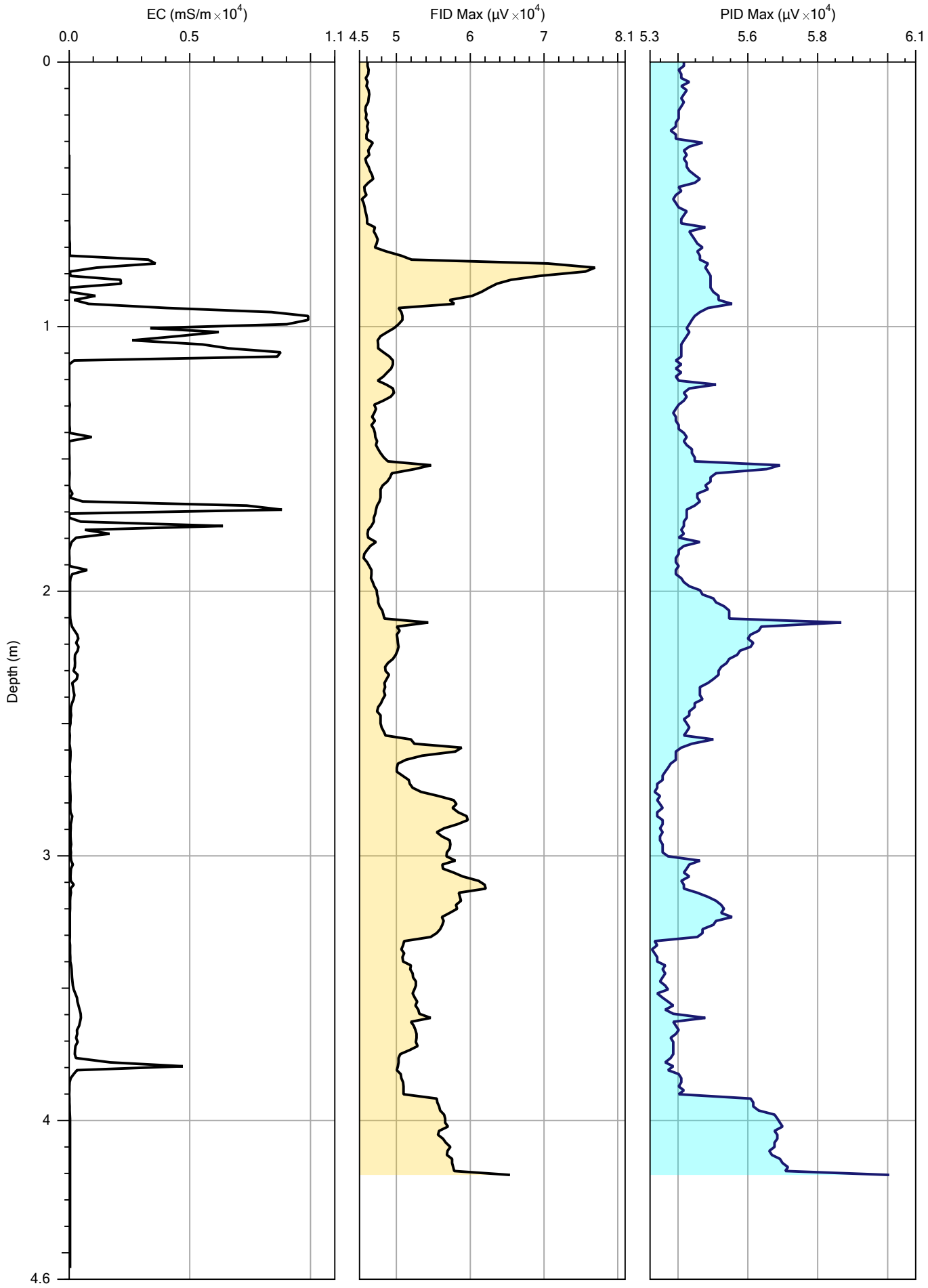
IN SITU
SITE INVESTIGATION

		File: MIP02.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



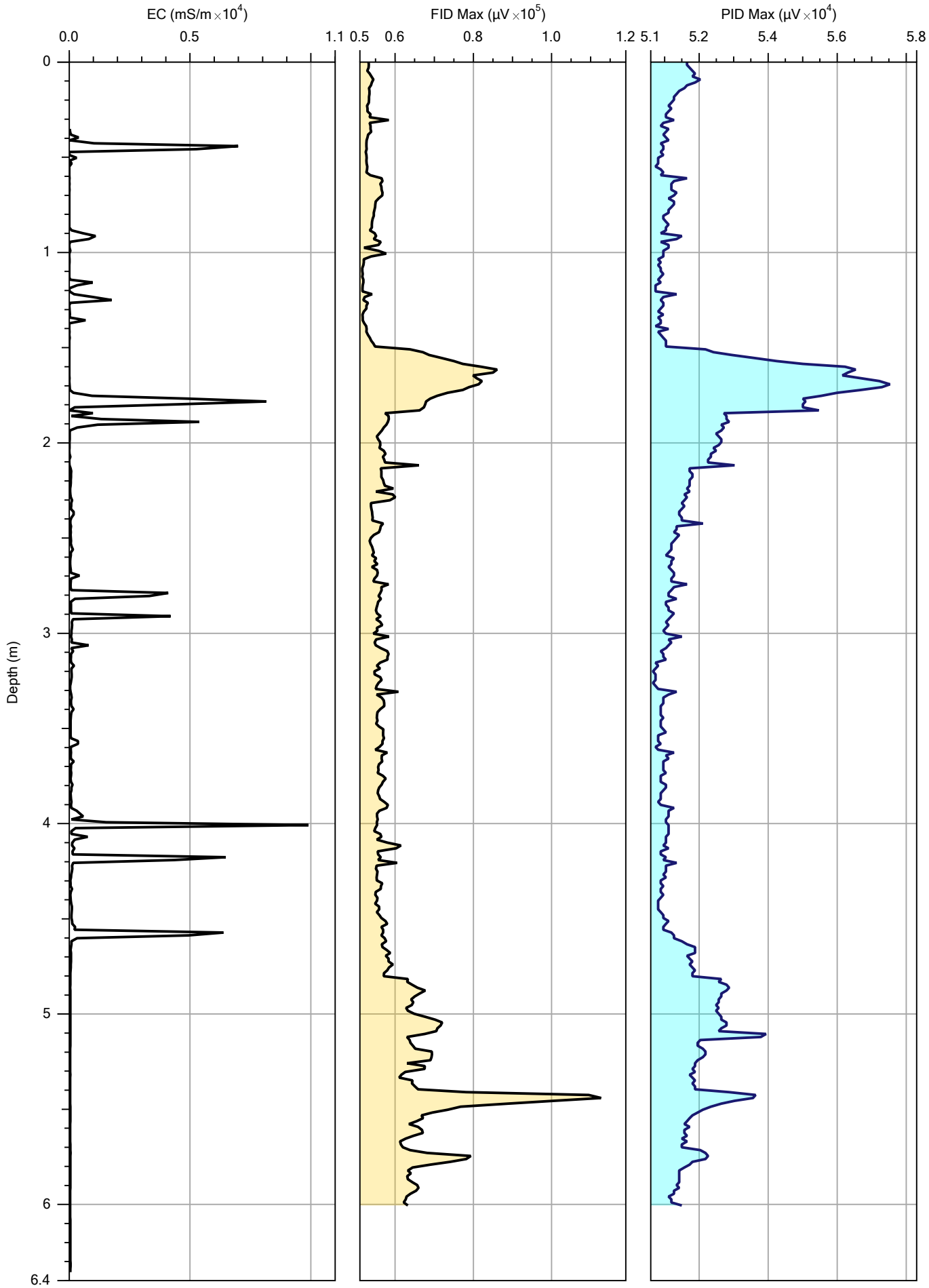
IN SITU
SITE INVESTIGATION

		File: MIP04.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

		File: MIP06.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

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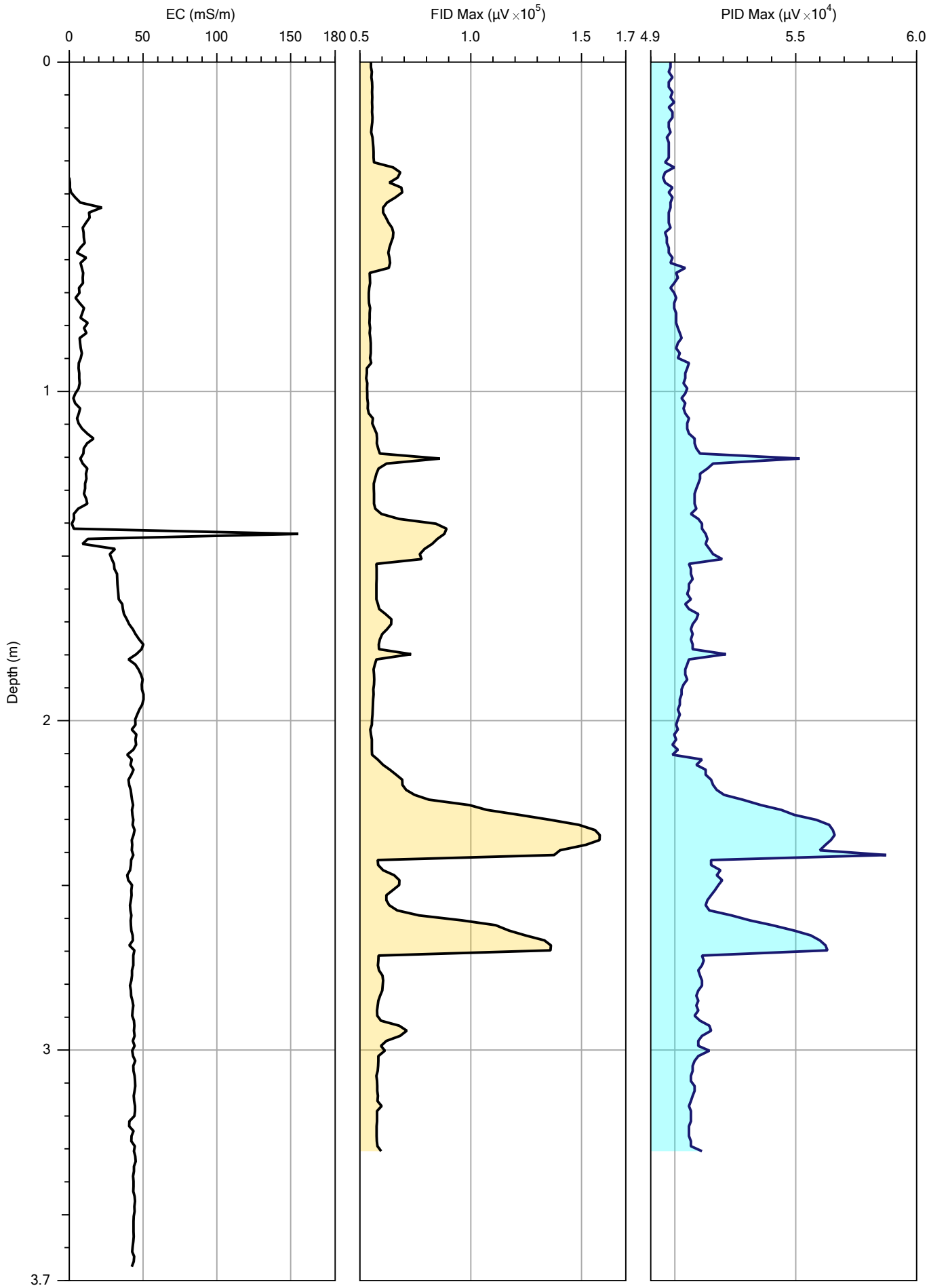
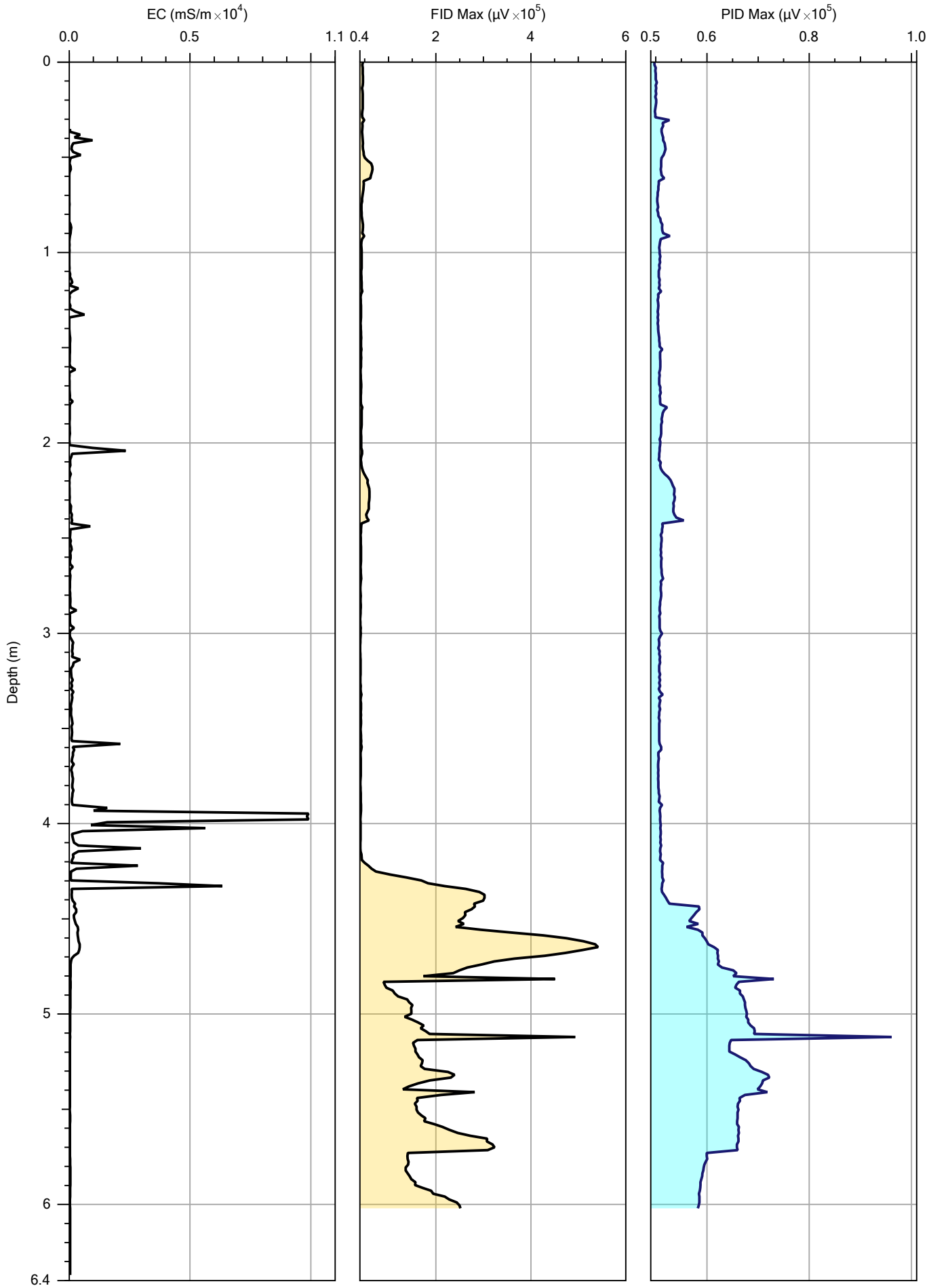
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



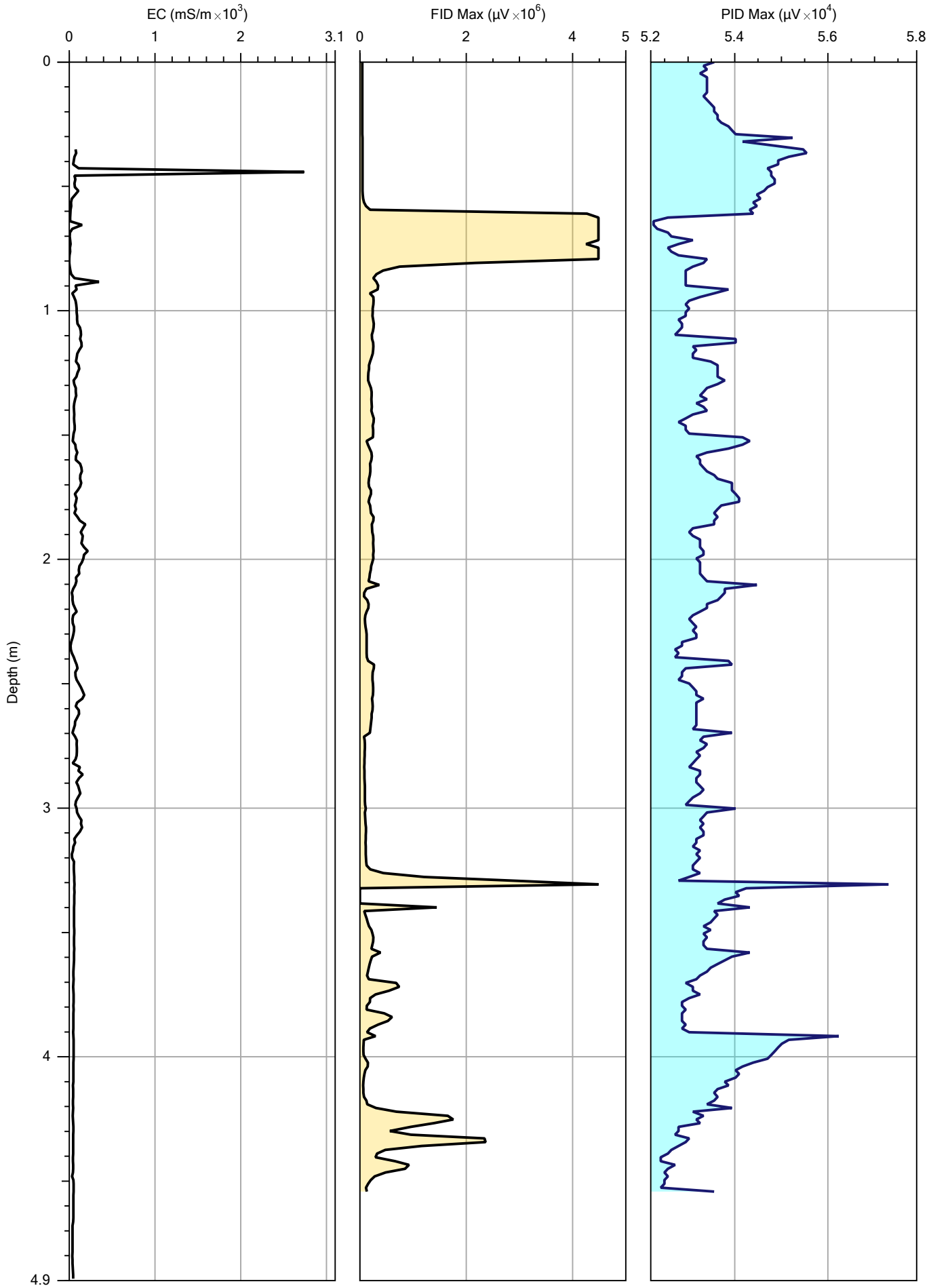
IN SITU
SITE INVESTIGATION

		File: MIP13.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



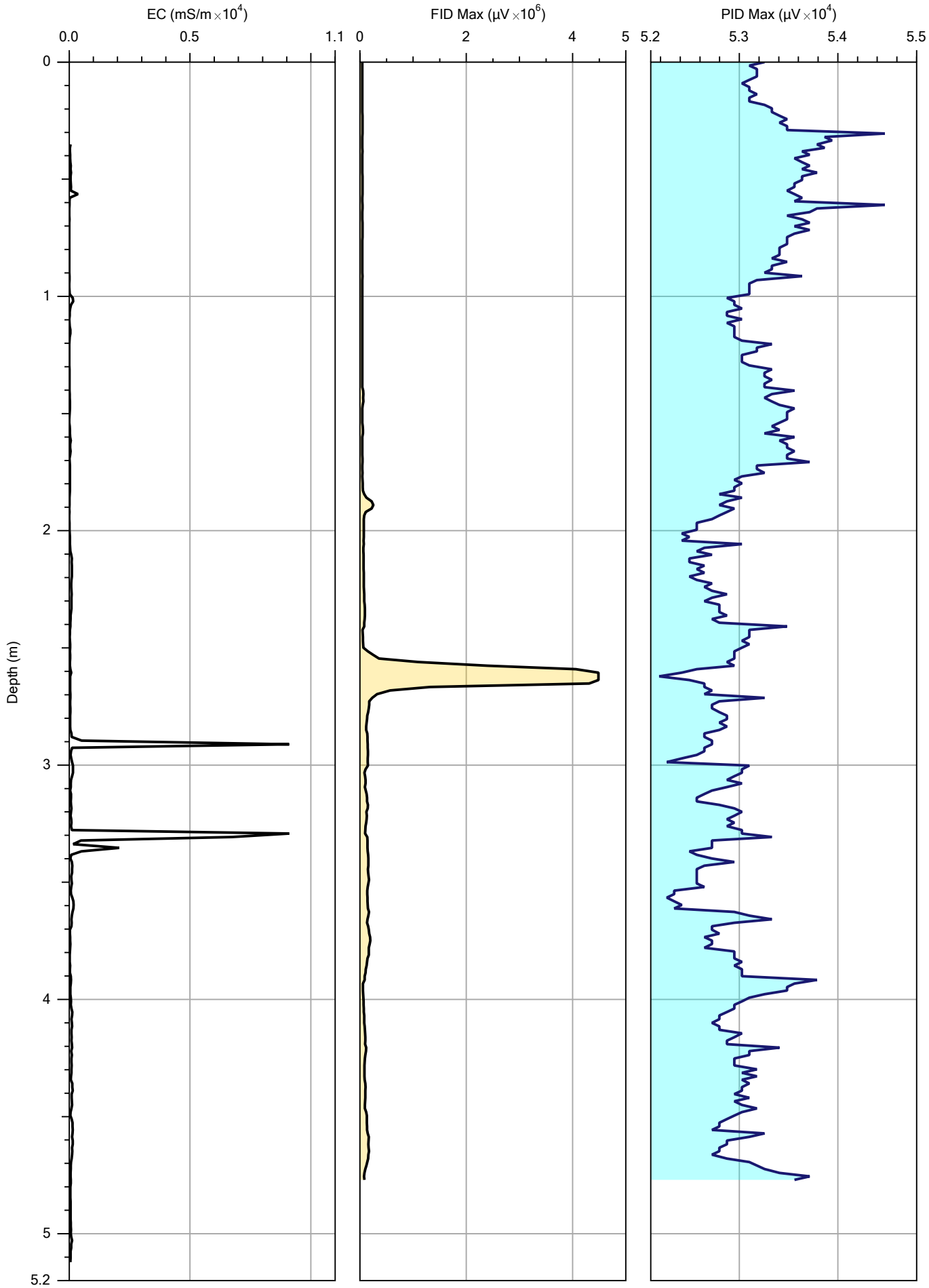
IN SITU
SITE INVESTIGATION

		File: MIP15.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



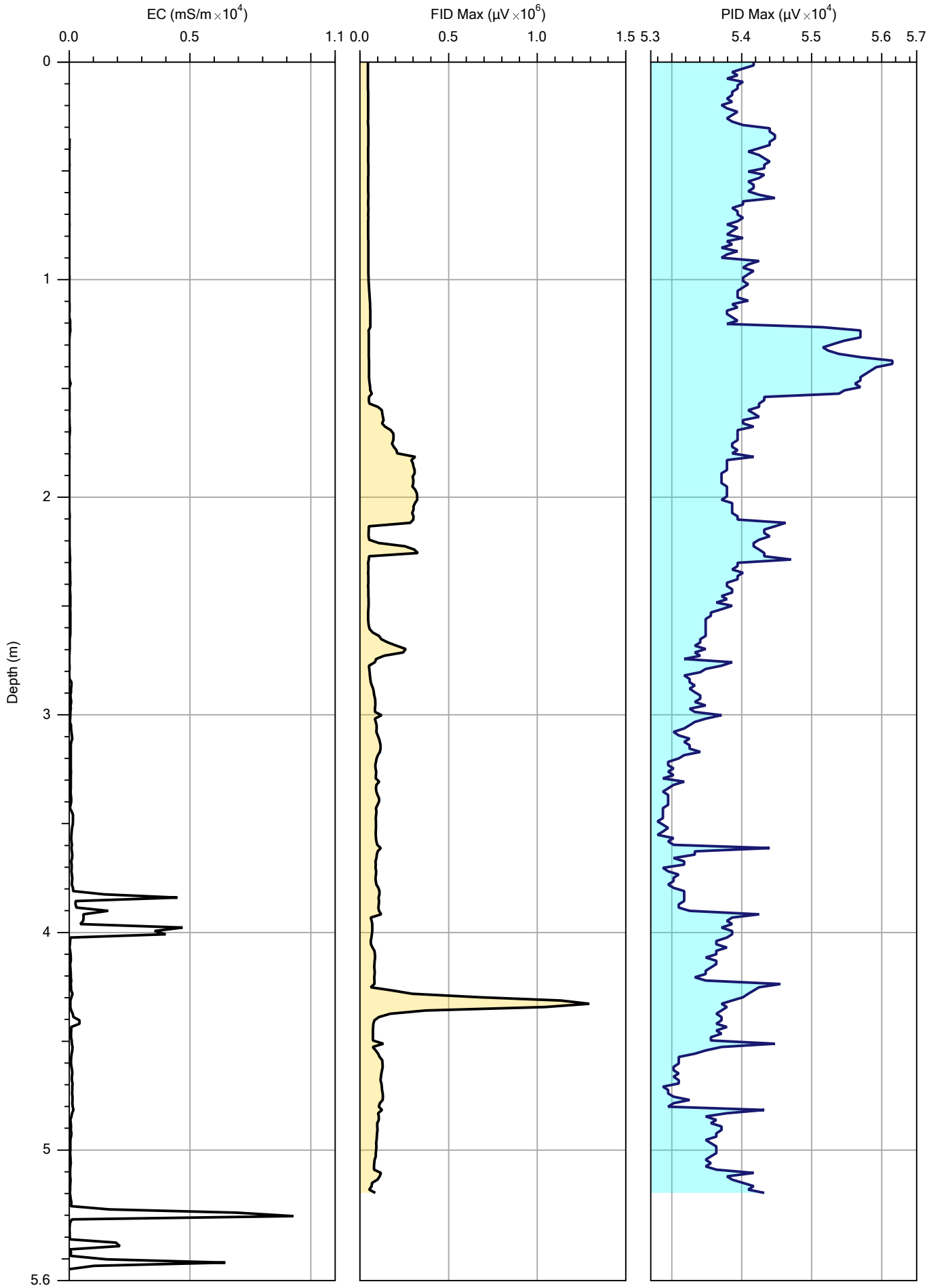
IN SITU
SITE INVESTIGATION

		File: MIP17.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



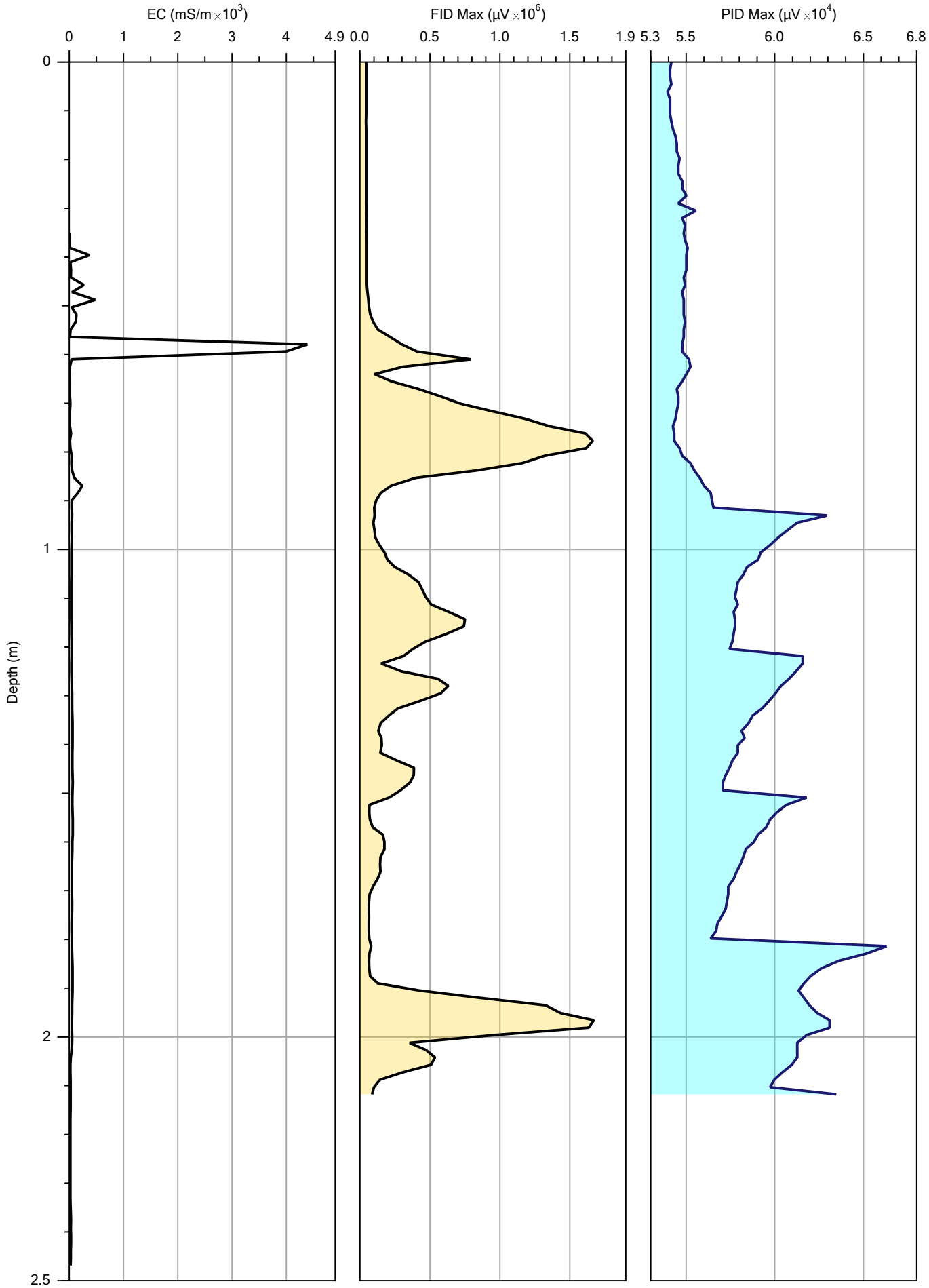
IN SITU
SITE INVESTIGATION

		File: MIP18.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



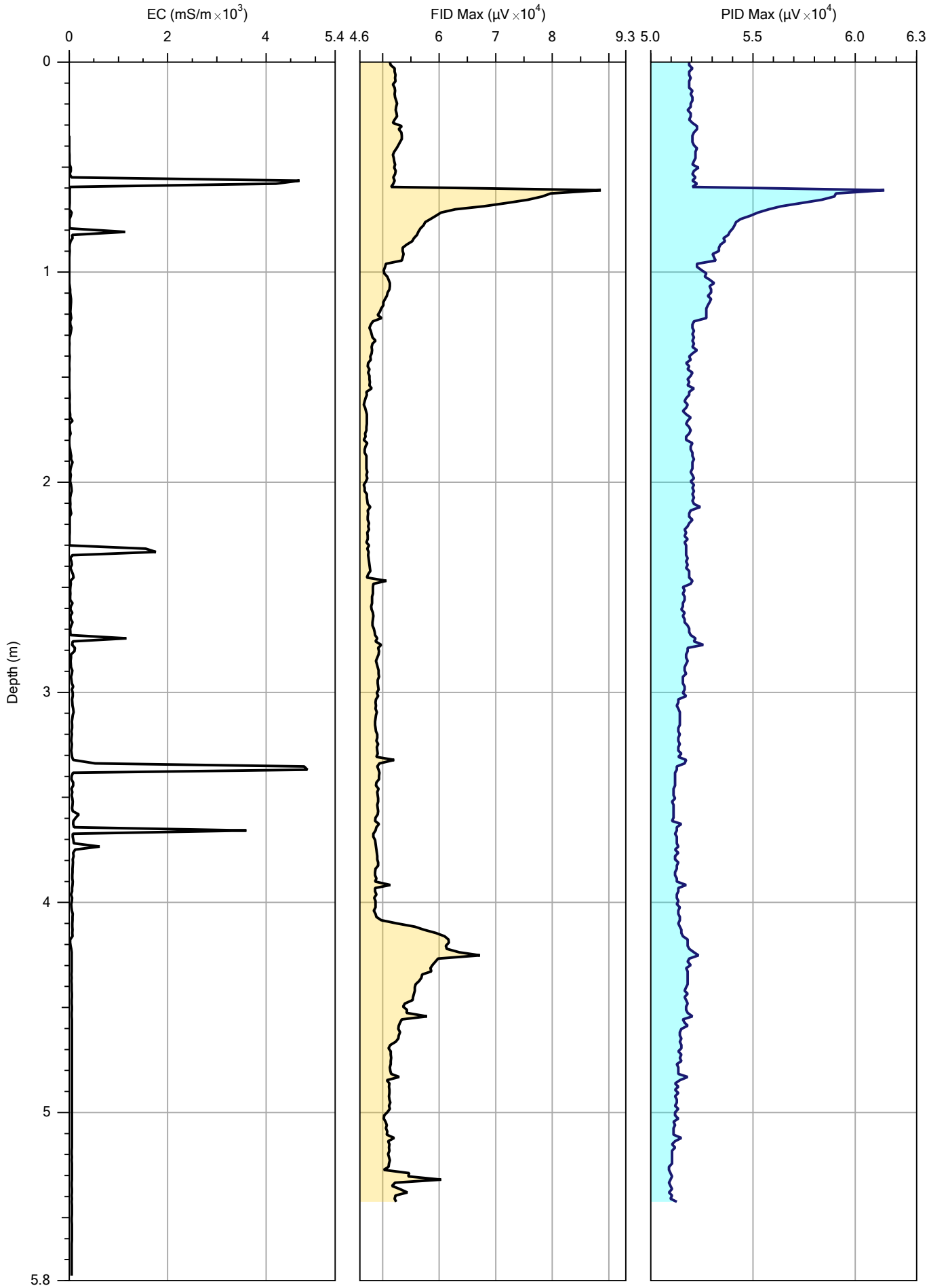
IN SITU
SITE INVESTIGATION

		File: MIP20.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



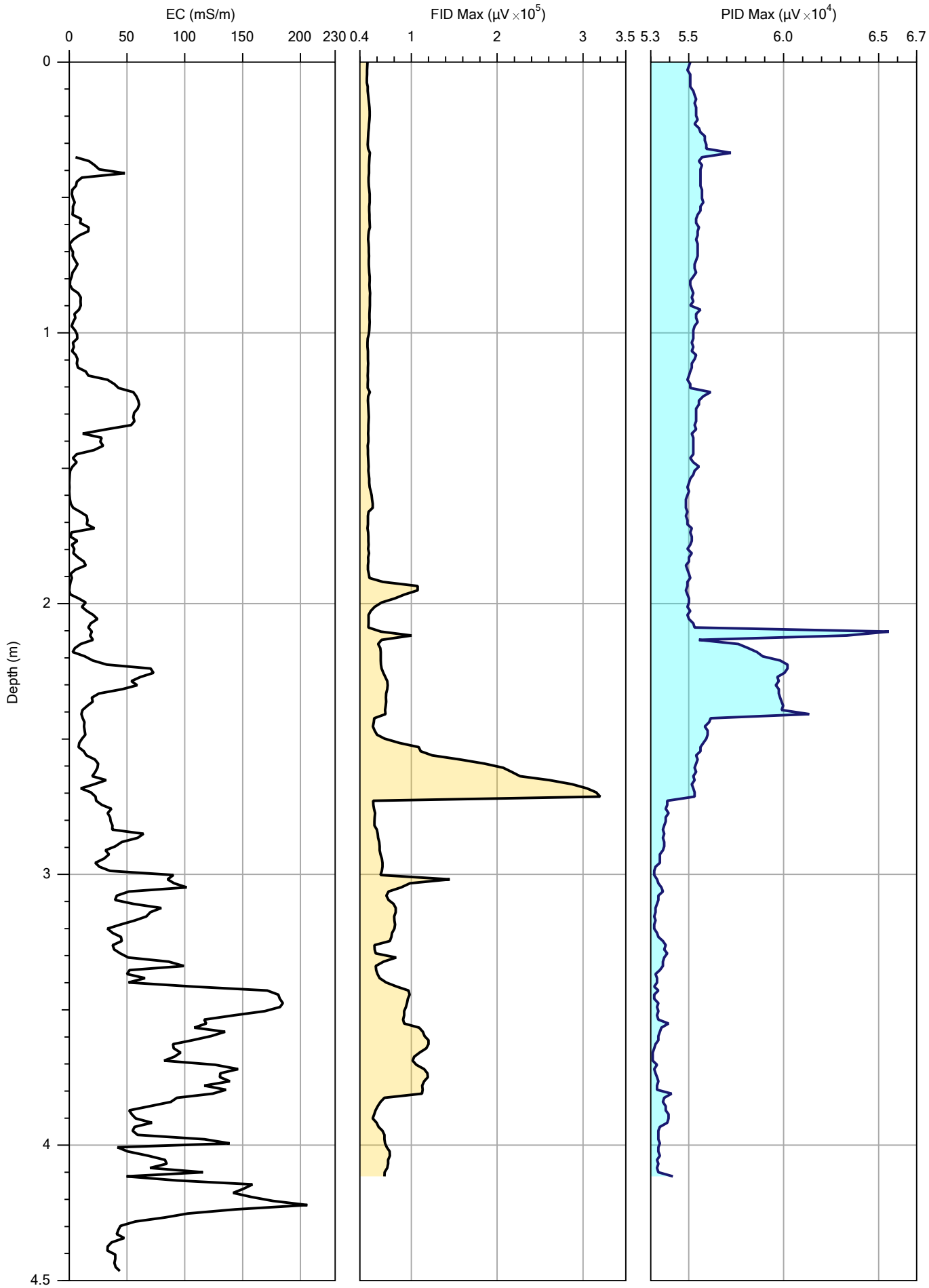
IN SITU
SITE INVESTIGATION

		File: MIP38.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



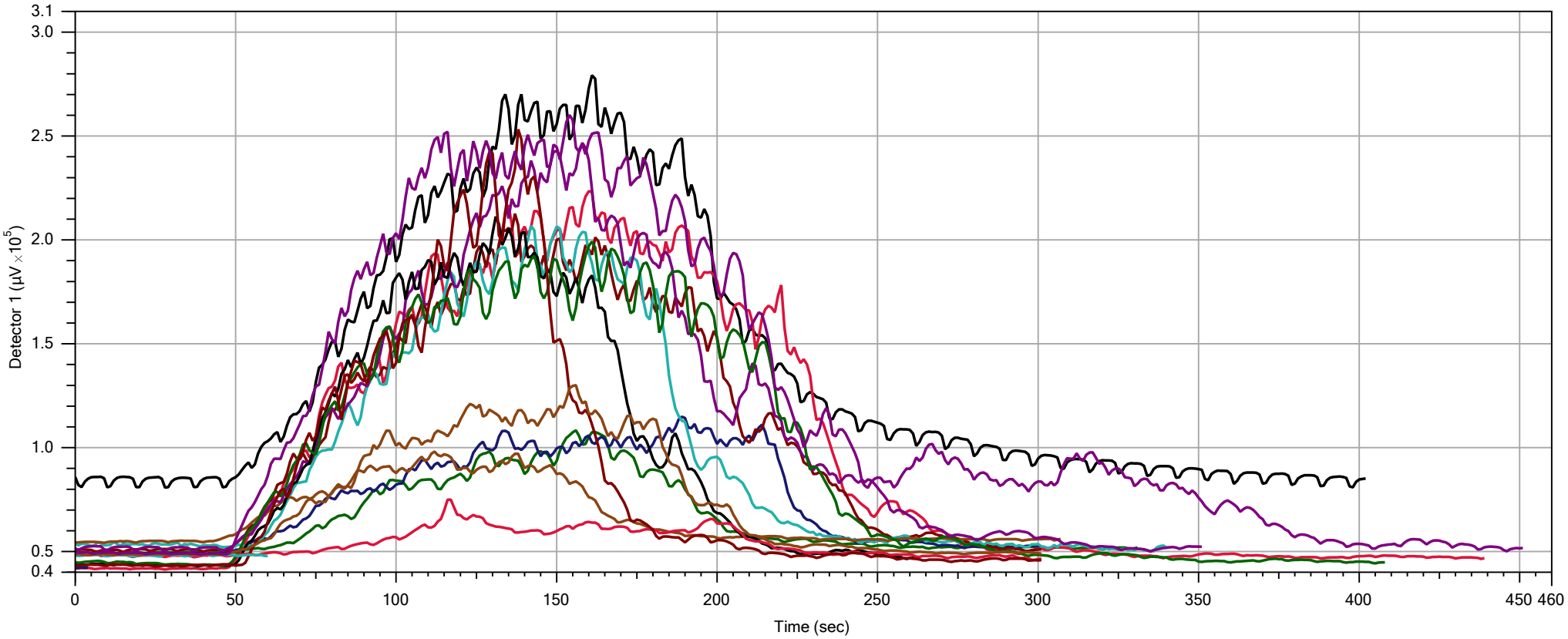
IN SITU
SITE INVESTIGATION

		File: MIP46.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 06/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath



IN SITU
SITE INVESTIGATION

		File: MIP48.MIP
Company: In Situ Site Investigation	Operator: Darren Hughes	Date: 04/08/2021
Project ID: 1210414	Client: Wardell Armstrong	Location: Ten Acres Lane, Newton Heath

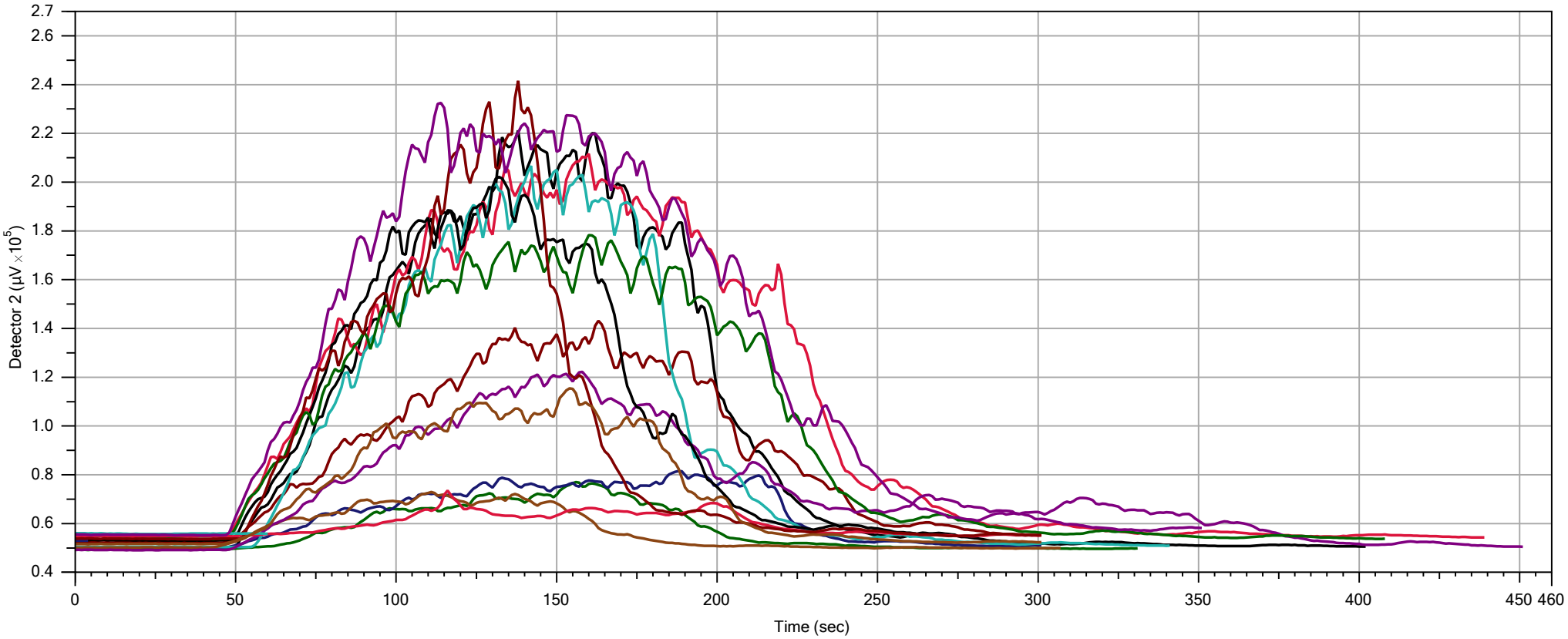


	Filename	Date
	MIP02.PRE.TIM	04/08/2021
	MIP04.PRE.TIM	06/08/2021
	MIP04.POST.TIM	06/08/2021
	MIP06.PRE.TIM	04/08/2021
	MIP06.POST.TIM	04/08/2021
	MIP10.PRE.TIM	06/08/2021
	MIP13.PRE.TIM	06/08/2021
	MIP15.PRE.TIM	04/08/2021
	MIP17.PRE.TIM	04/08/2021
	MIP18.PRE.TIM	04/08/2021
	MIP18.POST.TIM	04/08/2021
	MIP20.PRE.TIM	04/08/2021
	MIP38.PRE.TIM	04/08/2021
	MIP38.POST.TIM	04/08/2021
	MIP46.PRE.TIM	06/08/2021
	MIP48.PRE.TIM	04/08/2021

IN SITU
SITE INVESTIGATION

DETECTOR 1

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong



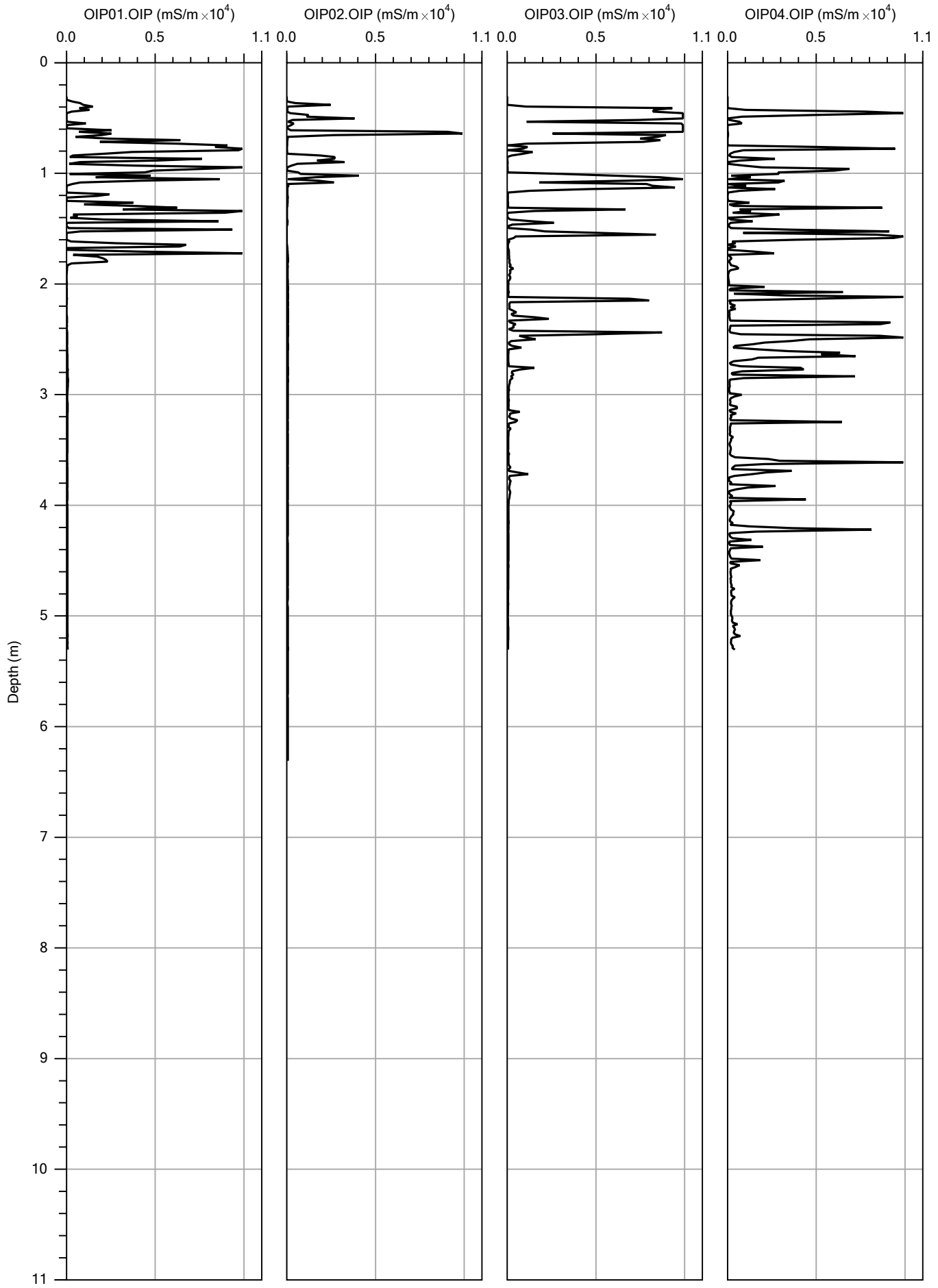
	Filename	Date
	MIP02.PRE.TIM	04/08/2021
	MIP04.PRE.TIM	06/08/2021
	MIP04.POST.TIM	06/08/2021
	MIP06.PRE.TIM	04/08/2021
	MIP06.POST.TIM	04/08/2021
	MIP10.PRE.TIM	06/08/2021
	MIP13.PRE.TIM	06/08/2021
	MIP15.PRE.TIM	04/08/2021
	MIP17.PRE.TIM	04/08/2021
	MIP18.PRE.TIM	04/08/2021
	MIP18.POST.TIM	04/08/2021
	MIP20.PRE.TIM	04/08/2021
	MIP38.PRE.TIM	04/08/2021
	MIP38.POST.TIM	04/08/2021
	MIP46.PRE.TIM	06/08/2021
	MIP48.PRE.TIM	04/08/2021

IN SITU
SITE INVESTIGATION

DETECTOR 2

Company: In Situ Site Investigation	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

16.0 ELECTRICAL CONDUCTIVITY CROSS SECTIONS

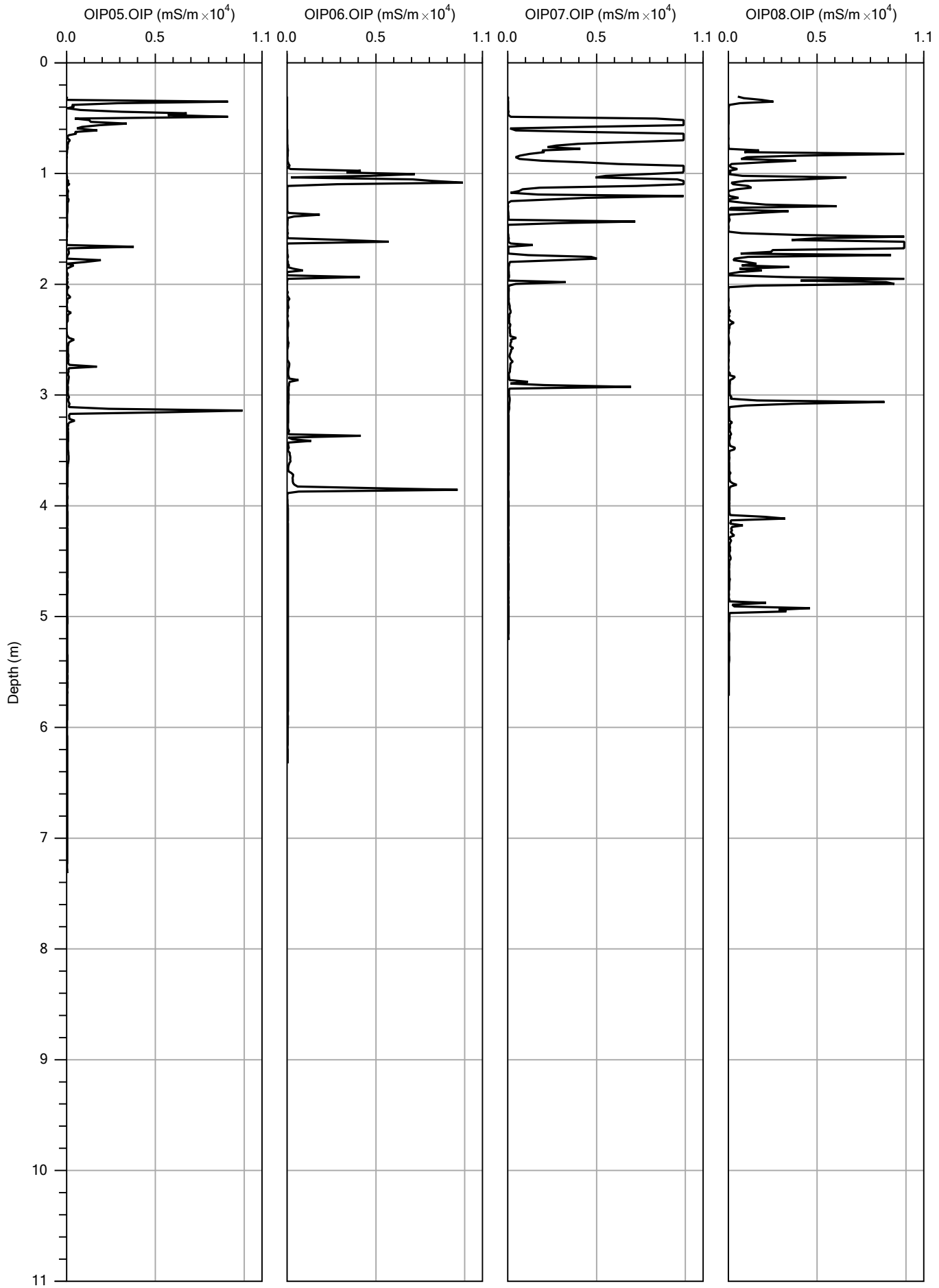


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP01.OIP	02/08/2021
OIP02.OIP	02/08/2021
OIP03.OIP	02/08/2021
OIP04.OIP	02/08/2021

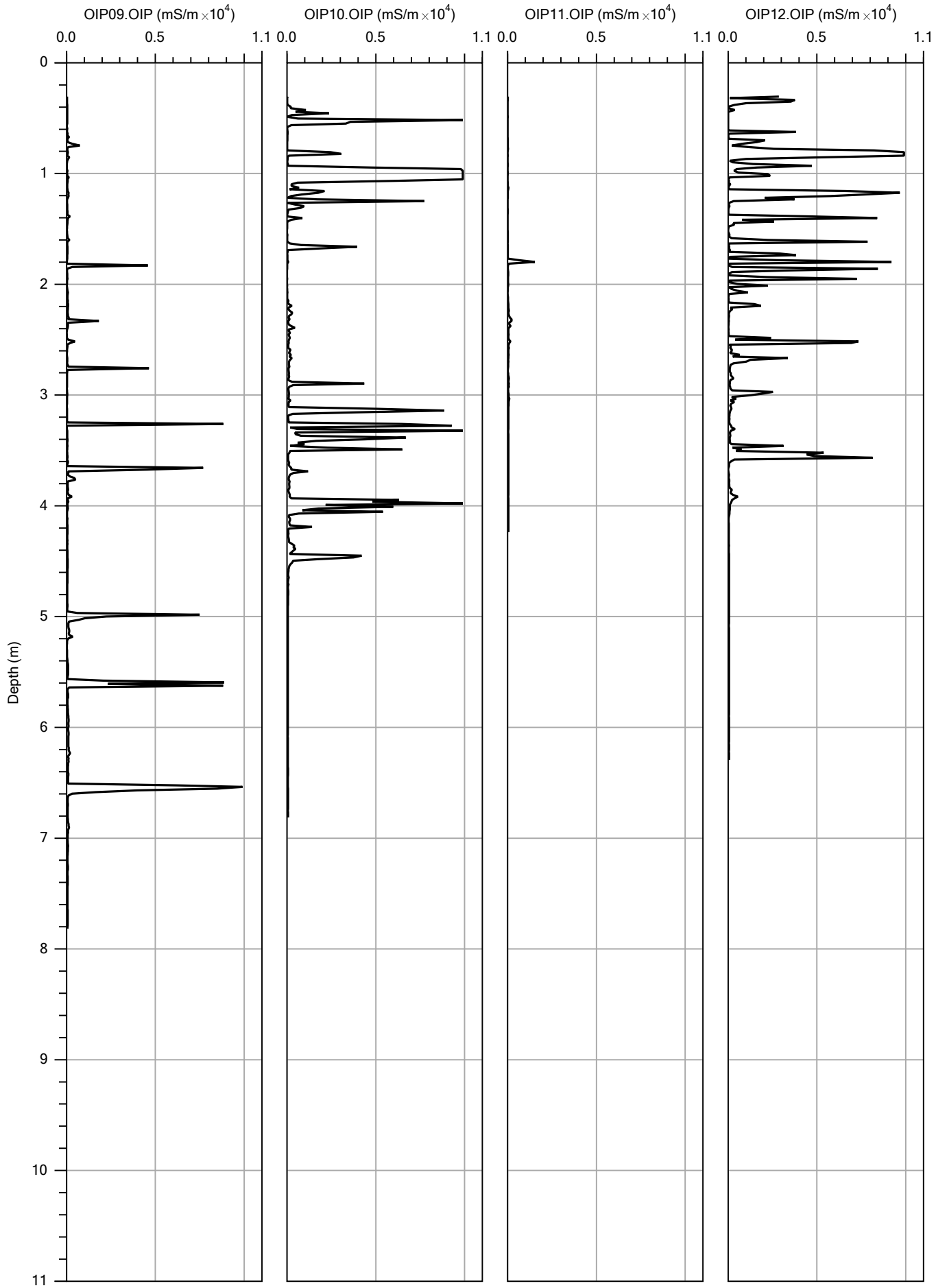


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP05.OIP	02/08/2021
OIP06.OIP	03/08/2021
OIP07.OIP	03/08/2021
OIP08.OIP	02/08/2021

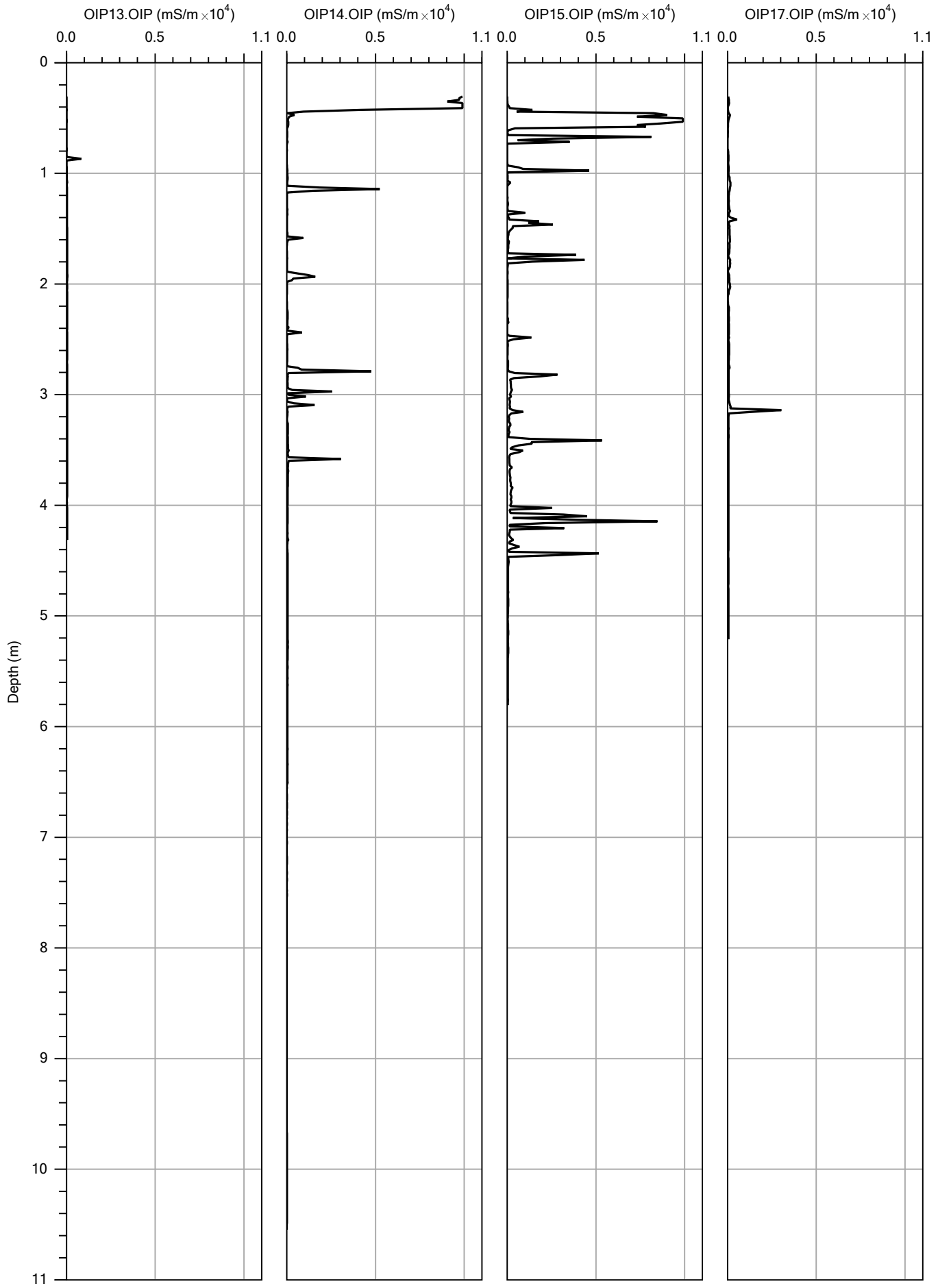


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP09.OIP	05/08/2021
OIP10.OIP	05/08/2021
OIP11.OIP	05/08/2021
OIP12.OIP	02/08/2021

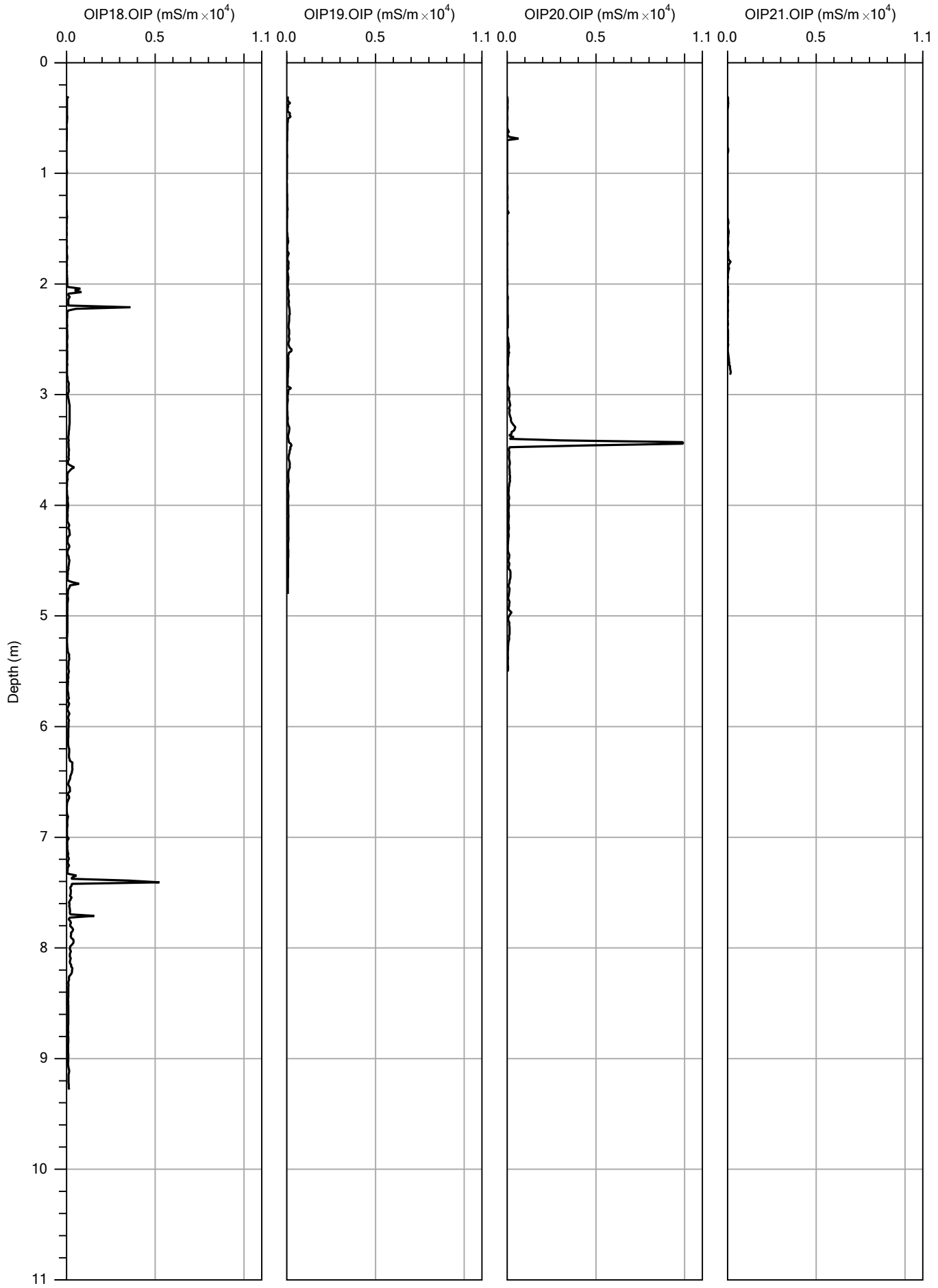


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP13.OIP	02/08/2021
OIP14.OIP	02/08/2021
OIP15.OIP	02/08/2021
OIP17.OIP	03/08/2021

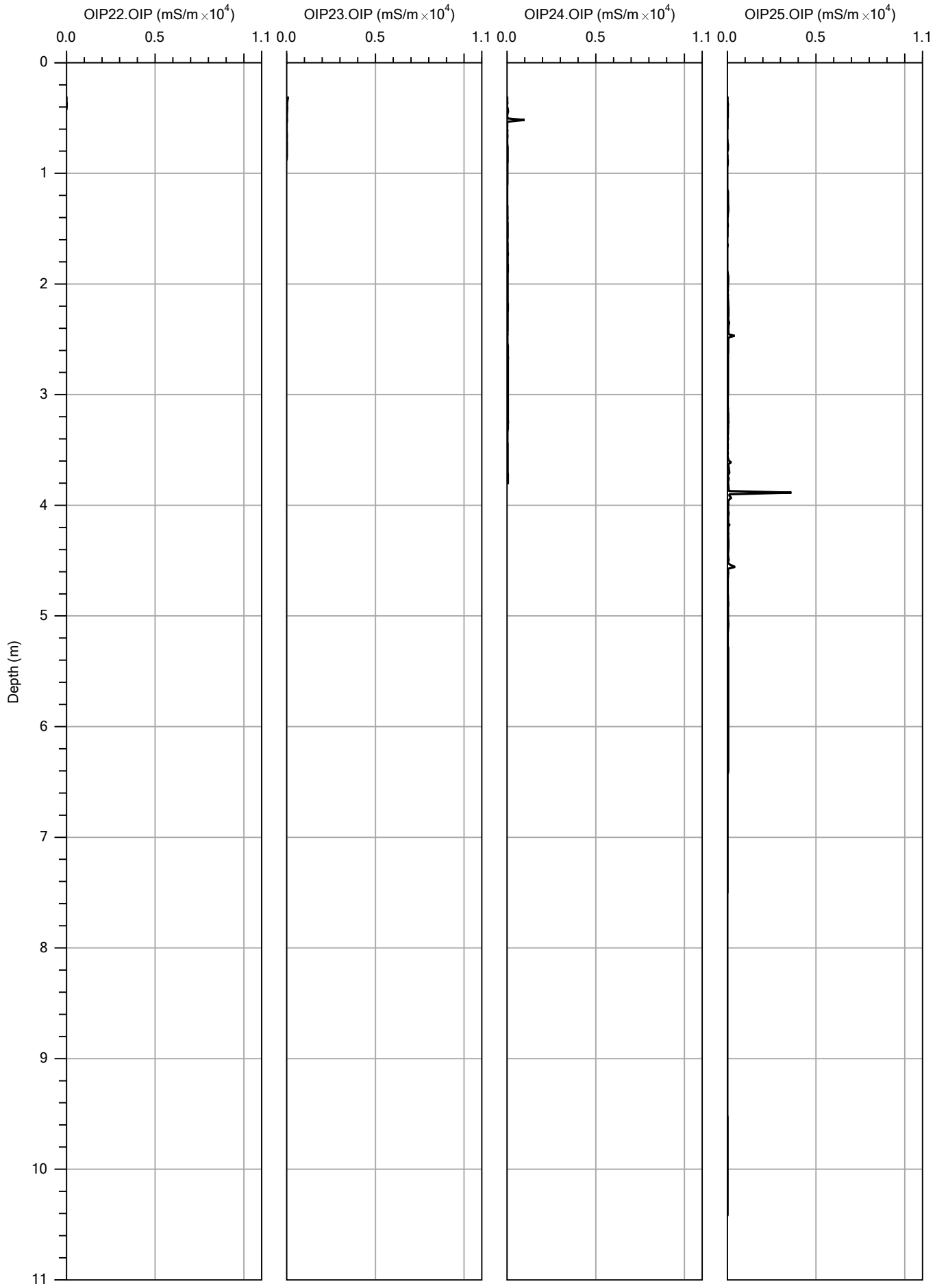


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP18.OIP	03/08/2021
OIP19.OIP	03/08/2021
OIP20.OIP	03/08/2021
OIP21.OIP	03/08/2021

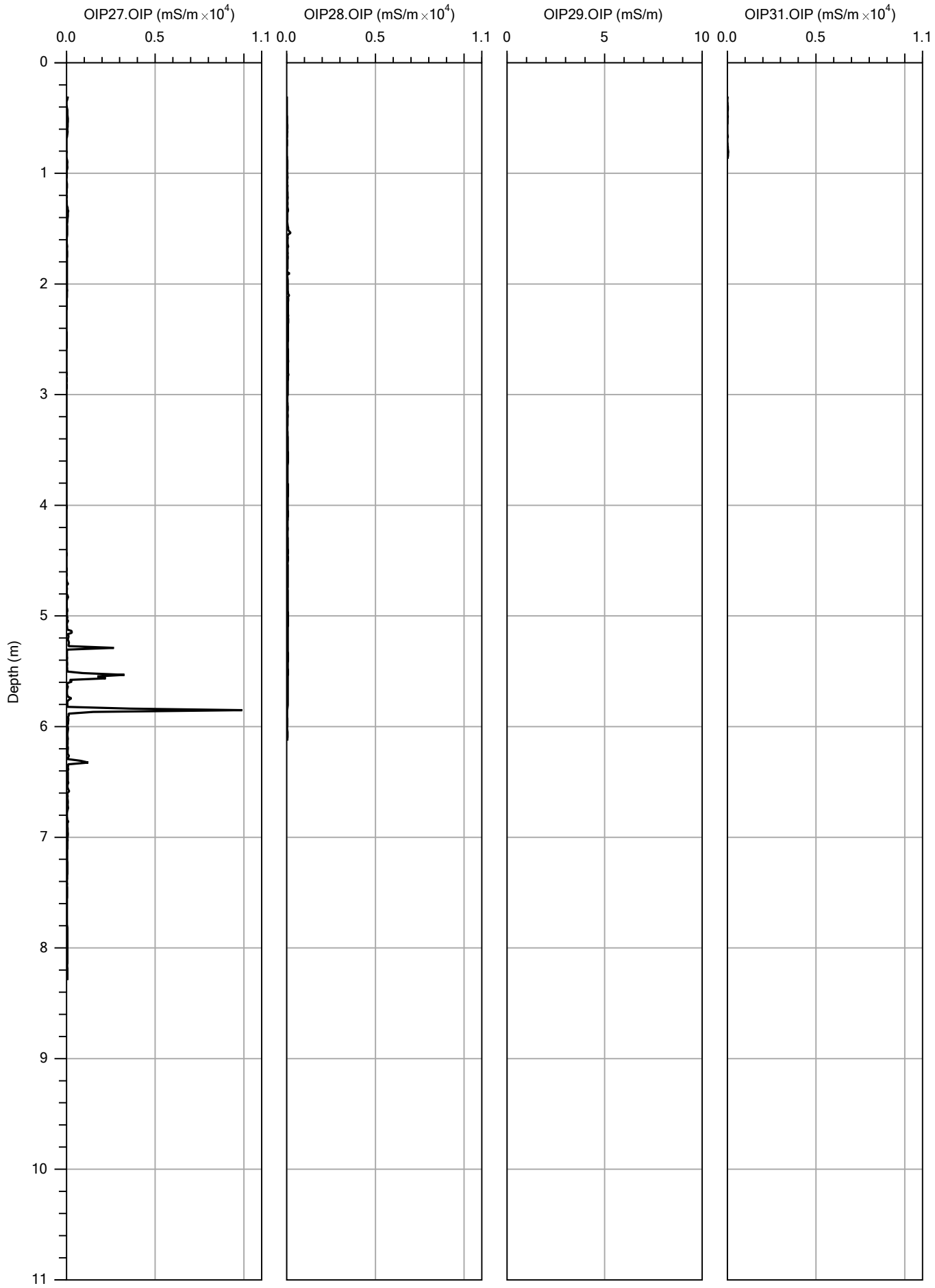


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP22.OIP	05/08/2021
OIP23.OIP	05/08/2021
OIP24.OIP	03/08/2021
OIP25.OIP	05/08/2021

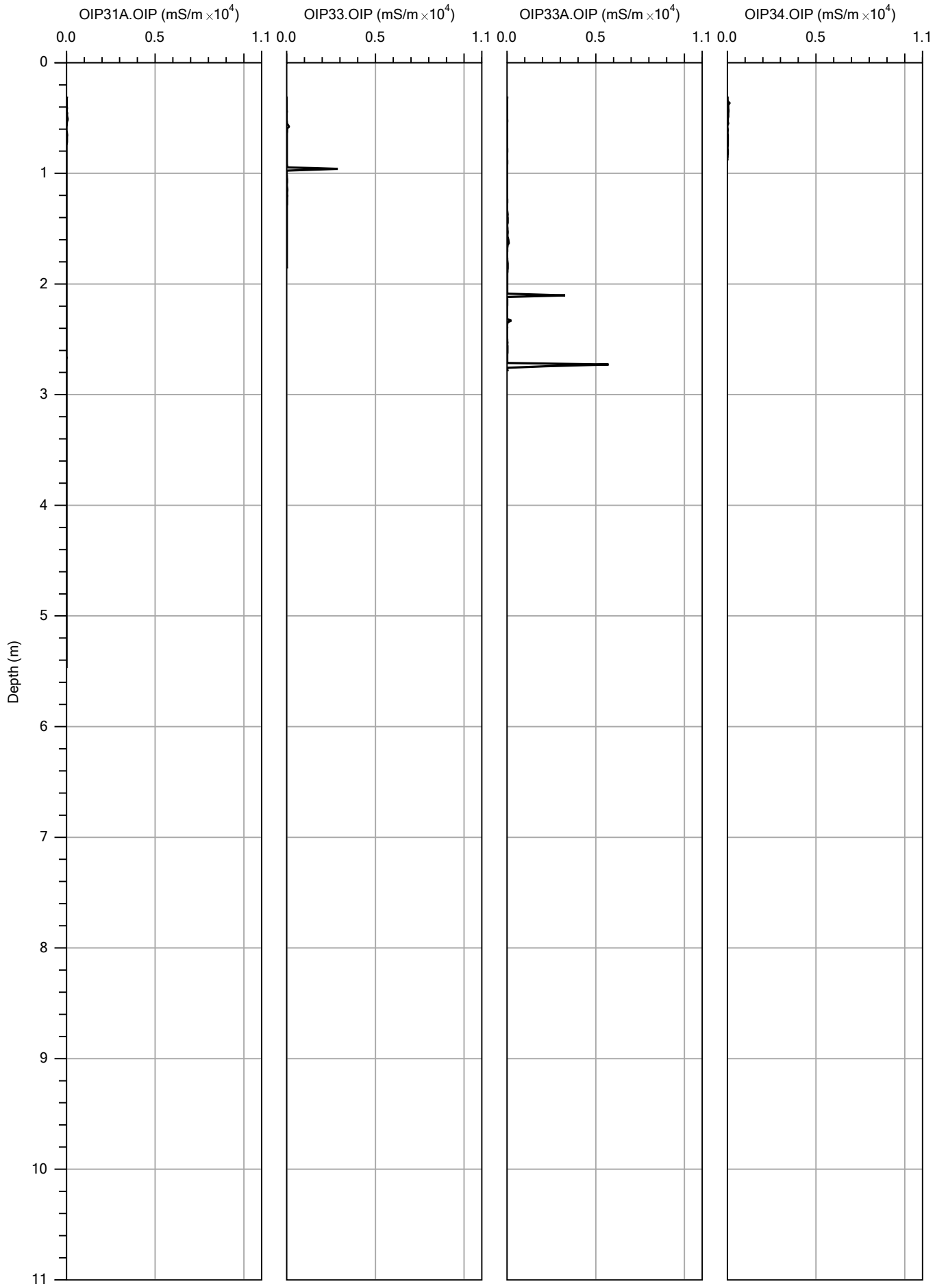


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP27.OIP	05/08/2021
OIP28.OIP	05/08/2021
OIP29.OIP	
OIP31.OIP	05/08/2021

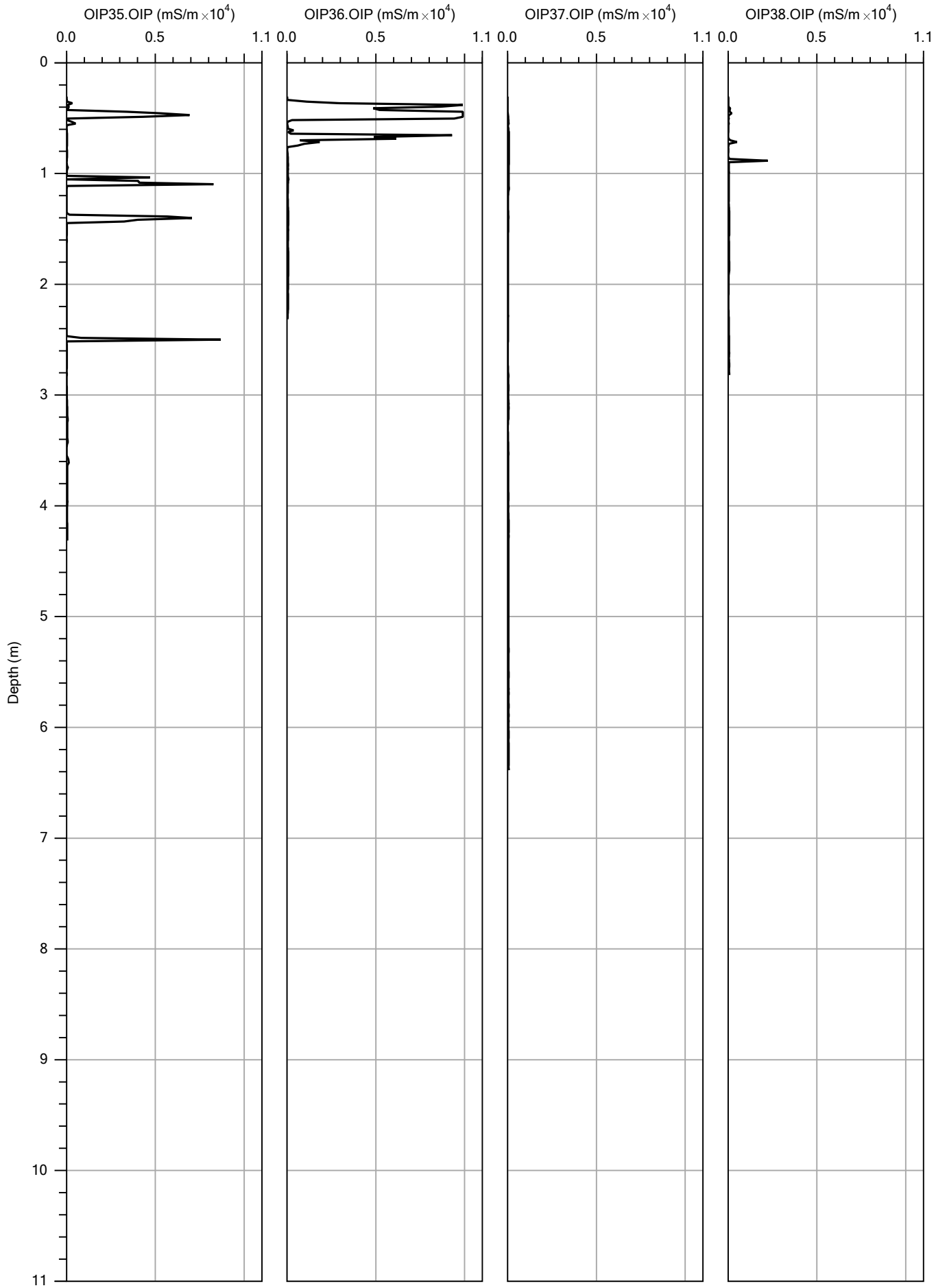


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP31A.OIP	05/08/2021
OIP33.OIP	05/08/2021
OIP33A.OIP	05/08/2021
OIP34.OIP	05/08/2021

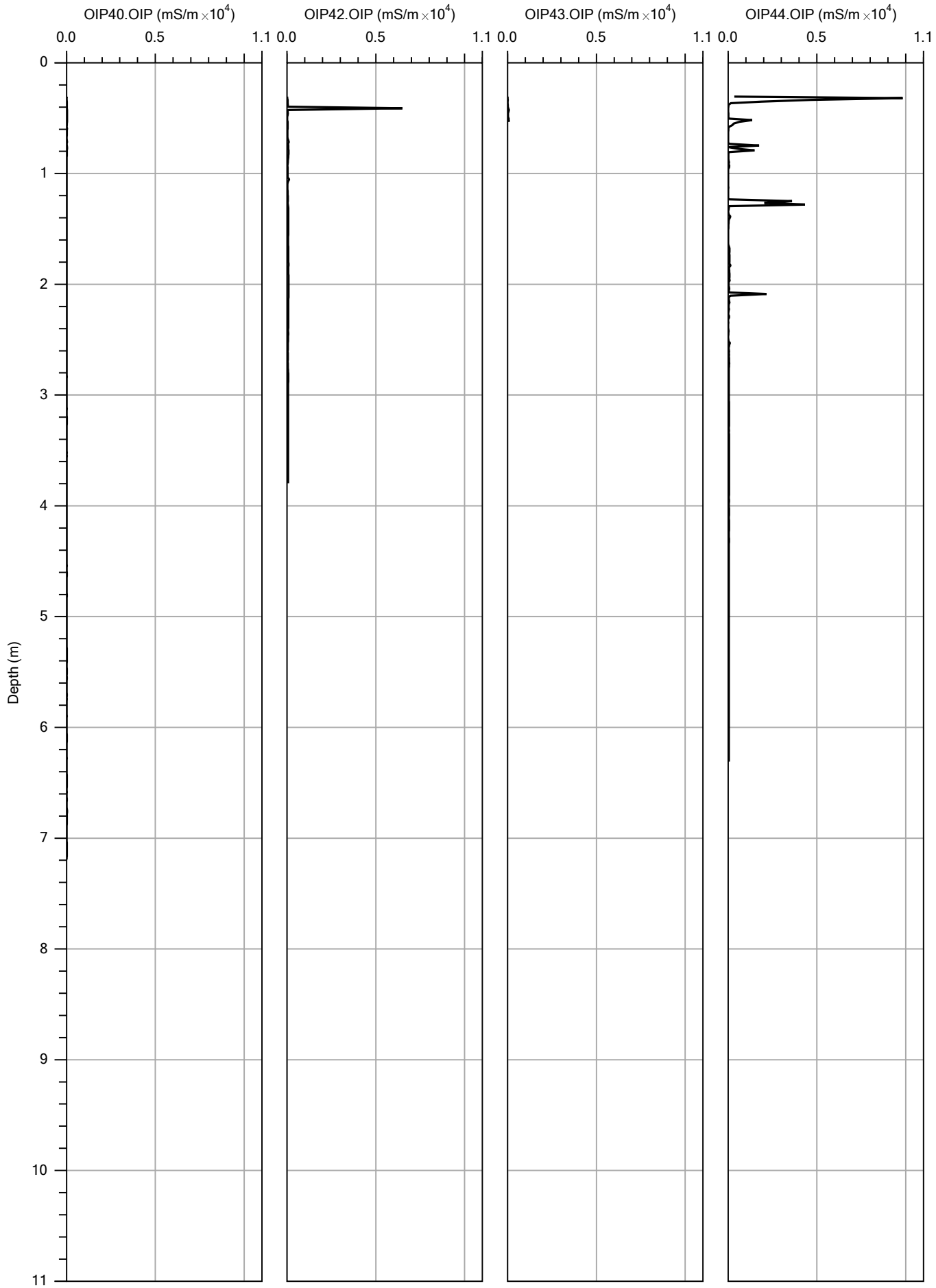


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP35.OIP	05/08/2021
OIP36.OIP	03/08/2021
OIP37.OIP	03/08/2021
OIP38.OIP	03/08/2021

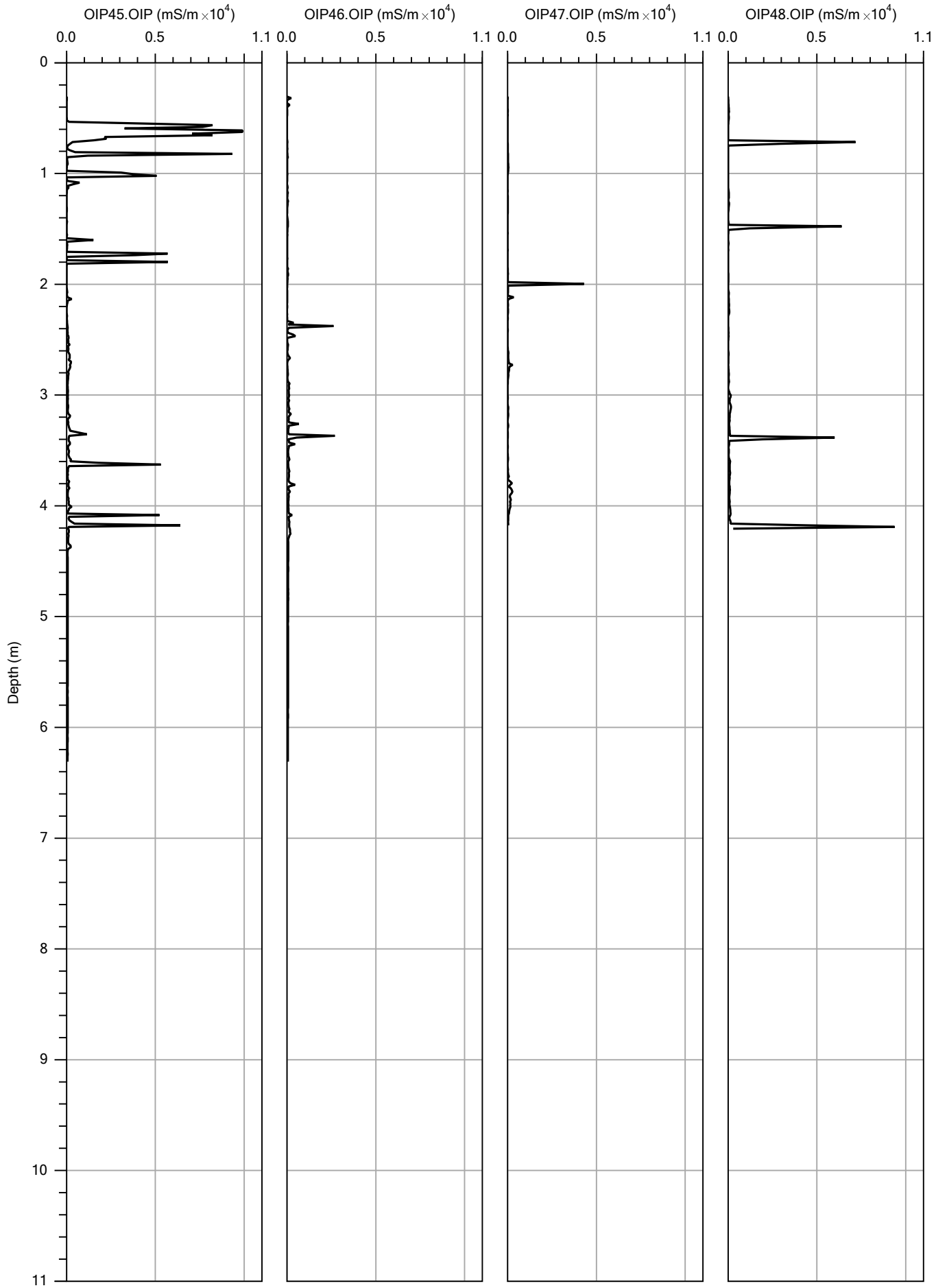


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP40.OIP	05/08/2021
OIP42.OIP	05/08/2021
OIP43.OIP	05/08/2021
OIP44.OIP	02/08/2021

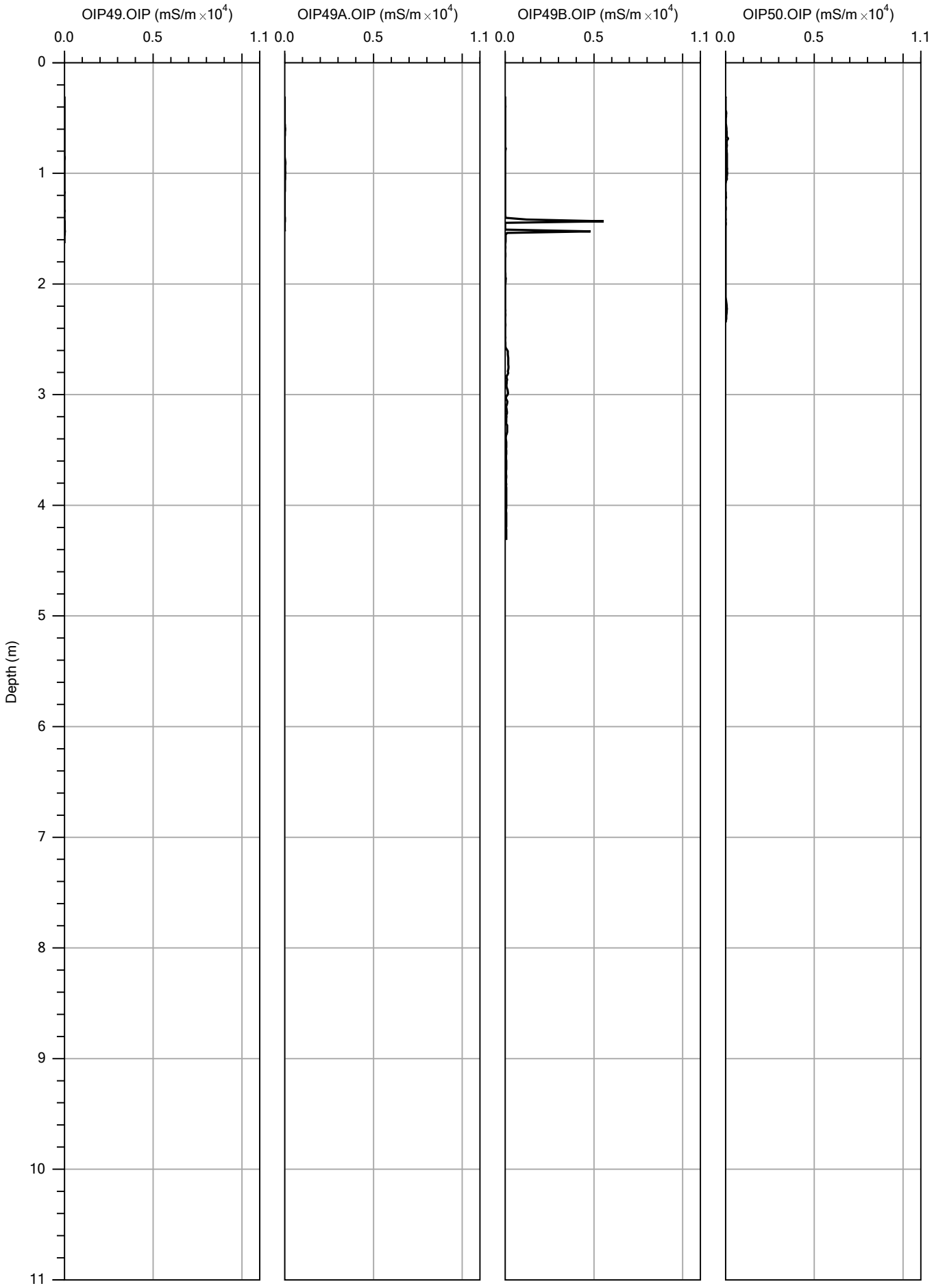


IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP45.OIP	02/08/2021
OIP46.OIP	02/08/2021
OIP47.OIP	03/08/2021
OIP48.OIP	03/08/2021



IN SITU
SITE INVESTIGATION

EC

Company: In Situ SI	Operator: Darren Hughes
Project ID: 1210414	Client: Wardell Armstrong

OIP49.OIP	03/08/2021
OIP49A.OIP	03/08/2021
OIP49B.OIP	03/08/2021
OIP50.OIP	03/08/2021

17.0 TABLE OF COMMONLY DETECTED COMPOUNDS BY MIP

Detectable Compounds by MIP

Wiki Website	Chemical Compound:	Boiling Point	Molecular Weight	Density	Ionization Potential	Solubility In Water	Vapor Pressure	Analytes Detected By			
		(oC)	(g/mol)	(g/mL)	(eV)	g/L	kPa @25C	PID* 10.6eV	FID**	XSD	ECD***
https://en.wikipedia.org/wiki/Methane	Methane	-161	16.0	.657 g/L	12.61	0.02	-	n	y	n	n
https://en.wikipedia.org/wiki/Dichlorodifluoromethane	Freon 12 (Dichlorodifluoromethane)	-29.8	120.9	1.486	12.31	0.3	568.0	n	y	y	LS****
https://en.wikipedia.org/wiki/1,1,2-Trichloro-1,2,2-trifluoroethane	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	47.7	187.4	1.564	11.78	0.17	285mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Vinyl_chloride	Vinyl Chloride (Chloroethene)	-13.0	62.5	0.910	10.00	2.7	2580mm Hg	y	y	y	LS
https://en.wikipedia.org/wiki/Bromomethane	Bromomethane	3.6	94.9	3.974	10.53	17.5	190.0	n	y	y	LS
https://en.wikipedia.org/wiki/Chloroethane	Chloroethane	12.3	64.5	0.901	10.97	5.74	134.6	n	y	y	LS
https://en.wikipedia.org/wiki/Trichlorofluoromethane	Freon 11 (Trichlorofluoromethane)	23.8	137.4	1.494	11.77	1.1	89.0	n	y	y	y
https://en.wikipedia.org/wiki/Acetone	Acetone	56.5	58.1	0.790	9.69	Miscible	30.6	y	y	n	n
https://en.wikipedia.org/wiki/1,1-Dichloroethene	1,1-Dichloroethene	32.0	97.0	1.213	9.65	0.04%	-	y	y	y	LS
https://en.wikipedia.org/wiki/Dichloromethane	Methylene Chloride (Dichloromethane)	40.0	84.9	1.327	11.35	17.5	57.3	n	y	y	y
https://en.wikipedia.org/wiki/Methyl_tert-butyl_ether	tert butylmethyl ether (MTBE)	55.2	88.2	0.740	9.24	42.0	-	y	y	n	n
https://en.wikipedia.org/wiki/1,2-Dichloroethene	trans-1,2-Dichloroethene	47.5	97.0	1.260	9.66	-	-	y	y	y	LS
https://en.wikipedia.org/wiki/1,1-Dichloroethane	1,1-Dichloroethane	57.2	96.7	1.213	11.06	0.6%	182mm Hg	n	y	y	LS
https://en.wikipedia.org/wiki/1,2-Dichloroethene	cis-1,2-Dichloroethene	60.3	97.0	1.280	9.65	-	-	y	y	y	LS
https://en.wikipedia.org/wiki/Butanone	2-butanone (MEK)	80.0	72.1	0.805	9.30	27.5	78mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/1,2-Dichloroethene	1,2-Dichloroethene	60.0	97.0	1.28	9.65	-	-	y	y	y	LS
https://en.wikipedia.org/wiki/Chloroform	Chloroform	61.0	119.4	1.480	11.37	8.1	25.9	n	y	y	y
https://en.wikipedia.org/wiki/Tetrahydrofuran	Tetrahydrofuran	66.0	72.1	0.889	9.54	Miscible	-	y	y	n	n
https://en.wikipedia.org/wiki/Bromochloromethane	Bromochloromethane	68.1	129.4	1.991	10.77	16.7	15.6	n	y	y	n
https://en.wikipedia.org/wiki/Diisopropyl_ether	Diisopropyl ether	69.0	102.2	0.725	9.20	2.0	119mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/1,1,1-Trichloroethane	1,1,1-Trichloroethane	74.0	133.4	1.320	11.25	0.4%	100mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Carbon_tetrachloride	Carbon tetrachloride	76.7	153.8	1.809	11.28	0.8	11.9	n	y	y	y
https://en.wikipedia.org/wiki/Benzene	Benzene	80.1	78.1	0.879	9.25	1.8	12.7	y	y	n	n
https://en.wikipedia.org/wiki/1,2-Dichloroethane	1,2-Dichloroethane	83.7	99.0	1.253	11.04	8.7	-	n	y	y	LS
https://en.wikipedia.org/wiki/Trichloroethylene	Trichloroethylene	87.0	131.4	1.460	9.45	1.3	58mm Hg	y	y	y	y
https://en.wikipedia.org/wiki/Bromodichloromethane	Bromodichloromethane	90.0	163.8	1.980	10.77	4.5	-	n	y	y	LS
https://en.wikipedia.org/wiki/1,2-Dichloropropane	1,2-Dichloropropane	96.0	113.0	1.156	10.87	2.6	40mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Dibromomethane	Dibromomethane	96.9	173.8	2.47	10.49	12.5	4.65	y	y	y	n
https://en.wikipedia.org/wiki/1,4-Dioxane	1,4-Dioxane	101.0	88	1.217	9.20	Miscible	29mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/1,3-Dichloropropene	cis-1,3-Dichloropropene	104.0	111.0	1.217	-	2.2	34.4mm Hg	y	y	y	LS
https://en.wikipedia.org/wiki/Methyl_isobutyl_ketone	4-methyl-2-pentanone (MIBK)	117.5	100.2	0.800	9.32	19.0	16mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/Toluene	Toluene	110.6	92.1	0.867	8.82	0.5	2.8	y	y	n	n
https://en.wikipedia.org/wiki/1,3-Dichloropropene	trans-1,3-Dichloropropene	112.0	111.0	1.224	-	2.3	23mm Hg	y	y	y	n
https://en.wikipedia.org/wiki/1,1,2-Trichloroethane	1,1,2-Trichloroethane	115.0	133.4	1.435	11.00	0.4%	19mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Tetrachloroethylene	Tetrachloroethylene	121.1	165.8	1.622	9.32	0.15	14mm Hg	y	y	y	y
https://en.wikipedia.org/wiki/Dibromochloromethane	Dibromochloromethane	119.5	208.3	2.451	10.59	-	-	n	y	y	n
https://en.wikipedia.org/wiki/1,2-Dibromoethane	1,2-Dibromoethane	131.5	187.9	2.170	-	0.4%	1.6	y	y	y	n
https://en.wikipedia.org/wiki/Chlorobenzene	Chlorobenzene	131.0	112.6	1.110	9.07	0.5	9mm Hg	y	y	y	y
https://en.wikipedia.org/wiki/1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	130.5	167.8	1.553	11.62	0.1%	14mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Ethylbenzene	Ethylbenzene	136.0	106.2	0.860	8.76	-	-	y	y	n	n
https://en.wikipedia.org/wiki/M-Xylene	m, p-Xylene	138.5	106.2	0.860	8.50	insoluble	9mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/O-Xylene	o-Xylene	144.4	106.2	0.880	8.56	0.02%	7mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/Styrene	Styrene	145.0	104.2	0.910	8.47	0.03%	5mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	146.5	167.9	1.250	11.10	2.9	5mm Hg	n	y	y	y
https://en.wikipedia.org/wiki/Bromoform	Bromoform	149.0	252.7	1.590	10.48	3.2	670Pa	y	y	LS	n
https://en.wikipedia.org/wiki/Cumene	Isopropyl benzene (Cumene)	152.0	120.2	0.862	8.75	Negligible	8mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/Bromobenzene	Bromobenzene	156.0	157.0	1.500	8.98	0.41	4.18mm Hg	y	y	LS	n
https://en.wikipedia.org/wiki/Chlorotoluene	Chlorotoluene	162.0	126.6	1.072	8.83	Insoluble	-	y	y	y	n
https://en.wikipedia.org/wiki/Mesitylene	1,3,5-Trimethylbenzene	164.7	120.2	0.864	8.39	2e-005	2mm Hg	y	y	n	n
https://en.wikipedia.org/wiki/1,2,4-Trimethylbenzene	1,2,4-Trimethylbenzene	170.0	120.2	0.876	8.27	-	-	y	y	n	n
https://en.wikipedia.org/wiki/1,3-Dichlorobenzene	1,3-Dichlorobenzene	173.0	147.0	1.250	9.12	Insoluble	-	y	y	y	LS
https://en.wikipedia.org/wiki/1,4-Dichlorobenzene	1,4-Dichlorobenzene	174.0	147.0	1.300	8.94	0.11	1.3mm Hg	y	y	y	LS
https://en.wikipedia.org/wiki/1,2-Dichlorobenzene	1,2-Dichlorobenzene	180.5	147.0	1.460	9.07	0.01%	1mm Hg	y	y	y	LS
https://en.wikipedia.org/wiki/1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene	214.4	181.4	1.460	-	3e-005	1mm Hg	y	y	y	y
https://en.wikipedia.org/wiki/1,3,5-Trichlorobenzene	1,3,5-Trichlorobenzene	208.0	181.4	1.140	-	6.0	-	y	y	y	y
https://en.wikipedia.org/wiki/Naphthalene	Naphthalene	218.0	128.2	-	8.10	0.03	23.6Pa	y	y	n	n
https://en.wikipedia.org/wiki/Total_petroleum_hydrocarbon	Gasoline Range Organics (C6-C10)	60-220	Variable	Variable	Variable	Variable	Variable	y	y	n	n
https://en.wikipedia.org/wiki/Total_petroleum_hydrocarbon	Diesel Range Organics (C10-C28)	170-430	Variable	Variable	Variable	Variable	Variable	y	y	n	n
Cannot be detected by MIP - These analytes are too large of molecules and/or have too high of a boiling points											
https://en.wikipedia.org/wiki/Polychlorinated_biphenyl	Polychlorinated biphenyl (PCBs)	340-375	291-361	1.18-1.57		n	n	n	n		
https://en.wikipedia.org/wiki/Perfluorooctanesulfonic_acid	Perfluorooctanesulfonic acid (PFOS)	133	500			n	n	n	n		
https://en.wikipedia.org/wiki/Perfluorooctanoic_acid	Perfluorooctanoic acid (PFOA)	190	414	1.8	9.5	n	n	n	n		

*Most common PID lamp electron voltage = 10.6eV. To respond on the PID, the analytes ionization potential must be below the lamp electron voltage.

**All compounds contain carbon and will burn in the FID if in high enough concentration

***An ECD response is variable depending upon the number of chlorine atoms on a molecule and molecular structure.

**** LS = Low Sensitivity

Miscible is a property of two substances to mix in all proportions.

As the analyte boiling point increases the more difficult it is for the compounds to diffuse through the membrane. This will increase the amount of carryover depending upon the MIP trip time that is used in the software. The analytes with the darker the color on this list essentially will not respond at the MIP detector due to their high boiling points. Only the lightest portion of the diesel range organics will make it through the membrane and reach the detectors however the higher boiling point compounds will cause high amounts of carryover.

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