Appendix 9.17

RoC Consulting, Plots NT02, NT03 & NT04 Dantzic Street, Phase 2 Site Investigation Report, reference 4328-ROC-ZZ-XX-RP-ES-P2-101, dated 21 October 2022.

Phase 2 Site Investigation

Plots NT02, NT03 & NT04
Dantzic Street

Far East Consortium International Ltd



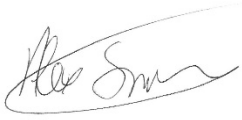
21/10/2022

COMPLEX CHALLENGES ...
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Phase 2 Site Investigation

Plots NT02, NT03 & NT04 Dantzic Street

Far East Consortium International Ltd

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Issue No.	**01**		
Report Reference	4328-ROC-ZZ-XX-RP-ES-P2-101		
Report Status	**FINAL**		

REVISIONS ONLY	DESCRIPTION	SIGNATURE	DATE

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CONTENTS

1.0 INTRODUCTION 3
1.1 Background 3
1.2 Terms of Reference 3
1.3 Objectives 4
2.0 LIMITATIONS OF STUDY ASSESSMENT 5
3.0 BACKGROUND INFORMATION 6
3.1 Site Description 6
3.2 Geological Characteristics 8
3.3 Site History and Environmental Characteristics 8
3.4 Previous Environmental Assessment 10
4.0 SITE INVESTIGATION DESIGN 12
5.0 SITE INVESTIGATION FIELDWORKS 14
6.0 ENCOUNTERED GROUND CONDITIONS 16
6.1 Ground Conditions Overview 16
6.2 Contamination Observations 20
6.3 Groundwater Observations 21
6.4 Below Ground Obstructions 22
6.5 Investigated Structures 23
7.0 LABORATORY TESTING 24
8.0 GEO-ENVIRONMENTAL ASSESSMENT 26
8.1 Soil Contamination 30
8.2 Assessment of Soil Contamination 34
8.3 Ground Gas Risk Assessment 35
8.4 Controlled Waters 37
8.5 Below Ground Concrete Construction 41
8.6 Below Ground Utilities and Service Runs 42
8.7 Waste Acceptance Criteria 42
9.0 REFINED CONCEPTUAL SITE MODEL 43
10.0 GEOTECHNICAL & FOUNDATION DESIGN ASSESSMENT 30
10.1 New Building Foundation Design 30
10.2 Ground Floor Construction 35
10.3 Below Ground Drainage 35
10.4 General Comments 35
11.0 CONCLUSIONS & RECOMMENDATIONS 37
APPENDIX A – SITE DRAWINGS 40
APPENDIX B – EXPLORATORY HOLE LOGSHEETS 41
APPENDIX C – CHEMICAL TESTING RESULTS 42
APPENDIX D – GEOTECHNICAL TESTING RESULTS 43
APPENDIX E – GROUND GAS / WATER MONITORING RESULTS 44

1.0 Introduction

1.1 Background

1.1.1 RoC Consulting has been appointed by Far East Consortium International Ltd to conduct a Phase 2 Site Investigation across plots NT02, NT03 and NT04 (the site).

1.1.2 It is understood that the site is to be developed with a mixture of high and medium rise residential buildings, with the former to heights of between 20 and 35 stories and the latter to heights of between 4 and 8 storeys. The development is also anticipated to include small areas of soft landscaping, and a new access road passing between NT02 and NT03 and continuing to the east along the southern site boundary. The design is subject to change, but a potential layout is indicated in Architects drawings RDB-HBA-2X-01-DR-AR-200101 and RDB-MLA-2D-00-DR-AR-310002 presented in Appendix A. In the short-term Plot NT02 will also be in use as a temporary event space.

1.1.3 The following assessment has been completed to support design and planning requirements for the site's redevelopment and follows on from a number of site investigations relating to the development site, specifically:

1) Phase 1 Desktop Study completed by RoC Consulting dated April 2022 (ref: 4328-ROC-ZZ-XX-RP-ES-PH1DTS)
2) Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy, at Plot NT02 only, by LK Consult dated March 2020 (ref: CL-602-LKC 20 1060-01)
3) Northern Gateway Final Factual Report completed by Allied Exploration & Geotechnics Ltd dated March 2019 (Contract Number: NW1580)
4) Ground Conditions Desk Study completed by Hydrock dated December 2015 (ref: R/151819/G001)

1.1.4 It is recommended reference be made to the abovementioned report(s) when reviewing the current assessment.

1.1.5 The scope of the report and its assessment has been based around the site's redevelopment proposals as outlined in the aforementioned Architect's plans. It should be noted that any subsequent revision of the proposed redevelopment or site boundary away from the above-mentioned drawing may result in the full or partial re-interpretation of this report and assessment.

1.2 Terms of Reference

1.2.1 The Phase 2 Site Investigation was carried out following receipt of an instruction from Far East Consortium International Ltd.

1.3 Objectives

1.3.1 The scope of works has been tailored to meet both planning and design requirements to assist with the site's redevelopment. These considerations include:

1) Design a programme of site investigation works to establish ground conditions beneath the site and target known or suspected sources of contamination (as revealed by the Phase 1 desktop study).

2) Completion of site investigation fieldworks including the formation of 10 rotary open hole and rotary cored boreholes to establish ground conditions, complete in-situ strength tests and facilitate the installation of groundwater monitoring wells.

3) Completion of approximately 11 window sampler boreholes to support information obtained from rotary boreholes and target the investigation of potential sources of soil and groundwater contamination.

4) Completion of 16 machine excavated trial pits to further assess the quality of soils across the site, presence of obstructions and former structures, and infill information obtained from the aforementioned boreholes.

5) Completion of hand pitting and foundation exposures to investigate the Network Rail viaduct and retaining wall structures and foundations.

6) Completion of geo-environmental and geotechnical laboratory analysis of soil, water, and rock samples to determine physical and chemical characteristics.

7) Completion of a ground gas risk assessment to establish site conditions and, as required, the scope of any remedial measures required to control gas ingress.

8) Completion of a geotechnical assessment to support new building foundation design requirements.

9) Completion of a geo-environmental assessment utilising information provided by both the current and previous phases of site investigation works sufficient in its scope for submission to the relevant statutory authorities as well as identify the initial scope of any remedial works necessary to support the sites redevelopment.

2.0 Limitations of Study Assessment

2.0.1 The report has been produced by RoC Consulting for the client solely for the purposes of a review of information for the above-mentioned site. It may not be used by any person for any other purpose other than that specified without the express written permission of RoC Consulting. Any liability arising out of its use by a third party for purposes not wholly connected with the above shall be the responsibility of that party who shall indemnify RoC Consulting against all claims, costs, damages and losses arising out of such use.

2.0.2 This report is written in the context of an agreed scope of work and should not be used in a different context. The report should be read in its entirety. Furthermore, new information, improved practices and changes in legislation may require re-interpretation of this report in whole or in part after its original issue. RoC Consulting reserve the right to alter their conclusions and recommendations in the light of further information that may become available.

2.0.3 Ground conditions can change rapidly, especially in areas of made ground, however, it is assumed that the ground conditions observed are typical and representative of the site as a whole. The ground conditions have been determined from a limited number of exploratory holes formed across the property, therefore, only a small percentage of the total area of the property has been investigated. Interpolation between exploratory holes has enabled a general picture of the subsurface conditions to be produced.

2.0.4 Conclusions drawn from the ground investigation should be read in this context. RoC Consulting cannot accept responsibility for any situations resulting from locally unforeseen ground conditions occurring between exploratory holes.

2.0.5 RoC Consulting has exercised all reasonable due skill, care and diligence when collating the design and subsequent execution of ground investigation works. It should be noted we cannot anticipate the requirements and actions of the regulatory authorities when designing and implementing ground investigation works and, whilst thorough consideration has been given to all geo-environmental and geotechnical concerns; further additional fieldworks or assessment may be required at their request.

2.0.6 RoC Consulting cannot confirm that all ground conditions which may be uncovered during the works have been identified, rather this report is intended as an informative for use by experienced professionals and contractors.

2.0.7 Whilst the investigation and report has been scoped in accordance with our understanding of typical regulatory authority requirements, we cannot confirm that on submission regulators may require additional in-situ testing or investigation.

3.0 Background Information

3.0.1 The overview below outlines the most salient points and considerations, and it is recommended reference be made to the complete findings of previous site investigation reports for additional information and/or clarification.

3.1 Site Description

3.1.1 The site comprises an area of approximately 2.3 hectares adjacent to the south of Dantzic Street, Manchester centred around National Grid Reference E384690 N399470.

3.1.2 The site has historically been divided into three plots for planning purposes – Plot NT02 in the west, Plot NT03 in the centre and Plot NT04 in the east. Each of these plots has distinct land uses. In this report 'the site' refers to all three plots. While it is currently proposed to develop these plots together, we have retained these names for clarity when discussing local site features. A plan depicting the boundaries between the different plots is contained within Appendix A (ref: 4328-ROC-XX-XX-SK-ESK102).

Plot NT02

3.1.3 Plot NT02 occupies the western portion of the site and comprises a light industrial building with several smaller buildings, associated access road and areas of hardstanding. The boundaries of Plot NT02 are formed by Dantzic Street to the north with a former caravan park beyond, the adjacent Victoria Riverside development to the west, a road and Network Rail viaduct to the south and Plot NT03 to the east. The eastern and southern portions of the site were formerly occupied by Farlam Waste Management Ltd a skip hire and waste handling company. The light industrial building was operated by Astra Signs Ltd; a sign making company.

3.1.4 The topography of Plot NT02 is relatively flat with levels varying between 31.20mAOD at the interface with Dantzic Street and 34.80mAOD in the southern portion of the site.

3.1.5 Plot NT02 is accessed by a gate on the northern site boundary onto Dantzic Street.

Plot NT03

3.1.6 Plot NT03 occupies the centre of the site. It is understood that a portion of the south of Plot NT03 is owned by Network Rail. The north of the plot is largely covered with hardstanding while the southern part and Network Rail land are occupied by two large earth mounds which are anticipated to overlap somewhat. The northernmost of these two mounds comprises loose topsoil-like material which is managed by the occupiers of the plot, Ryan Topsoil Ltd. South of this is the Network Rail land, which is a further mound largely covered with overgrown vegetation, backing onto the adjacent railway viaduct which forms the southern boundary. It is currently unclear if this slope provides support to the viaduct structure or what structures may be behind it.

3.1.7 Plot NT03 is also accessed via a gate onto Dantzic Street.

3.1.8 A small portion of NT03, also covered with hardstanding, is fenced off from the remainder of the plot and accessed separately, also from Dantzic Street. At the time of writing, this was occupied by a concrete batching plant.

3.1.9 Levels on Plot NT03 vary significantly due to the presence of a large stockpile of topsoil which rises to 49.11mAOD at its peak and sloping to 33.00mAOD at its base in the northern portion of the plot. The hardstanding working area, extending from the base of the mound to the northern boundary, varies in elevation from 33.00 to 31.38mAOD.

Plot NT04

3.1.10 Plot NT04 is comprised of semi vegetated disused land. The western boundary is formed by Plot NT03, the southern boundary by the Network Rail Viaduct, Dantzic Street and Dalton Street form the northern boundary along with warehousing, and the River Irk beyond. The eastern boundary is formed by Dalton Street and residential housing. During the site walkover relic walls of a former structure were encountered in the northern portion of Plot NT04, likely part of the historic Dalton Print Works. Parts of the south of the site are covered with hardstanding, with stockpiles of construction material present at the time of the site works.

3.1.11 Plot NT04 falls from south (41.50mAOD) to north (32.00mAOD). Levels in the eastern portion of NT04 generally appears to be higher than the rest with the north-eastern corner of the site generally sitting at circa 39.00 to 40.00mAOD.

3.1.12 Plot NT04 is accessed via a gate onto Dalton Street in the east of the plot. At the time of the site visit this was blocked by concrete blocks.

Adjacent Sites

3.1.13 The south is bounded to the north by Dantzic Street and Dalton Street. Adjacent to the west of the site is the construction site for the Victoria Riverside development. Adjacent to the south and east is a large Railway Viaduct, up to 10m above the site in some locations. This incorporates both track and areas of sidings. The viaduct wall is comprised primarily of brick where exposed, with different sections visibly constructed at different times.

3.1.14 Beyond Dantzic Street to the north is an area occupied by caravans and a disused brick commercial building formerly occupied by Theos Timber. Beyond this is the River Irk, a small river which is in a visibly poor condition with large amounts of rubbish present on the riverbank.

3.1.15 Further land uses within the immediate vicinity include a mixture of railway land, scrapyards, construction sites, car parking and residential housing.

3.2 Geological Characteristics

3.2.1 Review of publicly available BGS geological map records indicate the site is underlain by the following:

Drift Geology: Till, Devensian – Diamicton

Solid Geology: The western portion of the site is underlain by the Chester Formation (Sandstone) and the eastern portion of the site is underlain by the Manchester Marls Formation (Mudstone). The Manchester Marls Formation underlies the Chester Formation where this is present on site. The Manchester Marls Formation is underlain by the Collyhurst Sandstone Formation at depth.

3.2.2 The Envirocheck report included within Appendix C of the RoC Consulting Phase 1 Desk Study, indicated that the site is located within an area which may be affected by historic Coal Mining. However, it was apparent that the site falls outside an area where Coal Measures bedrock is present at shallow depths. The site is not located within a development high risk area. In addition, we are not aware of any commercial mineral or below ground mining workings within the Chester Formation or Manchester Marls Formation that underlies the site. As such, further investigation of mining related risks was not recommended.

3.2.3 According to the environmental database search, the site is located within a lower probability radon area (less than 1% of homes are estimated to be at or above the action level). Radon protection measures are not required for new dwellings.

3.3 Site History and Environmental Characteristics

3.3.1 The site has accommodated a number of industrial land uses in the past. The history of each individual plot is summarised below.

Plot NT02

3.3.2 The Victoria Screw and Bolt works was present in the southern portion of Plot NT02 on records dating from 1891 and was extended to incorporate the former Victoria Paint Works in 1908 covering the entirety of the southern portion of Plot NT02. The Victoria Paint works itself is indicated as being present between 1891 and 1908. Records dated 1948 to 1952 shows the paint works to have been converted to the Collyhurst Foundry up until some point between 1958 to 1968 when much of the building was demolished and an Asphalt Works and Tripe Works were constructed within its general footprint.

3.3.3 Records from 1958 to 1989 shows the construction of a light industrial / warehousing building in the eastern portion of Plot NT02 which became a part of the rubber works which had previously only operated adjacent the sites western boundary. Mapping dating from 2006 indicates much of this structure to have been demolished and only the present-day light industrial building and a smaller building along the northern boundary of Plot NT02 (now also demolished). The light industrial building is known to have previously been occupied by Astra Signs Ltd (a sign manufacturer) and is believed to have used solvents and paints although the previous Hydrock report states that the paints used on site were water based and therefore likely had low contaminative potential.

A waste management company known as Farlam Waste Management is known to have operated in the eastern portion of Plot NT02 only having ceased operation within the past decade and anecdotal evidence from discussions on site with excavator operatives indicate the southern portion of Plot NT02 was also used as a yard for construction plant.

Plot NT03

3.3.4 An unspecified works possessing a chimney was present in the central area of NT03 from 1891 to the mid to late 20th century when it became a scrap metal works. The usage then changed, and the plot is currently operated by Ryan Topsoil Ltd and is mostly occupied by a large mound of loose topsoil like material.

3.3.5 A small area of the southern boundary of the plot was previously occupied by a signal box on an embankment adjacent the railway viaduct. It is not clear from historical records if there is a retaining wall which supports the viaduct in this location or if the viaduct is supported by the embankment which is visible on historic plans and aerial photography and still present today.

Plot NT04

3.3.6 Dalton Works (a print works) was present on NT04 from 1891 until it was demolished on records dating from 2013. It occupied the southern area of the site and a small area adjacent Dalton Street sitting at a slightly elevated position to the rest of the site. Relic retaining walls appear to be present in the vicinity of the former works in the present day.

Adjacent Historical Land Uses

3.3.7 The site is located within an area of the city which has seen heavy industrial land use in the past. The most significant historic industrial land uses in close vicinity to the site are summarised below.

3.3.8 The Lancashire and Yorkshire Railway has been present adjacent the sites southern boundary from 1848 till the present day. In 1891 the Newtown sidings were added bringing the railway right up against the site's southern boundary.

3.3.9 The Rochdale Road Gasworks is visible as early as 1848, 50m to the south of the site comprising four large gasometers and significant associated infrastructure at its peak. Two gasometers associated with the gasworks were present 10m to the north of the site on the opposite side of Dantzic Street from the site. The extent of the gasworks declined during the mid-20th century before being converted to a depot in the late 20th century. The two gasometers to the north of the site were demolished in the mid to late 20th century and have since been occupied by caravans.

3.3.10 A garage / depot was located 10m to the north of the site from the mid-20th century and is believed to have most recently been used as a timber merchants.

3.3.11 Within 200m of the west of the site, a number of historic industrial activities were recorded including a rubber works, oil works, chemical works, print works, foundry, engineering works, glue works, timber yards, scrap yards and a large iron works. The vast majority of this industry is no longer present and has been replaced by alternative land uses such as car parking. It should be noted much of this industry is a considerable distance from the site and superficial ground conditions are relatively impermeable, furthermore a number of these industries were located on the other side of the River Irk which would also serve as a boundary to contaminants migration.

3.3.12 The Envirocheck Groundwater Vulnerability Map indicates the superficial deposits are classified as Secondary Undifferentiated with the underlying Chester Formation bedrock designated as a Principal Aquifer and the Manchester Marls designated as a Secondary B Aquifer. The site is not said to be located within any Environment Agency Source Protection Zones or close proximity to any sensitive water abstraction points (e.g., potable water supply well). The nearest water abstraction point is indicated 533m to the west relating to Joseph Hold Ltd. Water is abstracted from groundwater for use in breweries/wine process water, it is not clear if the permit is still valid.

3.3.13 The nearest surface water feature is indicated 21m to the north in the form of the River Irk. Water quality of this receptor indicates a GQA Grade of “E” (Poor) and a flow rate of less than 2.5 cumecs. There are no active surface water abstractions at the site or within 500m of the site boundary.

3.3.14 There is a single BGS recorded Landfill Site present 330m to the north of the site. There are three Historic Landfill Sites located within 500m of the site with the closest being located 205m to the north of the site. There are three Registered Waste Transfer Sites located within 500m of the site. The closest of which is located 82m to the west of the site. The licence holder for this site is Placemix Ltd and is operational as far as is known. There are no further waste facilities located within 500m of the site.

3.3.15 There are two Licensed Waste Management Facility located on site. The first is located within the eastern portion of Plot NT02 the license for which expired in 2020 and was operated by Farlam Waste Management Ltd. The second facility is located on Plot NT03 and, the license is listed as transferred and it was operated by Ryan John. Both facilities are categorised as Household, Commercial and Industrial Transfer Stations. There are a further 3 Licensed Waste Management Facilities located within 500m of the site however all licenses are shown as expired. There are a further three waste management facilities within 500m of the site.

3.3.16 A small area of the northern portion of the site is located in Flood Zone 2, the remainder of the site is located in Flood Zone 1. The risk of pluvial flooding is deemed as very low.

3.4 Previous Environmental Assessment

3.4.1 LK Consult undertook a Phase II Site Investigation across Plot NT02 in the western portion of the wider site.

3.4.2 Results from chemical testing undertaken by LK Consult revealed the following issues on Plot NT02 regarding contamination:

- Elevated levels of Heavy Metals (Lead) in soil at WS104, SP1 and SP2 (Likely associated with ash, clinker and coal noted within made ground deposits)
- Trace amounts of asbestos in soil at TP105 and SP1 (Likely associated with the demolition of historic buildings)
- Elevated levels of PAHs - Benzo(a)pyrene and Naphthalene in soil at WS102, WS103, WS105, TP103, TP105 SP1 and WS205 (Likely associated with ash, clinker and coal noted within made ground deposits)
- Elevated levels of TPH – Aliphatic C12-C16, Aromatic C8-C10 and Aromatic C10-C12 in soil at WS205 (beneath the light industrial building and likely associated with the numerous historic industrial activities in this area of the site)
- Elevated levels of VOCs/SVOCs – Benzene and Trichloroethene in made ground and superficial deposits at WS205, WS201, WS202 and WS204. PID readings in the southwest of the site also indicate the presence of volatile contamination with readings between 4.3ppm and 207ppm (Likely associated with the historic industrial activity in this area of the site); and
- Elevated concentrations of Vinyl chloride at RBH101 in water samples obtained from the bedrock aquifer and Trichloroethene in water samples obtained from the bedrock aquifer at RBH103 (Potentially associated with industrial activity on site but more likely a results of the local areas heavy industrial past and more specifically the contamination associated with nearby historic gas works).

3.4.3 Ground gas monitoring visits were undertaken on a total of seven wells. Slightly elevated levels of carbon dioxide were encountered with an absence of methane, carbon monoxide and hydrogen sulphide gases. Slightly depleted levels of oxygen were also encountered. The site was characterised as a Characteristic Situation 1 with no remedial measures envisaged.

3.4.4 On site soil and groundwater contamination encountered is believed to relate to previous industrial operations as well as the potential movement of gas works era contamination within the underlying principal aquifer beneath the site. A defined area of contamination was suspected in the southern and western portion of the plot beneath the existing building.

3.4.5 The report recommended that an area of contaminated soils, in the southwest of NT02, should be excavated and either treated onsite or disposed of offsite. The use of a soil cover system was recommended in soft landscaping areas. Although exceedances of contaminants in groundwater were recorded, groundwater remediation was not recommended.

4.0 Site Investigation Design

General

4.0.1 The RoC intrusive investigation was designed and completed to further investigate geo-environmental issues identified during the Phase 1 Desktop Study and previous site investigations; as well as provide geotechnical information to facilitate new building design.

4.0.2 The site investigation works comprised the formation of nine rotary open hole and cored boreholes to a maximum depth of 25.00mbgl, 11 window sampler boreholes to a maximum depth of 5.00mbgl and 14 machine excavated trial pits to a maximum depth of 4.00mbgl.

4.0.3 Exploratory hole placement was dictated by the findings of the Phase 1 Desktop Study to zone in on areas where current / previous industrial activity may have impacted soil quality. In addition, boreholes and trial pits were located within the footprint of the proposed new development to establish ground conditions and support foundation design.

4.0.4 Samples of soil collected during the investigation works are to be analysed for a variety of determinants associated with the pattern of current / historic industrial activity across the site as outlined within the preliminary conceptual site model.

4.0.5 Table 4.0 provided below provides location justification for each exploratory hole formed during the site investigation fieldworks. The purposes of this table are to illustrate the targeting of potential sources of contamination during the Phase 2 site investigation works.

Table 4.0: Borehole Locations & Justification

BH/WS ID.	Reason for selection
RBH201	Assess groundwater quality in north-western corner of Plot NT02.
RBH202	Provide geotechnical information in the vicinity of proposed building and assess groundwater quality on Plot NT02.
RBH203	Assess groundwater quality in area of previously identified groundwater contamination. Provide geotechnical information in the vicinity of proposed high-rise buildings.
RBH205	Assess groundwater quality in the northern portion of Plots NT03/NT04.
RBH206	Assess groundwater quality in the northern portion of Plot NT03 and provide geotechnical information in the vicinity of proposed building.
RBH207	Assess groundwater quality in the northern portion of Plot NT04.
RBH208	Assess groundwater quality in the western portion of Plot NT04 and provide geotechnical information in the vicinity of proposed building.
RBH209	Assess groundwater quality in the centre of Plot NT04 and provide geotechnical information in the vicinity of proposed hi-rise building.
RBH210	Assess groundwater quality in the eastern portion of Plot NT04 and provide geotechnical information in the vicinity of proposed hi-rise building.
WS201	Establish ground conditions and assess area of previously identified contamination.
WS202	Establish ground conditions and assess area of previously identified contamination. Install ground gas monitoring well.

BH/WS ID.	Reason for selection
WS203	Establish ground conditions and assess area of previously identified contamination. Install ground gas monitoring well.
WS204	Establish ground conditions and assess area of previously identified contamination. Install ground gas monitoring well.
WS205	Establish ground conditions and assess area of previously identified contamination.
WS208	Establish ground conditions and install ground gas monitoring well.
WS209	Establish ground conditions and install ground gas monitoring well.
WS210	Establish ground conditions.
WS211	Establish ground conditions and install ground gas monitoring well.
WS212	Establish ground conditions.
WS213	Establish ground conditions and install ground gas monitoring well.
TP201	Establish ground conditions and investigate area of historic tank.
TP202	Establish ground conditions and investigate area of previously identified contamination.
TP203	Establish ground conditions.
TP204	Establish ground conditions.
TP207	Establish ground conditions.
TP208	Establish ground conditions and foundation exposure along Network Rail viaduct.
TP213	Establish ground conditions.
TP214	Establish ground conditions.
TP215	Establish ground conditions.
TP216	Establish ground conditions.
TP217	Establish ground conditions.
TP218	Establish ground conditions.
TP219	Establish ground conditions.
TP220	Establish ground conditions and foundation exposure along Network Rail viaduct.

4.0.6 It should be noted that the envelope of a currently anticipated high rise building in plot NT03 is located within an inaccessible area of the site, beneath the topsoil mound, and currently could not be directly investigated as part of this phase of the works.

4.0.7 Exploratory hole locations are shown on RoC Consulting drawing 4328-ROC-ZZ-XX-DR-ES-ES102 (Current Site) provided within Appendix A.

5.0 Site Investigation Fieldworks

5.0.1 Site investigation fieldworks were completed between the 11th of July and the 15th of August 2022 by drilling contractors DMW Drilling Ltd and Plant Hire Company Hurt Plan Ltd. Rotary open hole and cored boreholes were formed using a Massenza MI3 and window sample boreholes were formed with a Competitor 150. Trial pits were formed with a 13-tonne tracked excavator.

5.0.2 Information with respect to buried services was obtained from relevant providers prior to commencement of the investigation works. However, as a precautionary measure all exploratory hole locations were scanned with a Cable Avoidance Tool prior to the commencement of works. In addition, hand dug service pits were completed to a depth of 1.2mbgl at all borehole locations deemed to fall in close proximity to the suspected location of possible buried service runs / infrastructure.

5.0.3 To ensure no new sources of contamination were introduced to underlying soils / bedrock during the formation of each borehole, steel casing was used throughout as well as vegetable oil as a lubrication medium for all drilling apparatus. Sampling equipment was also cleaned between sampling to reduce cross-contamination risks. Boreholes were sealed with bentonite on completion.

5.0.4 Soil and rock core samples were collected for subsequent chemical and geotechnical laboratory analysis. Soil samples used for geotechnical analysis were collected in 500g plastic sample tubs. Samples collected for chemical testing were collected in 1kg plastic sample tubs, 258g glass jars and 60g glass jars. Samples were obtained from both made ground and natural strata to assess the overall quality of underlying soils. In-situ soil strength was investigated using Standard Penetration Tests (SPT) within superficial deposits as well as to confirm rockhead had been reached.

5.0.5 The shallow soils encountered during construction of the boreholes were described and logged by a suitably qualified engineer in accordance with BS 5930: Code of Practice for Site Investigations (the log sheets for which have been provided within Appendix B).

5.0.6 A total of 16 ground gas and ground water monitoring wells were installed within rotary and window sampler boreholes. Five monitoring wells were also located on site from a previous SI and were also monitored. Installation details are provided within Table 5.0 below, copies of ground water and gas monitoring records are provided within Appendix E.

Table 5.0: Monitoring Well Installations

BH ID	Monitoring Well Depth (mbgl)	Response Zone (mbgl)	Response Zone Strata
RBH201	25.00	21.00 to 25.00	Manchester Marls Formation
RBH202	25.00	21.00 to 25.00	Manchester Marls Formation
RBH203	15.00	10.00 to 15.00	Chester Formation
RBH205	25.00	20.00 to 25.00	Manchester Marls Formation

RBH206	25.00	21.00 to 25.00	Manchester Marls Formation
RBH207	25.00	20.00 to 25.00	Manchester Marls Formation
RBH208	24.00	19.00 to 24.00	Manchester Marls Formation
RBH209	17.00	12.00 to 17.00	Manchester Marls Formation
RBH210	25.00	20.00 to 25.00	Manchester Marls Formation
WS202	1.50	1.00 to 1.50	Made Ground
WS203	1.00	0.50 to 1.00	
WS204	1.50	0.50 to 1.50	
WS208	1.00	0.50 to 1.00	
WS209	1.50	0.50 to 1.50	
WS211	1.00	0.50 to 1.00	
WS213	1.00	0.50 to 1.00	
LK RBH1	15.00	5.00 to 15.00	Chester Formation
LK RBH3		5.00 to 20.00	Chester Formation / Manchester Marls
LK WS103	3.00	1.00 to 3.00	Made Ground / Devensian Till
LK WS105b	3.00	1.00 to 3.00	Made Ground / Devensian Till / Chester Formation
LK WS201	3.00	1.00 to 3.00	Devensian Till

6.0 Encountered Ground Conditions

6.0.1 The following ground conditions are summarised from the exploratory holes formed during the RoC Consulting site investigation. The following represents an overview of encountered ground conditions, and it is recommended reference be made to the borehole and trial pit log sheets provided within Appendix B for a detailed strata description; all depths shown are given in metres below ground level (mbgl) unless otherwise stated).

6.1 Ground Conditions Overview

Plot NT02

Made Ground

6.1.1 Made ground was reported at all exploratory hole locations on Plot NT02 the details of which are provided in table 6.1 below:

Table 6.1: Made Ground Strata Description

Strata description	Made ground across the site was encountered as a surface layer of asphalt, concrete or exposed demolition fill type material in areas that have previously been excavated during previous phases of Geo-Environmental and Archaeological investigation. Underlying the surface layers of asphalt and concrete was a predominantly demolition fill type material comprising a gravelly sand or sandy gravel containing whole and half bricks and chunks of concrete. The gravel fraction of the made ground was predominantly made up of a mixture of brick fragments, slate, clinker, and slag. Other anthropogenic inclusions included wire, metal, glass, plastic, metal pipes and beams, clay pipes, fabric, rubber, and timber. The density of made ground was generally reported as medium dense according to SPT N Values and the level of difficulty experienced during hand excavation. Groundwater was not encountered within made ground deposits during site investigation works.		
Max Depth	1.70mbgl	**Min Depth**	0.20mbgl
Mean Depth	1.10mbgl	**SPT Range**	N = 18 (single test only)

Devensian Till

6.1.2 Natural soils were reported at the base of made ground deposits at 8 exploratory hole locations as described in Table 6.2.

Table 6.2 Devensian Till Strata Description

Strata description	Devensian Till was predominantly encountered as brown sandy gravelly clay ranging in consistency from very soft to stiff but generally becoming stiff with depth where encountered. Sand was also encountered within Devensian Till Deposits at TP203 and was described as a slightly clayey gravelly sand or simply a fine to medium sand. Overall, Till deposits were found to comprise predominantly clay of limited thickness (1.10m was the maximum encountered thickness of clay proven on Plot NT02, however at WS203 the borehole was terminated at 3.15mbgl with a thickness of 2.15m, however this is expected to be due to the SPT encountering the top of the weathered fraction of the underlying Chester Formation. No groundwater was encountered within Devensian Till deposits during the site investigation works.		
Max Depth	3.00mbgl	**Min Depth**	2.00mbgl
Mean Depth	2.40mbgl	**SPT Range**	6-50

Chester Formation Sandstone

6.1.3 Depth to rock head ranged from 2.00 to 3.00mbgl with the weathered fraction of the Chester Formation being encountered at this depth by a number of window sample boreholes and trial pits as well as the rotary boreholes. generally, as a very dense reddish-brown sand and causing SPT refusals (N values >50).

6.1.4 Generally, the sandstone was completely weathered for the first several metres and recovered as sand with poor recovery in areas of attempted shallower coring at RBH203. When cores were recovered the rock was described as a very weak fine-grained sandstone interbedded with bands of fine sand and horizontal closely spaced joints. Significant core loss was encountered during coring through sandstone on Plot NT02 suggesting the sandstone in the vicinity of RBH203 to be highly weathered.

6.1.5 Generally the investigation is considered to corroborate the finding of the previous site investigation by LK Consult.

Manchester Marls Formation

6.1.6 The Manchester Marl formation was encountered underlying the Chester Formation at all three rotary borehole locations depth ranging between 9.90 to 15.07mbgl. The Manchester marls were found to be predominantly formed of extremely weak to weak reddish-brown mudstone completely weathered to clay in places with some bands of grey siltstone and reddish-brown sandstone. Generally, the mudstone occurs at a shallower depth towards the east of the plot which is in agreement with BGS geological mapping for the area.

6.1.7 Generally the investigation is considered to corroborate the finding of the previous site investigation by LK Consult.

6.1.8 A programme of geotechnical testing was completed on rock samples obtained from site investigation works, copies of which are provided within Appendix D.

Plot NT03

Made Ground

6.1.9 Made ground was reported at all exploratory hole locations, the details of which is provided in table 6.3 below:

Table 6.3: Made Ground Strata Description

Strata description	Made ground was encountered at all three exploratory hole locations on Plot NT03 and was found to comprise a gravelly sand and sandy gravel containing demolition fill type material such as bricks and concrete. A large area of Plot NT03 was covered by a stockpile mound that prevented investigation of the southern portion of the plot. Service constraints also limited the area of the plot that could be investigated during the site investigation works. No groundwater strikes were encountered within made ground deposits during the site investigation works.		
Max Depth	2.00mbgl	**Min Depth**	0.60mbgl
Mean Depth	0.80mbgl		

Devensian Till

6.1.10 Natural soils were reported at the base of made ground deposits at all three exploratory hole locations as described in Table 6.4.

Table 6.4 Devensian Till Strata Description

Strata description	Devensian Till was predominantly encountered as a firm to stiff slightly gravelly slightly sandy clay. No groundwater strikes were encountered within Devensian Till deposits during the site investigation works.		
Max Depth	7.65mbgl	**Min Depth**	7.50mbgl
Mean Depth	7.60mbgl		

Chester Formation

6.1.11 The Chester Formation Sandstone was encountered at a depth of 7.65mbgl underlying Devensian Till deposits and was predominantly described as a very weak to weak, fine to medium grained sandstone.

Manchester Marls Formation

6.1.12 The Manchester Marls Formation was encountered underlying the Chester Formation at RBH206 at a depth of 13.97mbgl and underlying Devensian Till Deposits at RBH205 at a depth of 7.50mbgl and was found to comprise a very weak reddish brown mudstone.

6.1.13 A programme of geotechnical testing was completed on rock samples obtained from site investigation works copies of which are provided within Appendix D.

Plot NT04

Topsoil

6.1.14 Some soils at the site have been described as Topsoil and/or Made Ground – Topsoil is where they contain man-made material or overly man-made material. Typically, this material has a depth of 0.20m. These depths and classifications are based on visual descriptions only and do not in themselves indicate that the material is suitable for reuse in soft landscaping areas and should be verified by a landscape architect. We have not undertaken assessment to *BS 3882: 2015 – Specification for topsoil.* However, we consider that this material is likely unsuitable for engineering purposes.

Made Ground

6.1.15 Made ground was reported at all 17 exploratory hole locations the details of which is provided in table 6.5 below:

Table 6.5: Made Ground Strata Description

Strata description	Made ground was generally encountered as a gravelly sand or gravelly clay containing clinker, concrete, brick, slag, slate, coal, and ceramics. At WS208 from 0.50mbgl a gravelly sand containing asphalt was encountered. A number of remnant structures were encountered within made ground deposits in both trial pits and window sample boreholes believed to be associated with the former Dalton Print Works. At TP214 material suggestive of an informal domestic waste landfill was encountered with domestic products such as food containers, plastic, clothing, rubber, rebar, and sheet metal encountered. This material appears to be limited to the immediate vicinity of TP214 and no similar material was encountered in neighbouring exploratory holes. No groundwater strikes were encountered within made ground deposits during the site investigation works.		
Max Depth	3.00	**Min Depth**	1.00
Mean Depth	1.70	**SPT Range**	N = 11 to 50

Devensian Till

6.1.16 Natural soils were reported at the base of made ground deposits at 12 of the exploratory hole locations as described in Table 6.6.

Table 6.6 Devensian Till Strata Description

Strata description	The Devensian Till encountered on Plot NT04 is generally described as a stiff brown/orangish brown/blueish grey clay slightly gravelly in places. At WS210 clay was interbedded with fine to medium sand and a stiff slightly clayey silt. No groundwater strikes were encountered within Devensian Till Deposits on Plot NT04.		
Max Depth	10.00mbgl	**Min Depth**	6.00mbgl
Mean Depth	8.13mbgl		

Manchester Marls Formation

6.1.17 Underlying the Devensian Till deposits the Manchester Marl Formation was encountered varying in depths from 6.00 to 10.00mbgl. The Manchester Marl Formation was generally found to comprise an extremely weak to weak reddish-brown mudstone with bands of grey siltstone and reddish brown / grey / yellowish brown sandstone. The Manchester Marls appeared to be heavily weathered in places with significant amounts of the core recovered as clay with mudstone lithorelicts or as non-intact mudstone gravel. It is likely that the level of weathering observed within the mudstone is due to a combination of mechanical weathering during the drilling process and the action of faulting.

6.1.18 A programme of geotechnical testing was completed on rock samples obtained from site investigation works, copies of which are provided within Appendix D.

6.2 Contamination Observations

Plot NT02

6.2.1 Olfactory evidence of contamination was encountered at 4 exploratory hole locations on Plot NT02 these are summarised below in table 6.7.

Table 6.7: Plot NT02 Visual and Olfactory Evidence of Contamination Observations

BH ID	Depth		Notes and observations
	mbgl	mAOD	
WS202	1.00	31.05	Strong solvent odours within Devensian Till deposits. Likely associated with historic industry on plot (Rubber works, foundry, bolt works, asphalt works)
TP202	0.40	33.20	Hydrocarbon odours within made ground deposits. Likely associated with historic industry on plot (Rubber works, foundry, bolt works, asphalt works)
TP203	0.05	32.19	Strong hydrocarbon odours within made ground deposits. Likely associated with historic industry on plot (Rubber works, foundry, bolt works, asphalt works)
RBH203	2.30	31.29	Strong solvent odours within weathered Chester Formation (Reddish brown sand). Likely associated with historic industry on plot (Rubber works, foundry, bolt works, asphalt works)

Plot NT03

6.2.2 Olfactory evidence of contamination was not encountered within exploratory holes formed on Plot NT03. However, anecdotally while the mound of material occupying the southern portion of the site was being removed a pungent smell was noted and runoff from the mound appeared discoloured and to have a slight oily sheen. Therefore, it is feasible that the mound has leached contaminants into the underlying ground. The mound and topsoil business are subject to separate licensing and permitting regulations and assessment of the material is beyond the scope of this investigation. However, it is recommended that the underlying ground is investigated further in a future supplementary investigation.

Plot NT04

6.2.3 No visual or olfactory evidence of contamination was encountered on Plot NT04.

6.3 Groundwater Observations

6.3.1 Resting groundwater monitoring results (as revealed from borehole standpipes) indicate a groundwater table within the Chester Formation and Manchester Marls Formation at depths ranging between 4.60 and 13.84mbgl. Table 6.8 below provides a summary of water strikes and resting water levels. Full details of monitoring results have been provided within Appendix E.

Table 6.8: Groundwater Strike Information

BH ID	Water Strike Depth		Resting Water Level	
	mbgl	mAOD	mbgl	mAOD
RBH201	None Recorded		4.65 to 4.83	26.75 to 26.57
RBH202			6.09 to 6.30	26.67 to 26.46
RBH203			6.66 to 6.88	26.93 to 27.29
LKBH01			4.60 to 4.80	26.84 to 26.64
LKBH03			6.71 to 6.74	26.88 to 26.85
RBH205			5.42 to 5.74	25.96 to 25.64
RBH206			5.75	26.25
RBH207			7.80 to 7.97	28.37 to 28.20
RBH208			13.70 to 13.84	29.30 to 29.16
RBH209			12.32 to 12.56	28.14 to 27.90
RBH210			12.52 to 12.62	28.88 to 28.76

6.3.2 It should be noted that, due to the choice of drilling methods, it was not possible to accurately record the depth of groundwater strikes in rotary drilling locations. Assessment of deep groundwater levels is more accurately made based on the resting water levels recorded during monitoring.

6.3.3 A drawing showing the variation of groundwater levels across the site, and anticipated direction of flow is presented in Drawing 4328-ROC-ZZ-XX-DR-ES-ES109 presented in Appendix A. This generally indicates a direction of flow to the northwest in the direction of the River Irk, and it is feasible that these water bodies are in continuity.

6.3.4 It should be noted that the investigation and subsequent monitoring has been undertaken primarily during drier summer months. We consider it likely that groundwater levels will rise through the winter months, potentially into superficial and Made Ground soils. It is notable that groundwater levels are relatively consistent across the site between both the Chester Formation and Manchester Marls, indicating that groundwater in these units may be in continuity, owing to faulting and strata of more permeable rocks. Given the site topography it is feasible for there to be a small quantity of surface water runoff to the northwest in the direction of the River Irk.

6.4 Below Ground Obstructions

6.4.1 A number of obstructions and constraints were encountered during the site investigation works on Plots NT02 and NT04 and are detailed in tables 6.9 and 6.10 respectively.

Plot NT02

Table 6.9: Plot NT02 Below Ground Obstructions Summary

BH ID	Depth		Notes and observations
	mbgl	mAOD	
RBH203	1.20	32.39	Concrete obstruction
TP202	0.25 to 1.50	33.35 to 32.10	Concrete structure in northern face of trial pit.
TP207	0.80 1.00	32.50 32.30	Small diameter Alkathene water supply pipe Clay Drainage Pipe
WS201	0.30	31.14	Cobblestone block likely associated with historic street / yard
WS205	0.60	33.81	Metal pipe encountered within handpit likely associated with historic building.

Plot NT04

Table 6.10: Plot NT02 Below Ground Obstructions Summary

BH ID	Depth		Notes and observations
	mbgl	mAOD	
TP218	0.40 to 1.70 0.40 to 2.80 0.60 1.20	40.82 to 39.52 40.82 to 38.42 40.62 40.02	Masonry wall likely associated with former Dalton Works Masonry wall likely associated with former Dalton Works Arch structure likely associated with former Dalton Works Masonry floor likely associated with former Dalton Works
WS208	1.00 to 1.18	40.72 to 40.54	Asphalt infill
WS212	0.50	40.85	Relic brick wall likely associated with former Dalton Works

6.5 Investigated Structures

6.5.1 The scope of the works also included the investigation of existing structural elements.

6.5.2 In NT02 TP08 was undertaken to establish the foundation arrangement to the existing viaduct structure. The trial pit encountered a large footing beneath a relic steel column which sits in front of the viaduct this feature prevented further excavation to reveal the retaining wall foundations. A sketch drawing of the structural investigations is presented in 4328-ROC-ZZ-XX-SK—ESK110 and contained within Appendix A.

6.5.3 In the southern part of the mound hand pits HP201 to HP203 were undertaken to investigate the potential presence of a retaining structure supporting the viaduct in this location. Investigation in this area of the mound was inconclusive with no retaining structure encountered. To increase the robustness of the investigation further work is proposed on the opposite side of the boundary fence separating the Network Rail mound and the live railway. A drawing of the structural investigations is presented in 4328-ROC-ZZ-XX-DR-ES104 and contained within Appendix A.

6.5.4 In NT04 TP220 was undertaken to establish the foundation arrangement to the existing viaduct structure. This has shown the structure to be sat on a foundation located 1.40mbgl and founded within underlying stiff clay of the Devensian Till. A sketch drawing of the structural investigations is presented in 4328-ROC-ZZ-XX-SK—ESK110 and contained within Appendix A.

7.0 Laboratory Testing

7.0.1 To establish the physical and chemical properties of underlying soils, a programme of laboratory analysis was completed utilising samples obtained during site investigation works. This analysis comprised the testing of soil samples to assist with the estimation of risks posed by contaminated land related concerns.

Chemical Testing

7.0.2 RoC Consulting submitted a total of 27 soil and water samples to a UKAS accredited testing facility for analysis against a range of determinands synonymous with the site's former industrial activity.

Determinands	No. of Tests
Soil - Toxic and phytotoxic metals and metalloids	27
Soil - Total & Speciated Polycyclic Aromatic Hydrocarbons (PAH)	27
Soil - Other inorganic substances (e.g. Sulphate, Cyanide etc)	27
Soil - TPH UKCWG	15
Soil - Asbestos ID	26
Soil - Asbestos Quantification	5
Soil - SVOC's	11
Soil - VOC's	11
Soil - Speciated Phenols	12
Soil - Leachate Analysis (Heavy Metals, PAHs etc)	5
Soil - Leachate Analysis (TPH UKCWG)	6
Soil - Water Soluble Sulfate & pH	27
Soil - Waste Acceptance Criteria	2
Soil - UKWIR	1
Water - Toxic and phytotoxic metals and metalloids	19
Water - Total & Speciated Polycyclic Aromatic Hydrocarbons (PAH)	19
Water - TPH UKCWG	19
Water - SVOC's	19
Water - VOC's	19
Water - Speciated Phenols	15

7.0.3 Copies of chemical testing results have been provided within Appendix C.

Geotechnical Testing

7.0.4 A programme of geotechnical laboratory analysis was also completed on soil samples and rock cores obtained during site investigation works.

Plasticity Index

7.0.5 A total of 5 soil samples were tested for the determination plasticity index of the Devensian Till. The depth range of samples tested varied from 1.20 to 3.00m with a mean depth of 2.24mbgl. The plasticity index range varied between 14 and 24% with a mean value of 17.6%. These results indicate clays to be of a low to medium plastic nature. Modified plasticity indices have also been calculated for the samples, with modified plasticity index values ranging from 13.58 to 23.52% indicating Devensian Till deposits to have a low to medium volume change potential.

Point Load Testing

7.0.6 A total of 46 rock samples underwent point load testing from depths ranging between 6.34 and 24.40mbgl. Point load tests undertaken in the Chester Formation had Is (50) values ranging from 0.02 to 0.19Mpa. Point load tests undertaken in the Manchester Marls Formation had I_S (50) values ranging from 0.02 to 1.42Mpa.

Unconfined Compressive Strength

7.0.7 A total of 9 rock samples were tested for the determination of Unconfined Compressive Strength. Tests were completed on rock cores obtained from rotary boreholes. A single UCS test was undertaken in the Chester Formation reporting a UCS of 5.73Mpa. A total of 8 UCS tests were undertaken on rock cores from the Manchester Marls Formation providing UCS values ranging between 528kPa to 25.5Mpa.

7.0.8 Results from geotechnical laboratory testing have been provided within Appendix D.

8.0 Geo-Environmental Assessment

8.0.1 The results from the intrusive Phase 2 ground investigation have been used to complete a refined assessment of risks posed by ground contamination and ground stability issues beneath the site, building on the model and assessment outlined in the Phase 1 Desktop Study. The assessment considers these risks both in terms of the site's current arrangement and usage, as well as any potential future development (and associated construction process).

8.0.2 The assessment has been collated with reference to various statutory and non-statutory guidance documents relating to land contamination and ground stability. Specifically, the assessment has been conducted in accordance with the Environment Agency Land Contamination Risk Management (LCRM) guidance relating to the "Tier 2 Generic Quantitative Risk assessment" process (revised April 2021).

8.0.3 In accordance with this method, a Refined Conceptual Model has been collated for the site based on the results of the desktop review. This model is based around the Source / Pathway / Receptor methodology as outlined in Fig 8.0.



Figure 8.0 Source Pathway Receptor Diagram

8.0.4 Risk assessment is the process of collating known information on a hazard or set hazards in order to establish actual or potential risks to receptors. The receptor may be human health, controlled waters, a sensitive local ecosystem or even construction materials. Receptors can be connected with the hazard under consideration via one or several exposure pathways (e.g., the pathway of direct skin contact and oral exposure).

8.0.5 Risks are generally managed by isolating or removing the hazard, isolating the receptor, or by intercepting the exposure pathway. Without the three essential components of a source (hazard), pathway and receptor, there is deemed to be no risk. In other words, the mere presence of a hazard at a site does not mean that there will necessarily be risks.

8.0.6 Potential sources of contamination have been identified across the site, where applicable, based on observations and information obtained during the desktop review. These sources are defined based on the results from site investigation fieldworks and subsequent laboratory analysis of samples / monitoring works. As previously discussed, the design of these investigations included judgemental elements of targeting known or suspected sources of contamination, based on the results of the Tier 1 Preliminary desktop assessment; as well as obtain site wide information on soil, groundwater, and ground gas.

8.0.7 The risk assessment has been completed with reference to the guidance outlined within CIRIA 552 "Contaminated land risk assessment. A good practice guide". This risk assessment methodology considers the potential consequence / severity of risks that may be present within soils in comparison with the likelihood of exposure to or and occurrence of said risk. A range of risk classifications are provided within CIRIA 552 further details of which are provided in Table 8.0 below.

Table 8.0: Definition of Risk Class and Consequence

Risk Class	Definition	Example
Minor	Potential for harm, although not significant, which may result in financial loss to resolve. Ground conditions where the use of PPE would readily mitigate risks posed to human health.	Low level contamination hotspots within made ground / demolition fill materials. Stunted or impeded plant growth due to poor soil quality.
Mild	Pollution of non-sensitive water resources or damage to crops, plant growth, below ground utilities or structures.	Perched groundwater contamination overlying low permeability aquifer or aggressive sulphate concentrations in soils.
Medium	Sources of contamination identified on site have the potential to cause both long and short-term health effects on site residents / users. Alternatively (or in conjunction with) sources of contamination may have the potential to impact surface or groundwater quality or impede vegetation growth.	Elevated concentrations of hydrocarbon contamination reported within topsoil tested within residential gardens as a result of inadequate or incomplete previous remediation works. Movement of contaminated groundwater from leaking below ground storage tank into adjacent surface water course.
Severe	Sources of contamination pose a credible and acute risk to human health with potential for "Significant Harm" occurring as defined by the Part IIA of the Environmental Protection Act (1990). Alternatively (or in conjunction with risks posed to human health) sources of contamination may pose an immediate risk to controlled water resources or ecosystems.	Grossly contaminated soils are encountered or disturbed during excavation works, causing an immediate release of toxic soil vapour and leachate / contaminated groundwater flow across adjacent land.

8.0.8 As previously discussed the contaminated land risk assessment model evaluates the severity of risks that may be present within soils / groundwaters in the context of threats posed to identified receptors before deriving the actual risk rating based on the probability of occurrence. Table 8.1 (provided overleaf) outlines the range likelihood of risk.

Table 8.1: Probability Assessment

Classification	Definition
High likelihood	A credible pollutant linkage has been identified and it is very likely contaminants will impact identified receptors in both the short or long term (or is already actively doing so). The potential for harm to be caused is thus highly likely.
Likely	Pollutant linkages between the sources of contamination and identified receptors are present and it is considered likely they will become active given the right set of circumstances (e.g., contaminants currently buried below ground that are likely to be exposed or disturbed during construction / excavation works). The circumstances are such that an event is not inevitable, however it is possible in the short term and likely over the longer term.
Low likelihood	A theoretical pollutant linkage has been identified that has the potential to exposure receptors to contaminates under the correct circumstances. However, the likelihood of such an event occurring is not a certainty, even in the long term
Unlikely	There is no / minimal likelihood a pollutant linkage would occur, even over the long term.

8.0.9 The risk assessment process is a combination of probability and consequence, recognising that it may be possible to have a significant source of contamination beneath a site (such as a large below ground chemical storage tank) that may only present a relatively moderate to low risk (owing to the fact it may be contained within a secure concrete bund). Table 8.2 indicates how the actual nature of risk is established with Table 8.3 illustrating how the risk is interpreted in the context of contaminated land risk assessment.

Table 8.2: Risk Definition

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	

Table 8.3: Description of Risks Posed

Risk Definition	Description
Very High	Active pollutant linkages between a significant source of contamination and identified receptors have been establish and there is a high likelihood of severe harm occurring to said receptors unless immediate investigation and remediation action is not taken.
High Risk	Harm is likely to arise to receptors from an identified hazard in the short and long term. Urgent investigation of the contaminant issue will be required, and remedial treatment is likely.
Moderate Risk	The possibility of harm has been identified toward receptors under the right circumstances, although the severity of harm would be relatively mild. Further investigation of identified issues would be prudent and possible need for remedial measures in the long term.
Low Risk	It is possible harm could arise to a designated receptor from identified hazard, but it is likely (if realised) any harm would be (at worst) mild.
Very Low Risk	No significant pollutant linkages have been identified and the possibly of harm occurring to receptors is low.

8.0.10 A Preliminary desk-based risk assessment has been completed for the site utilising the current and historical environmental information available (refer to RoC Consulting report ref: 4328-ROC-ZZ-XX-RP-ES-PH1DTS). This report formed the basis on which the current programme of ground investigations was designed and undertaken.

8.0.11 The Tier 2 risk assessment process can be divided based on the receptor group in question between:

1. Risks posed to human health by soil contamination (both construction persons and future site users).

2. Risks posed to human health by hazardous ground gas ingress (both construction persons and future site users).

3. Risks posed to controlled waters by soil or groundwater contamination (both surface water features and bedrock aquifers).

4. Risks posed to new building construction by aggressive ground conditions (namely elevated sulphate concentrations).

8.0.12 It is noted the site is being developed for residential led end use without gardens but containing areas of soft landscaping. In the short term, before construction begins, Plot NT02 will also be in use as temporary event space.

8.0.13 Appropriate assessments have been completed for each of the above utilising the latest statutory and non-statutory guidance documents; for details of risks posed to human health refer to Section 8.1 (soils) and Section 8.2 (ground gas), for details of risks posed to controlled waters refer to Section 8.3 and risks posed to new structures refer to Section 8.4.

8.1 Soil Contamination

8.1.1 In order to estimate the risks posed to human health from soil contamination, a quantitative risk assessment has been completed utilising the latest Environment Agency CLEA methodology. The assessment utilises the chemical testing results obtained during the site investigation fieldworks to characterise site conditions and facilitate the completion of the risk assessment process.

8.1.2 The assessment is based on the comparison of soil chemical testing results with published Environment Agency Category Four Screening Levels (C4SL's) under the proposed end use scenario to determine the sites suitability for use. C4SL values represent the highest acceptable values for contaminants within site soils under the proposed end use and are derived using the Environment Agency CLEA risk assessment methodology. A result in exceedance of a C4SL level may indicate the presence of contaminants within site soils and require further assessment.

8.1.3 It is noted only a limited number of C4SL values have been derived by the Environment Agency for use, and reference has been made to LQM/CIEH Suitable For Use Values (S4UL's) for a wider range of other contaminants (Heavy Metals, Poly Aromatic Hydrocarbons, TPH, SVOC and VOC's) to increase the depth and robustness of our assessment.

8.1.4 Chemical testing results are compared against C4SL and S4UL values for each determinant with any results reported in exceedance of screening criteria identified and their significance reviewed. When determining the significance of any exceedances within the dataset the magnitude and frequency of the exceedance needs to be taken into account, for example, a single exceedance of a screening value may be considered as localised hotspot whereas consistently elevated levels of a substance at multiple locations across the site may indicate a more prevalent contamination issue.

8.1.5 In addition to this assessment, an Asbestos Identification test (via the visual inspection method) has been completed on all samples of made ground obtained during the investigation to determine risks posed. Any positive occurrences of Asbestos will be subject to quantification analysis to further assess the extent and significance of risks posed.

8.1.6 As required, for each exceedance reference will be made to the Conceptual Site Model to establish the most likely source of contaminants and initial commentary given as to the likely scope of remedial measures. In addition, reference will also be made to the assumptions used to derive generic assessment criteria (C4SL and S4UL values) to determine their comparability with the proposed end use.

8.1.7 For the purposes of this assessment we have assumed a "Residential without Gardens" end use scenario when reviewing chemical testing data against C4SL / S4UL values; a "worst case" Soil Organic Matter content value of 1% has been assumed for the initial assessment.

Summary and Assessment of Risks Posed by Soil Contamination

8.1.8 Results from chemical testing analysis indicate the following exceedances of contaminants within site soils.

Plot NT02

Table 8.4: Plot NT02 Soil GAC Exceedances and Notable Contaminants

BH ID	Depth (m)	Determinant/s Exceeded and Determinants Reported with No GAC
Red indicates exceedances of established GACs **Orange** indicates elevated concentrations of contaminants with no established GACs **Green** indicates concentrations of contaminants that do not exceed established GACs but which are otherwise notable Asbestos identifications are assessed separately.		
RBH203	3.00	**VOCs** – **1,2,4-Trimethylbenzene (0.023mg/kg), 1,3,5 Trimethylbenzene (0.008mg/kg), 4-Isopropyltoluene (0.002mg.kg), ethylbenzene (0.002mg/kg), m&p xylene (0.003mg/kg), o-xylene (0.002mg/kg) and tricholoroethene (0.006mg/kg)** **SVOC –2,4-Dimethylphenol (0.19mg/kg), 2,4-Dinitrotoluene (1.41mg/kg), 2-Methylnapthalene (14.1mg/kg), 4-Methylphenol (0.142mg/kg), 4-Nitrophenol (0.429mg/kg), Carbazole (1.73mg/kg), Dibenzofuran (10.90mg/kg), Hexachloroethane (4.83mg/kg), Nitrobenzene (0.176mg/kg),**
TP201	0.50	**Heavy Metals – Arsenic (44mg/kg), Beryllium (2mg/kg)**
TP202	0.50	**Heavy Metals – Lead (7,660mg/kg),** **PAH – Benzo(a)anthracene (53.5mg/kg), Benzo(a)pyrene (36.8mg/kg), Benzo(b)fluoranthene (47.8mg/kg), Chrysene (80.8mg/kg), Dibenzo(ah)anthracene (6.23mg/kg)** **VOC – Trichloroethene (0.012mg/kg)** **SVOC – 2-Methylnapthalene (0.412mg/kg), Carbazole (0.481mg/kg), Dibenzofuran (0.461mg/kg), Perylene (1.2mg/kg)** **Asbestos** – Chrysotile loose fibres (0.007%)
TP203	0.30	**Heavy Metals – Lead (391mg/kg)** **Asbestos** – Chrysotile loose insulation (0.003% **SVOC –2,4-Dinitrotoluene (0.158mg/kg), 2-Methylnapthalene (1.51mg/kg), Carbazole (0.40mg/kg), Dibenzofuran (1.21mg/kg), Perylene (0.743mg/kg)**
	1.20	**Heavy Metals – Lead (847mg/kg)** **Asbestos** – Chrysotile and Amosite cement (2.563%)
TP204	0.60	**Heavy Metals – Arsenic (119mg/kg), Beryllium (2mg/kg), Lead (709mg/kg)**

TP207	0.20	**Heavy Metals** – **Arsenic (40mg/kg), Lead (386mg/kg)** **Asbestos** – Amosite and Chrysotile loose fibres (0.007mg/kg) **PAH** – **Benzo(a)anthracene (11mg/kg), Benzo(a)pyrene (10.9mg/kg), Benzo(b)fluoranthene (11.5mg/kg), Dibenzo(ah)anthracene (1.21mg/kg)**
WS202	1.50	**SVOC** – **Dibenzofuran (0.136mg/kg)**
WS203	0.50	**Heavy Metals** – **Lead (313mg/kg)** **Asbestos** – Chrysotile (trace) loose fibres **VOC** – **Trichloroethene (0.03mg/kg).** **SVOC** - **Detected but no GAC – Perylene (0.204mg/kg)**
WS204	0.40	**PAH** – **Dibenzo(ah)anthracene (0.78mg/kg), Benzo(b)fluoranthene (7.29mg/kg), Benzo(a)pyrene (6.91mg/kg)** **SVOC** – **Perylene (1.19mg/kg), Dibenzofuran (0.153mg/kg), Carbazole (0.259mg/kg)**
WS205	0.30	**Heavy Metals** – **Arsenic (103mg/kg), Lead (343mg/kg)**

8.1.9 Lead, arsenic and beryllium contamination appears to be generally widespread across the site within made ground deposits. This is likely attributable to a combination of the makeup of the made ground (demolition fill material) and the historic site uses in this area which included a foundry and bolt works.

8.1.10 PAH contamination was reported in several locations (TP202, TP207 and WS204) and is thought to be associated with ash and clinker that was noted to be in made ground across the site.

8.1.11 A single exceedance of a Volatile Organic Compound, Trichloroethene (0.03mg/kg) has been recorded. It should be noted that this is in the location of WS203, in the vicinity of RBH203 and in an area where significant visual/olfactory evidence of contamination has been observed. It should also be noted that elevated concentrations of several other VOCs (although not in exceedance of criteria) have been observed in soil testing at RBH203.

8.1.12 In addition, a number of concentrations of SVOCs have been observed across the site. These represent contaminants with no current published assessment criteria.

8.1.13 Finally, asbestos fibres have been observed in 4 locations, which have subsequently undergone quantification testing.

Plot NT03

Table 8.5: Plot NT03 Soil GAC Exceedances and Notable Contaminants

BH ID	Depth (m)	Determinant/s Exceeded and Determinants Reported with No GAC
Red indicates exceedances of established GACs **Orange** indicates elevated concentrations of contaminants with no established GACs Asbestos identifications are assessed separately.		
TP214	0.80	**Heavy Metals** – **Lead (3,920mg/kg)** **SVOC** – **2-Methylnapthalene (1.26mg/kg), Carbazole (1.44mg/kg), Dibenzofuran (1.97mg/kg), Perylene (2.24mg/kg)**

8.1.14 Despite the lesser number of investigation locations, testing of the Made Ground soils in plot NT03 encountered comparable concentration of contaminants to those observed in Plot NT02, with a comparable lead exceedance and similar observations of elevated SVOCs, although it should again be noted that the latter are not contaminants with established GACs.

Plot NT04

Table 8.6: Plot NT02 Soil GAC Exceedances

BH ID	Depth (m)	Determinant/s Exceeded
Red indicates exceedances of established GACs **Orange** indicates elevated concentrations of contaminants with no established GACs **Green** indicates concentrations of contaminants that do not exceed established GACs but which are otherwise notable Asbestos identifications are assessed separately.		
TP215	1.00	**Heavy Metals** – **Arsenic (84mg/kg), Beryllium (2.4mg/kg), Copper (11,800mg/kg), Lead (19,000mg/kg)** **Cyanide – (329mg/kg)** **SVOC** –**2-Methylnapthalene (0.495mg/kg), Carbazole (0.308mg/kg), Dibenzofuran (0.322mg/kg), Perylene (0.542mg/kg)**
TP216	0.20	**Heavy Metals** – Lead (367mg/kg),
	0.60	**Heavy Metals** – **Lead (373mg/kg),** **SVOC** – **Carbazole (0.193mg/kg), Dibenzofuran (0.143mg/kg), Perylene (0.40mg/kg)**
	1.20	**Heavy Metals** – **Arsenic (77mg/kg), Barium (1410mg/kg), Beryllium (1.7mg/kg), Copper (7,580mg/kg), Lead (12,000mg/kg),** **Cyanide – 39mg/kg**
TP217	0.50	**Heavy Metals** – **Arsenic (69mg/kg), Beryllium (1.7mg/kg), Lead (8,900mg/kg)**
TP218	0.50	**Heavy Metals** – **Arsenic (58mg/kg), Beryllium (1.7mg/kg), Lead (1,560mg/kg)** **SVOC** –**Methylnapthalene (0.162mg/kg), Carbazole (0.164mg/kg), Dibenzofuran (0.15mg/kg), Perylene (0.528mg/kg)**
TP219	0.50	**Heavy Metals** – **Lead (1,840mg/kg)** **Asbestos** – Chrysotile loose fibres (0.007%)
TP220	0.70	**Heavy Metals** – **Lead (382mg/kg)**
WS208	0.40	**Heavy Metals** – **Lead (394mg/kg)** **PAH** – **Dibenzo(ah)anthracene (0.36mg/kg)**
WS209	0.40	**Heavy Metals** – **Arsenic (126mg/kg), Beryllium (1.9mg/kg), Copper (13,800mg/kg), Lead (18,100mg/kg)**
WS210	0.50	**Heavy Metals** – **Lead (472mg/kg)**

		SVOC –**Methylnapthalene (0.46mg/kg), Carbazole (0.615mg/kg), Dibenzofuran (0.457mg/kg), Perylene (1.43mg/kg)**
	1.30	**Heavy Metals** – **Lead (906mg/kg)** **PAH** – **Dibenzo(ah)anthracene (0.35mg/kg)**
WS211	0.30	**Heavy Metals** – **Lead (520mg/kg)**

8.1.15 Lead, arsenic and beryllium contamination again appears to be generally widespread across NT04 within made ground deposits. This is likely attributable to a combination of the makeup of the made ground (demolition fill material) and the historic site uses in this area which included a print works.

8.1.16 An area of localised PAH contamination is evident with Dibenzo(ah)anthracene exceedances in the western portion of the site at WS208 and WS210. This is most likely associated with clinker and asphalt encountered at these locations.

8.1.17 Similarly to elsewhere on the site, a number of concentrations of SVOCs have been observed across the site. These represent contaminants with no current published assessment criteria.

8.1.18 Finally, asbestos fibres have been observed in 4 locations, which have subsequently undergone quantification testing.

8.2 Assessment of Soil Contamination

8.2.1 Exceedances of human health criteria have been observed in shallow Made Ground across all three parts of the site. Primarily these comprise inorganics such as Lead and Arsenic, with others such as PAHs distributed less evenly. The criteria used for this assessment are for residential developments without gardens and are not directly intended for high-rise residential land uses with large areas of hardstanding. For example, it is notable that of the 19 exceedances of lead recorded across the site, only 4 would exceed the higher, commercial assessment criteria of 6,000mg/kg. The recorded concentrations are typical of Made Ground in previously developed brownfield sites and could be attributable to either the former site activities (including a foundry and bolt works in NT02, iron works in NT03 and print works in NT04), or of demolition fill. Regardless, these concentrations should be considered to represent a meaningful risk to human health and recommendations relating to them are presented in Section 11 below.

8.2.2 A single exceedance of Trichloroethene has been recorded in the location of TP202 and further VOCs have been detected (although not in exceedance of GACs) in the location of RBH203. This evidence supports the hypothesis that chlorinated hydrocarbon contamination is present in this location, a hypothesis that is also supported by the previous site investigation by LK Consult, and testing of groundwater in this location. It is feasible this contamination may be associated with the historic industry in Plot NT02, such as the use of solvents and plasticizers within the historic rubber works and bolt works, or coking processes in the historic foundry that was located in the southern portion of the site. Some of the identified VOCs have historically been used as degreasers.

An off-site source, such as the nearby gas works is also a potential source, although much of the evidence indicating contamination is highly localised to this part of the site. Recommendations relating to remediation is presented in Section 11 below.

8.2.3 A number of concentrations of SVOCs have been recorded in soils across the site. These contaminants are not governed by published GACs, but in the context of other identified contamination in near surface soils, may support the case for remedial measures. These contaminants may be associated with the former print works or nearby sources of combustion.

8.2.4 Asbestos fibres have been identified in 5 locations. All of these were subsequently quantified, with 4 recording concentrations of fibres above trace levels. In one location this comprised Chrysotile and Amosite cement, representing 2.563% of the sample by weight. Asbestos is not regulated through Generic Assessment Criteria like many other contaminants and requires bespoke risk assessment. It is relevant that for waste assessment purposes soil is considered hazardous if it contains pieces of asbestos Containing Materials identifiable by eye, or if the waste as a whole contains 0.1% or more asbestos. While visible pieces of asbestos containing materials have not been identified during the site investigation, the testing is sufficient to indicate that asbestos in the site soils may comprise a meaningful risk to human health and may support the case for remedial measures. The asbestos observed is likely attributable to demolition of former site buildings.

8.2.5 The findings are broadly consistent with the observation of the previous site investigation. The previous investigation also observed exceedances of criteria for aliphatic hydrocarbons and benzene in the west of the existing building (WS205) and it is feasible this is also related to the chlorinated hydrocarbon contamination detailed in paragraph 8.2.2

8.2.6 The findings of the above have been used to update the Refined Conceptual Site Model (provided within Section 9.0) as well as inform the scope of any further investigation or remedial works deemed necessary to support the sites development.

8.3 Ground Gas Risk Assessment

8.3.1 The Preliminary Conceptual Site model identified made ground as being a potential source of ground gas generation. The site is not said to be located within in an area at risk from Radon gas ingress.

8.3.2 It is considered the most probable exposure pathways are likely to be limited to construction workers during the sites redevelopment and future site users occupying buildings across the site.

8.3.3 To estimate the risks posed by ground gas generation a total of 7 locations were installed with gas monitoring wells, three existing boreholes from the previous LK site investigation were also located on site and monitored. The purpose of these standpipes is to investigate the ground gas generation potential of both shallow soils and those at depth, and the associated implications this may have for new building design.

8.3.4 At the time of writing, four ground gas monitoring visits had been completed on site (refer to Appendix E for further information). A summary of the results is reported below:

- Maximum CH_4 Value = 0% volume
- Maximum CO_2 Value = 13.4% volume (WS204 on 28th August 2022)
- Minimum O_2 Value = 2% volume (WS211 on 4th October 2022)
- Maximum flow rate = 0.1l/hr volume (detection limit)
- H_2S and CO not detected
- Variable atmospheric pressures between 1016 and 992Mb

8.3.5 Elevated Carbon Dioxide concentrations were encountered on Plot NT02 with levels generally ranging between 3 and 13%, depleted oxygen concentrations were also recorded. On Plot NT04 carbon dioxide levels within wells were only slightly elevated generally in the region of 1 to 2%.

8.3.6 The method used to categorise the site ground gas regime is covered in the CIRIA C665 document and defines gas concentrations and borehole flow rates to calculate a gas volume flow (Gas Screening Value) and classify a characteristic situation.

8.3.7 Gas Screening Values (GSVs) have been calculated using the formula:

GSV (l/hr) = borehole flow rate (l/hr) x gas concentration (v / v %) / 100

8.3.8 This calculation has been applied to the maximum Carbon Dioxide and flow rates recorded of the course of monitoring to represent a reasonable worst-case scenario for the entire site. In most cases, ground gas measurements from the site found no change in flow rates which remained at 0.0% for each of the six measurement visits. Where this has occurred a nominal flow rate of 0.1l/hr has been adopted for calculation purposes.

8.3.9 With reference to guidance provided in CIRIA C665 "*Assessing risks posed by hazardous ground gases to buildings*" and assuming the development comprises Situation A; the above-mentioned worst case gas levels and borehole flow rates equate to a Gas Screening Value (GSV) of 0.0134l/hr which corresponds to an anticipated Characteristic Situation of CS-2. Additionally, although there have been relatively low flow rates reported on site the levels of Carbon Dioxide detected facilitate the sites grading of CS-2 as the maximum recorded Carbon Dioxide concentrations exceed the threshold of 5%. This would lead to a requirement for gas protection measures in accordance with BS8485.

8.3.10 On Plot NT04 gas levels do not correspond to a CS-2, therefore it is recommended that Plot NT02 employs gas protections measures in line with CS-2 and Plot NT04 is classified as CS-1. It should be noted that no gas monitoring wells were installed on Plot NT03 due to the presence of the large mound occupying the majority of the plot and a future supplementary investigation should be undertaken when this mound is removed in order to quantify the risk from ground gas on this plot.

8.3.11 At the time of writing ground gas monitoring is still ongoing and final recommendations will be made in a subsequent addendum following a full risk assessment in accordance with CIRIA C665 "*Assessing risks posed by hazardous ground gases to buildings*" when monitoring results are finalised. Gas protections measures may also include vapour protection measures depending on the outcome of the further investigations recommended regarding the risk of the chlorinated solvent, TPH and benzene contamination plume in plot NT02.

8.4 Controlled Waters

8.4.1 It is understood the site is underlain by a principal aquifer in the Chester Formation which underlies the western portion of the site, and a Secondary B aquifer in the Manchester Marls Formation which underlies the Chester Formation in the Western portion of the site and Devensian Till Deposits (Secondary Undifferentiated aquifer) in the eastern portion of the site. The site is not located within any Environment Agency Zone source protection zones or in close proximity to sensitive groundwater abstraction boreholes. The nearest surface water feature is indicated 21m to the north in the form of the River Irk.

8.4.2 Resting groundwater monitoring results (as revealed from borehole standpipes) indicate a groundwater table within the Chester Formation and Manchester Marls Formation at depths ranging between 4.60 and 13.84mbgl. There is no evidence of significant groundwater in the Made Ground or superficial deposits although it is likely that groundwater levels will rise in winter months.

8.4.3 A contour plan has been produced taking an average of the recorded water levels during the monitoring visits (ROC-ZZ-XX-DR-ES-ES109) and is contained within Appendix A. This indicates a direction of flow to the northwest in the direction of the River Irk, and it is feasible that these water bodies are in continuity. Given the site topography it is feasible for there to be a small quantity of surface water runoff to the northwest in the direction of the River Irk.

8.4.4 No evidence of non-aqueous-phase liquid was encountered through use of the interface meter during the groundwater monitoring programme.

Sampling and Testing

8.4.5 Prior to sampling all wells were subject to purging of at least three well volumes to ensure representative levels of contaminants. In addition, leachate testing was also undertaken on some soil samples.

8.4.6 Ground water across the site has been tested in 19 instances as detailed below. In order to assess potential risks to surface waters and the underlying aquifers, results of chemical testing analysis from groundwater monitoring wells installed within the Manchester Marls Formation and Chester Formation have been compared against the Drinking Water Standards. While Drinking Water Standards are not primarily intended for groundwater quality assessment, they are typically used as such as a starting point for assessment.

Table 8.7: Controlled Waters Screening

Determinands	DWS (µg/l)	No. of tests	No. of Exceedances	Max. Concentration (µg/l) & Location
Plot NT02 (soils)				
Arsenic	10	9	4	21 (LK BH01)
Sulphate	250,000	9	4	416,000 (RBH202)
1,1,2 Tetrachloroethane	No GAC	9	0	1 (RBH203)
Carbon Tetrachloride	3	26	3	104 (RBH203)
Chloroform	100	26	0	77 (RBH203)
Cis 1,2-Dichloroethene	50	26	2	267 (LKBH01)
Trans 1,2-Dichloroethene	50	26	2	234 (LKBH01)
Trichloroethene	10	26	3	572 (RBH203)
Vinyl Chloride	0.5	26	2	16 (LKBH01)
Acenapthene	No GAC	26	0	0.38 (LKBH01)
Acenapthylene	No GAC	26	0	0.02 (LKBH01)
Anthracene	No GAC	26	0	0.09 (LKBH01)
Fluoranthene	No GAC	26	0	0.01 (RBH202)
Napthalene	No GAC	26	0	0.02 (RBH201 & LKBH01)
Aromatic Hydrocarbons (C5-C7)	1	26	2	247 (LKBH01)
Benzene	1	26	2	258 (LKBH01)
Phenol		22	0	14 (LKBH01)
Plot NT02 (leachable)				
Arsenic (Leachable)	10	6	1	12 (TP202)
Lead (Leachable)	10	6	1	13 (TP202)
Sulphate (Leachable)	250,000	6	2	386,870 (TP202)
1,2,4-Trimethylbenzene (Leachable)	No GAC	6	0	13 (RBH203)
Styrene (Leachable)	No GAC	6	0	3 (RBH203)
Acenapthene (Leachable)	No GAC	6	0	401.40 (RBH203)
Acenaphthylene (Leachable	No GAC	6	0	7.33 (RBH203)

Determinands	DWS (µg/l)	No. of tests	No. of Exceedances	Max. Concentration (µg/l) & Location
Anthracene (Leachable)	No GAC	6	0	57.04 (RBH203)
Benzo(a)anthracene (Leachable)	No GAC	6	0	4.1 (RBH203)
Benzo(a)pyrene (Leachable)	0.01	6	2	0.39 (RBH203)
Benzo(b)fluoranthene (Leachable)	0.1	6	2	0.54 (RBH203)
Chrysene (Leachable)	No GAC	6	0	3.28 (RBH203)
Fluoranthene (Leachable)	No GAC	6	0	46.17 (RBH203)
Fluorene (Leachable)	No GAC	6	0	211.08 (RBH203)
Indeno(123-cd)pyrene (Leachable)	0.1	6	1	0.1 (WS202)
Napthalene (Leachable)	No GAC	6	0	1623.52 (RBH203)
Phenanthrene (Leachable)	No GAC	6	0	278.39 (RBH203)
Pyrene (Leachable)	No GAC	6	0	32.89 (RBH203)
SUM-polycyclic aromatic hydrocarbons (sum of four, leachable)	No GAC	6	2	0.87 (RBH203)
Hydrocarbons Aliphatic >C16-C21 (Leachable)	No GAC	6	0	277 (WS202)
Hydrocarbons Aliphatic >C21-C35 (Leachable)	No GAC	6	0	1,659 (RBH203)
Hydrocarbons Aliphatic >C35-C44 (Leachable)	No GAC	6	0	175 (RBH203)
Hydrocarbons Aromatic >C8-C10 (Leachable)	No GAC	6	0	623 (RBH203)
Hydrocarbons	90	6	1	9,761 (RBH203)

Determinands	DWS (µg/l)	No. of tests	No. of Exceedances	Max. Concentration (µg/l) & Location
Aromatic >C10-C12 (Leachable)				
Hydrocarbons Aromatic >C12-C16 (Leachable)	90	6	2	10,700 (RBH203)
Hydrocarbons Aromatic >C16-C21 (Leachable)	90	6	2	3,148 (RBH203)
Hydrocarbons Aromatic >C21-C35 (Leachable)	90	6	2	346 (RBH203)
Hydrocarbons Aromatic >C35-C44 (Leachable)	No GAC	6	0	12 (WS202)
BTEX – M&P Xylene (Leachable)	No GAC	6	0	10 (RBH203)
BTEX – O Xylene (Leachable)	No GAC	6	0	10 (RBH203)
Plot NT03				
Manganese	50	4	4	58 (RBH206)
Plot NT04				
Sulphate	250,000	12	6	414,000 (RBH209)
Arsenic	10	12	1	10 (RBH208)
Pyrene	No GAC	12	0	0.03 (RBH209)
Napthalene	No GAC	12	0	0.09 (RBH208)
Hydrocarbons Aromatic >C8-C10	No GAC	12	0	30 (RBH203)
Lead (Leachable)	10	6	2	141 (TP216)

8.4.7 Screening of groundwater results from wells installed within the Chester Formation Sandstone in Plot NT02 (RBH203, LKBH03 and LKBH01) reported exceedances of the GAC for a number of VOCs including Trichloroethene and Vinyl Chloride which were previously identified in water monitoring undertaken by LK Consult during their 2020 site investigation (previously located in the southwest and northwest of NT02 respectively). These VOCs are all chlorinated solvents, and it is likely they were used on site for metal degreasing associated with the historic industry present on Plot NT02, in particular the former bolt works, other associated metal industries and the former rubber works. The groundwater testing further supports the evidence of VOC contamination in this location identified by soil testing in Section 8.2

8.4.8 The spatial extent of contamination of groundwater appears to be confined to Plot NT02, although limited information for Plot NT03 is available due to the presence of the mound in the southern portion of the site. It should also be noted that the presence of the lower permeability Manchester Marls beneath this location, which dip to the west, and observations of the general groundwater regime, are likely to result in any plume spreading to the west or north of this location. It is notable that groundwater levels are relatively consistent across the site between both the Chester Formation and Manchester Marls, indicating that groundwater in these units may be in continuity, owing to faulting and strata of more permeable rocks. Deeper wells installed into the Manchester Marls Formation on Plot NT02 also indicated the absence of these determinands or levels below the GAC.

8.4.9 Marginal exceedances of Arsenic and Manganese have been observed in 9 samples. Such concentrations are, in our experience, commonly occurring in urban groundwater and are not in themselves a cause for concern. PAH contamination has not been recorded.

8.4.10 Leachate testing has been undertaken on 6 samples and has recorded 1 marginal arsenic exceedance, 3 lead exceedances and PAH exceedances in two locations. This would suggest that lead concentrations are potentially leachable. However, this has not been borne out by direct testing of groundwater.

8.4.11 Sampling of the LK borehole, LKBH01, identified exceedances of Benzene on both occasions, with coinciding exceedances of the corresponding Aromatic TPH fraction. Benzene and TPH exceedances were also encountered in deeper soils in the previous site investigation by LK consulting, in the east of the warehouse building, and it is feasible these exceedances relate to the same source or plume as those detailed in paragraph 8.4.7 above. This contamination has not been reproduced in nearby investigation locations or soil testing. Historic tanks were located in this location but no evidence of them was observed in trial pitting. We consider any contamination of this kind to be highly localised, without no obvious source for remediation.

8.4.12 The findings are broadly consistent with the observation of the previous site investigation. The exceedances identified in that investigation have been discussed in the above paragraphs.

8.4.13 The results indicate that groundwater within the Principal Aquifer has been impacted by chlorinated solvents across NT02 and potentially into Plot NT03 where the Chester Formation is present. Exceedances in the northern part of the site indicate this contamination may be migrating in the direction of the River Irk. It is likely that these contaminants are associated with the historic use of the site. Groundwater in the Manchester Marls does not appear to be similarly impacted.

8.5 Below Ground Concrete Construction

Plot NT02

8.5.1 Peak potential sulphate concentrations range between 10 and 1470mg/l with soil pH values ranging between 7.16 and 10.56 providing a characteristic pH of 7.62 and a characteristic sulphate of 940mg/l. Based on these results, it is considered that well compacted buried concrete should be designed in accordance with Class DS-2 AC-2 requirements as specified in BRE Digest Special Digest 1:2005 *Concrete in aggressive ground: Version 3*.

Plot NT03

8.5.2 No sulphate tests were undertaken on Plot NT03 owing to the presence of the large mound in the southern portion of the site and it is recommended that additional testing is undertaken in this location in a future supplementary site investigation when the mound has been removed.

Plot NT04

8.5.3 Peak potential sulphate concentrations range between 10 and 504mg/l with soil pH values ranging between 6.78 and 9.30 providing a characteristic pH of 7.38 and characteristic sulphate of 405mg/l. Based on these results, it is considered that well compacted buried concrete should be designed in accordance with Class DS-1 AC1s requirements as specified in BRE Digest Special Digest 1:2005 *Concrete in aggressive ground: Version 3*.

8.6 Below Ground Utilities and Service Runs

8.6.1 Elevated levels of PAH, TPH, SVOCs and other contaminants have been identified during the site investigations which poses a risk to drinking water supply pipes. However, it is noted that bulk earthworks and possible removal are required as part of the redevelopment and as such it is recommended further testing and a United Utilities Risk Assessment is completed along the proposed route of water supply pipes following bulk earthworks operations and once the locations of these services and any remedial works have been established.

8.7 Waste Acceptance Criteria

8.7.1 Waste Acceptance Criteria tests were undertaken on two samples one from NT02 and one from NT04. The sample from WS203 taken on Plot NT02 exceeded the Hazardous Waste Landfill threshold for total organic carbon and the sulphate threshold for Inert Waste Landfill. The sample from WS211 taken from Plot NT04 exceeded the Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill threshold for total organic carbon and the Antimony threshold for an Inert Waste Landfill. Landfill type material was observed in the location of TP214. It is also noted that the observation of asbestos fibres in site soils may affect waste classification as detailed in Section 8.2 above.

9.0 Refined Conceptual Site Model

9.0.1 The Environmental Protection Act Part IIA: 1990, defines contamination as land containing levels of contamination which form a risk to human health, controlled waters, or other ecosystems. Therefore, contamination in exceedance of the relevant screening values is considered a source. Table 9.0 assesses and summarises the sources, pathways and receptors that may exist at the site.

Table 9.0: Refined Conceptual Site Model

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
On Site	General site Made Ground (Metals, PAHs and Asbestos)	Dermal contact and / or ingestion. Inhalation of vapours / dusts	Current Site Users	Medium	Low Likelihood	Moderate to Low	Soil testing indicates relatively even distribution of contaminants across the site including PAHs and metals, particularly lead and arsenic. Most of the site is currently not in use and the areas in use are predominantly hardstanding with limited areas of broken ground. Hardstanding will significantly inhibit pathways to human health receptors.
			Construction workers	Medium	High Likelihood	High	Soil testing indicates relatively even distribution of contaminants across the site including PAHs and metals, particularly lead and arsenic. Construction workers will likely be the most exposed to the identified contaminants on site when breaking ground. Risks to construction workers will require careful control measures through the construction phase, through the use of full PPE and the adoption of good hygiene and site practices. *

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
			Future Site Users: residential	Medium	Likely	Moderate	Soil testing indicates relatively even distribution of contaminants across the site including PAHs and metals, particularly lead and arsenic. The site is to be developed to comprise a predominantly residential apartment style development with small areas of soft landscaping, and it is considered future site users could be at risk of exposure to sources of contamination as outlined above in any proposed areas of soft landscaping. Consequently, remedial measures have been recommended in these areas.
			Future Site Users: temporary event space	Medium	Low Likelihood	Moderate to Low	Soil testing indicated exceedances of contaminants across the site. However, the criteria used for the assessment relate to the residential end use and exceedances in comparison to more relevant criteria, such as commercial criteria, are minimal. The concentrations of contaminants in soils are typical for an urban brownfield site. The majority of NT02 is covered with buildings and hard standing and is anticipated to remain as such. The short duration of stays by users will also significantly reduce any potential exposure. Therefore, no additional mitigation measures are proposed with respect to these users.
			Ecological	Mild	Likely	Moderate to Low	Phytotoxic contaminants have been identified on site including arsenic and lead. Remediation measures are proposed for proposed areas of soft landscaping which are considered to mitigate this risk.

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
On Site		Leaching and groundwater flow	Controlled waters (Aquifers and River Irk)	Medium	Low Likelihood	Moderate to Low	Soil testing indicated relatively even distribution of contaminants across the site including PAHs and metals, particularly lead and arsenic. While leachate testing has indicated some potential for the leaching of lead, this potential is not supported by direct testing of the groundwater. There is some evidence of contamination of groundwater with Benzene in the northwest of NT02, although there is no evidence that this is widely distributed, nor a clear source for contamination observed in near surface excavations. However, there are potential pathways from this location to the River Irk.
	Potential chlorinated solvent and TPH contamination in NT02	Dermal contact and / or ingestion; Inhalation of vapours / dusts	Current Site Users	Medium	Low Likelihood	Moderate to Low	A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02. However, the majority of this relates to groundwater sampling rather than soil testing, and we anticipate contamination to be located at a significant depth (>2m). In addition to depth, the presence of buildings and hardstanding across the affected area significantly inhibits the potential pathways to human health risk receptors.
			Construction workers	Medium	High Likelihood	High	A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02. However, the majority of this relates to groundwater sampling rather

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
							than soil testing, and we anticipate contamination to be located at a significant depth (>3m). Construction workers will likely be the most exposed to the identified contaminants on site when breaking ground. Risks to construction workers will require careful control measures through the construction phase, through the use of full PPE and the adoption of good hygiene and site practices. *
			Future Site Users: residential	Medium	Low Likelihood	Moderate to Low	A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02. However, the majority of this relates to groundwater sampling rather than soil testing, and we anticipate contamination to be located at a significant depth (>2m). In addition to depth, the proposal for buildings and hardstanding across the affected area significantly inhibits the potential pathways to human health risk receptors. Remedial measures in areas of nearby proposed soft landscaping should also account for the presence of VOCs if not otherwise remediated.
			Future Site Users: temporary event space	Medium	Low Likelihood	Moderate to Low	A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02. However, the majority of this relates to groundwater sampling rather

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
							than soil testing, and we anticipate contamination to be located at a significant depth (>2m). In addition to depth, the presence of buildings and hardstanding across the affected area significantly inhibits the potential pathways to human health risk receptors.
			Controlled waters (Aquifers and River Irk)	Medium	High Likelihood	High	A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02. In particular, contamination of groundwater has been demonstrated by water testing in the current and previous site investigation. We anticipate contamination to be located at a significant depth (>2m), and to have entered the Principal Aquifer in the Chester Formation, although pathways to the underlying Secondary A aquifer are more limited. The Principal Aquifer is likely to be in continuity with the River Irk and modelling indicates a likely flow of groundwater in this direction. It is recommended that remediation is undertaken in this location to directly investigate and remove affected material, as well as any pipes or tanks in the location that may not have yet been identified. However, it is unclear whether removal of the source will be sufficient to fully address the risk of contamination to groundwater and this should be investigated in a full Remediation Strategy.

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
	Site soils	Below ground service runs	Below ground infrastructure & construction	Medium	Likely	Moderate	Elevated levels of heavy metals, PAH and TPH have been identified within soil samples across the site which present a risk to water supply pipes on site. A UU pipe risk assessment should be undertaken once the drainage layout has been confirmed, in soils local to these features. Barrier pipes are a possibility dependant on the findings of the assessment. On Plot NT02 below ground concrete structures to be designed in accordance with a Class DS-2 AC-2 requirements and on Plot NT04 below ground concrete structures are to be designed in accordance with a class DS-1 AC-1S as specified in BRE Digest Special Digest 1:2005 Concrete
	Ground Gas Generation	Migration / Accumulation	Current Site Users	Severe	Unlikely	Low - Moderate	Relatively low levels of ground gas have been encountered on Plot NT04 which has been classified as a Characteristic Situation 1 Scenario based on CIRIA C665. Plot NT02 however has been classed as a Characteristic 2 Scenario due to CO2 levels consistently being above the 5% trigger value across the plot meaning remedial measures will be required for Plot NT02. No gas monitoring has been undertaken on Plot NT03 owing to the presence of the mound in the southern portion of the site and a ground gas risk assessment should be undertaken on the plot once the mound has been removed. The site Made Ground deposits are considered to be the source of on-site ground gas generation.
			Construction workers	Severe	Unlikely	Low - Moderate	
			Future Site Users	Severe	Low Likelihood	Low - Moderate	

Table 9.0		Refined Conceptual Site Model					
Source		Pathway	Receptor	Severity	Probability	Risk definition	Comments
Off site	Potentially Contaminative Sources; Controlled waters and ground gas generation [adjacent landfills, peat bogs etc]	Leaching of contaminated soil onto site	Controlled Waters: Aquifer	Medium	Likely	Moderate	Given the local areas industrial heritage there is potential for the principal aquifer beneath the site to have been contaminated by local historic industrial processes, most notably the historic Rochdale Road Gasworks. Contaminants have been reported in water samples taken from the principal aquifer that can be potentially associated with the gas works. However, we consider onsite sources to be the principal concern
			Controlled Waters: Surface Water	Minor	Unlikely	Very Low	There are no surface water features located on the site.
		Ground gas Migration / Accumulation	Construction workers	Severe	Unlikely	Low - Moderate	It is unlikely further significant sources of ground gas exist off-site with the potential to impact the current site. However, appropriate personal ground gas detection equipment should be deployed by all site operatives when working in below ground or confined spaces.
			Future Site Users	Severe	Unlikely	Low - Moderate	
			Proposed development	Severe	Unlikely	Low - Moderate	

*Any sources of contamination uncovered during site development works should be brought to the immediate attention of RoC Consulting for consideration and comment.

Soil Contamination Remedial Requirements

9.0.2 Re-appraisal and reassessment of the conceptual site model (following completion of investigation works) has identified the following sources of contamination.

9.0.3 Elevated levels of contaminants have been identified within made ground deposits across the site arising from previous site uses including metals, asbestos, and PAHs. Under the current proposals the majority of the site will be covered in buildings and areas of hardstanding. While hardstanding will inhibit exposure pathways between site users and contaminated soils, areas of soft landscaping have the potential to expose future site users to contaminants. In addition, construction workers will be exposed to these contaminants during excavation works and may also release mobile contaminants that may be stored in any below ground relic structures. It is likely that a degree of remediation will be required due to the risks identified to human health.

9.0.4 A detailed remediation design should be undertaken as part of a Remediation Strategy for the site, but are likely to include the provision of a clean soil capping system in areas of proposed soft landscaping, with a minimum thickness of 600mm, of which 150mm should be topsoil. This system should also be subject to a validation system of it's own including chemical testing and validation excavations. Vapour control measures may also be required as recommended by the Remediation Strategy.

9.0.5 Furthermore, an area of contamination has been identified in NT02, including chlorinated solvents, TPH and benzene in both soil and water testing, over the course of the this and the previous site investigation. This is considered to comprise a potentially significant area of contamination with the potential to affect controlled waters and human health risk receptors. The precise source and distribution of this contamination has not yet been established and further investigation of this source is recommended.

Waste Acceptance Criteria Testing

9.0.6 Two WAC tests were undertaken on samples of made ground soils from the site as part Waste Acceptance Criteria tests were undertaken on two samples one from NT02 and one from NT04.

9.0.7 The sample from WS203 taken on Plot NT02 exceeded the Hazardous Waste Landfill threshold for total organic carbon and the sulphate threshold for Inert Waste Landfill. The sample from WS211 taken from Plot NT04 exceeded the Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill threshold for total organic carbon and the Antimony threshold for an Inert Waste Landfill. Site materials may also comprise hazardous waste on the basis of recorded asbestos fibres and materials.

9.0.8 An area of filling was noted on Plot NT04 at TP214 and may be considered to comprise an unrecorded landfill site. The site soils in this area might therefore be considered to be a waste material.

9.0.9 Earthworks are anticipated at the site that will require Environmental Permits and Materials Management Plans. Environmental testing of soils and subsequent treatment and processing may also be required. It may be necessary to consult with the Environment Agency before works commence to verify the proposed works and establish that the material can be declassified as waste and re used on site in accordance with the most current guidance and Article 6(1) of the Waste Directive. These applications are the responsibility of the contractor. We can consult on these matters on request.

Ground Water Remedial Requirements

9.0.10 A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02 with the potential to affect human health, groundwater and the River Irk. A clear source of this plume has not yet been identified however; we believe it is likely to have arisen from onsite sources such as use of degreasers by the former boltworks.

9.0.11 The spatial distribution of this contamination plume will require further investigation and assessment, potentially through more detailed desk-based review, supplementary groundwater sampling, up and downstream water sampling from the River Irk, or further intrusive works. Depending on the results of this additional assessment, it may be necessary to construct a Detailed Quantitative Risk Assessment model within which the risks posed to controlled waters are more thoroughly assessed in order to allow for the specification of remedial clean-up targets for the contamination plume in NT02.

9.0.12 Given the potential presence of the aforementioned contamination within the area of Plot NT02 and potential risks posed toward construction / demolition contractors during the enabling works phase, it is recommended that the proposed contamination delineation works are completed (ideally) in advance of any below ground excavations or slab removal. The demolition of buildings to ground level would still be possible but, given the potential vapour exposure risks with soils in this area, grubbing out works of foundations and drainage etc should be postponed until such time as this issue is further assessed.

Ground Gas Protection Measures

9.0.13 Ground gas protection measures are anticipated as a requirement in new buildings in accordance with a CIRA C665 CS2 scenario on Plot NT02 while on Plot NT04 no ground gas protection measures are envisaged. The installation of these gas protection measures should be completed at all new residential buildings at each of the four sites by suitably qualified specialist contractors in accordance with the specifications and expectations outlined in BS 8485:2015. This requirement is provisional pending the completion of the gas monitoring programme and issue of a subsequent addendum report.

9.0.14 The local planning authority will require evidence of the installation of these protective measures as part of the discharge of any pre-occupation planning conditions relating to ground quality that may be imposed on the development.

9.0.15 This validation should include photographical records during the installation of all gas membranes (including evidence of adequate jointing / service penetration sealing) within all new structures at all 4 sites. Specifications for materials used and evidence of competent contractors being appointed to complete the installation should also be provided as part of the validation report to the local planning authority.

General

9.0.16 It is recommended all construction contractors take reasonable precautions to control environmental impacts that may occur as a result of redevelopment works with respect of soil and groundwater quality. These measures should include (and not be limited to):

1. Any sources of contamination uncovered during site development works should be brought to the immediate attention of RoC Consulting for consideration and comment. As required, the findings and recommendations of the current assessment may require amendment to reflect changes in site condition.

2. The operation of plant, refuelling facilities and general basement excavation works should include appropriate provision to reduce the risk of leakage / spillage, particularly into the site's groundwater table or exposed natural soils.

3. Appropriate dust mitigation measures should be deployed during basement excavation works, particularly when handling and excavating made ground deposits.

4. All excavated materials stockpiled should be periodically dampened down to control dust release. Similarly, the disposal of any material from site should be completed using covered wagons.

10.0 Geotechnical & Foundation Design Assessment

Background Information

10.0.1 It is understood that the site is to be developed with a mixture of high and medium rise residential buildings, with the former to heights of between 20 and 35 stories and the latter to heights of between 4 and 8 storeys. The development is also anticipated to include small areas of soft landscaping, and a new access road passing between NT02 and NT03 and continuing to the east along the southern site boundary.

10.0.2 Site investigations indicated made ground to be present across the site, predominantly comprising demolition fill type material, underlain by Devensian Till Deposits predominantly comprised of clay which are generally thinner in the western portion of the site and thicker in the east. In some areas on Plot NT02 made ground directly overlies the weathered fraction of the Chester Formation sandstone. There is a transition from the Chester Formation being the bedrock immediately underlying drift deposits to the Manchester Marls Formation in the vicinity of Plot NT03.

10.1 New Building Foundation Design

10.1.1 Site investigations have identified a variable thickness of made ground deposits beneath the site It is not recommended new building foundations be constructed on top of made ground deposits. The variable composition and in-situ strength of these materials is such that unacceptable levels of total and differential settlement will occur as a result. Similarly natural superficial soils at the site have also been proven to be thin and unevenly distributed across the site where present.

10.1.2 Given the anticipated building loadings coupled and the presence of contaminated soils the adoption of conventional shallow foundations is not considered appropriate in this instance. The use of a piled foundation solution will be required with piles taken to depth within the Chester Formation and Manchester Marls Formations.

10.1.3 A summary of ground conditions, rock depth and quality across the site is presented in Tables 10.1 and 10.2 overleaf. The rock shows signs of weathering or faulting with relatively poor rates of recovery and RQD. The approximate alignment of the fault is shown on drawing 4328-ROC-ZZ-XX-DR-ES-ES104.

10.1.4 Discussion should be held with a piling specialist to confirm design parameters and copies of the current site investigation provided to support this process. These discussions are required to confirm that the bedrock is sufficient to support the required column loads.

Table 10.1: Summary of UCS Values and RQD

Geological Unit	UCS tests	Point Load Tests	Conversion Factor*	Equivalent UCS Values	Mean UCS	Median UCS	Representative UCS of sampled material**
Chester Formation (Sandstone)	5.73	0.02	21.45	0.43	2.93	2.79	2.79
		0.19		4.08			
		0.07		1.50			
Manchester Marls (Shallow) <15.00m	8.11	0.07	21 - 21.45	1.47	6.05	1.79	1.79
	0.65	0.04		0.84			
	0.53	0.04		0.84			
		0.04		0.86			
		1.42		30.46			
		0.38		7.98			
		0.38		7.98			
		1.01		21.21			
		0.1		2.10			
		0.02		0.42			
		0.02		0.42			
		1.07		22.47			
		0.09		2.16			
		0.07		1.47			
		0.12		2.52			
		0.44		9.24			
		0.04		0.28			
		0.48		10.08			
		0.05		1.05			

Manchester Marls (Deep) > 15.00m	15.9	0.47	21 - 21.45	10.08	10.03	10.08	10.03
	12.4	0.05		1.05			
	10.4	0.44		9.44			
	15	0.04		0.84			
	25.5	0.1		2.15			
		0.53		9.22			
		0.03		0.63			
		1.18		24.78			
		0.66		13.86			
		1.2		25.20			
		0.78		16.38			
		0.66		13.86			
		0.66		13.86			
		0.06		1.26			
		0.04		0.84			
		0.3		6.30			
		0.67		14.37			
		0.28		5.88			
		0.53		11.13			
		0.1		2.10			
		0.88		18.48			
		0.28		5.88			

* Conversion factors of mudstone as per average of values given for shale and sedimentary rocks in Aitalesh et al (2015). Conversion factors of sandstone and siltstone as per average of values given for sandstone In Aitalesh et al (2015). **Lowest of Mean and Median. These values refer to tested material only and design should note that, as much of each strata is unrecoverable, these values may not be typical of the strata.

Table 10.2: Summary of Strata

Strata	Depth Top of Strata (m BGL) **		Depth Top of Strata (m AOD)		Typical Description	RQD		Representative UCS of Sampled Material*
	Western Boundary	Eastern Boundary	Western Boundary	Eastern Boundary		Range	Mean	
Made Ground	0	0	33.75	39	Gravelly Sand / Sandy Gravel containing brick, ash clinker, slag and other athropogenic inclusions.	N/A	N/A	N/A
Superficial Soils	1.1	1.7	32.65	38.476	Predominantly stiff but locally soft to firm brown sandy gravelly clay containing gravel of mudstone and sandstone	N/A	N/A	N/A
Weathered Chester Formation	2.4	Not Present	31.35	Not Present	Very dense reddish-brown sand.	N/A	N/A	N/A
Chester Formation (Sandstone)	3.4	Not Present	30.35	Not Present	Very weak reddish-brown fine-grained sandstone interbedded with beds of fine sand.	0 to 72	17.00	2.79
Manchester Marls (Shallow)	12.26	8.13	21.49	26.74	Very Weak reddish-brown Mudstone. Potentially influenced by faulting.	0 to 76	27.63	1.79

Manchester Marls (Deep)	15.00	15.00	18.75	24	Weak reddish-brown mudstone with bands of siltstone and sandstone. Potentially influenced by faulting.	0 to 97	35.39	10.03
*Lowest of Mean and Median. These values refer to tested material only and design should note that, as much of each strata is unrecoverable, these values may not be typical of the strata. ** Depths and levels are based on overage depths and levels recorded in the western and eastern portions of the site.								

10.1.5 Given the presence of contamination within site soils the consideration will need to be given to choosing a method that limits the potential for contaminant pathways to be created though site soils and into the underlying aquifer. It is also likely that a comprehensive enabling works package to break out and remove the existing below ground structures in areas of the site particularly in the area of the former print works on Plot NT04 and where relic structures have been encountered on Plot NT02. There may be a number of locations on Plot NT02 where relic structures are present given the extensive historic development of this plot. A piling risk assessment will be required (regardless of the chosen method).

10.1.6 Based on testing it is considered that well compacted buried concrete on Plot NT02 should be designed in accordance with Class DS-2 AC-2 requirements whereas on Plot NT04 Class DS-1 AC1s requirements will suffice as specified in BRE Digest Special Digest 1:2005 *Concrete in aggressive ground: Version 3*. Additional testing is recommended on Plot NT03 to properly characterise the concrete specification required on this plot.

10.1.7 Mature trees are present to the site boundaries and a small number of proposed foundation locations may be located within the zone of root influence. While it is anticipated a piled foundation is to be adopted it is feasible that trees that are retained or removed could affect any smaller foundations through the resulting volume change. Any influence would typically be compensated for through deepening of foundation. Further information for design is presented in BS8004-1986 *"Code of practice for – Foundations"*, Section 3.2.8 and National House Building Council (NHBC) Standards, Chapter 4.2.

10.2 Ground Floor Construction

10.2.1 In view of the thickness of made ground at the site, we recommend that either suspended ground floor slabs are adopted, or that ground improvement is undertaken to support the ground floor.

10.3 Below Ground Drainage

10.3.1 Buried services constructed in unimproved Made Ground soils may be subject to settlement and this should be considered during design. In particular water and sewerage pipes should not utilise shallow gradients that render them vulnerable to settlement.

10.4 General Comments

10.4.1 No entry should be permitted into excavations exceeding 1.2m depth without appropriate risk assessments, shoring and support. Whilst groundwater was not encountered in superficial deposits, the bedrock groundwater level is relatively shallow, and it is feasible that this will rise during winter months. Appropriate provisions should be made to dewater excavations as and when required.

10.4.2 Similarly it is not recommended foundation excavations to underlying clay be left open and exposed to the elements as rainwater ingress will damage and reduce its strength. Similarly, no vehicular movements should be permitted within exposed foundation locations.

10.4.3 The geotechnical assessment has been collated based on the proposed development type, layout, and likely loadings at the time of report publication. It should be noted that future alterations to these proposals or loadings (including alterations in the site layout or new building scale) will require the re-interpretation of the current assessment. In such an instance updated design information should be provided to RoC Consulting and the current assessment updated accordingly.

11.0 Conclusions & Recommendations

11.0.1 The site is to be redeveloped for residential led apartment style end uses comprising a number of proposed high rise, midrise and low-rise buildings with some areas of soft landscaping.

11.0.2 Site investigations have revealed variable depths of made ground across the site. Made ground material was found to generally comprise demolition fill type material most likely originating from the demolition of historic buildings on site, although anthropogenic inclusions such as coal, clinker and ash were also noted that may have originated from historical processes undertaken on site. Made ground deposits were generally underlain by cohesive Devensian Till deposits with some beds of granular material. However, in some areas of NT02 made ground directly overlay the weathered fraction of the Chester Formation bedrock.

11.0.3 Groundwater monitoring identified a groundwater body to be present in both the Chester Formation (which forms a Principal Aquifer) and the Manchester Marls Formation (which forms a Secondary B Aquifer). Data obtained from subsequent groundwater level monitoring suggests groundwater to be flowing towards the north and west of the site in the direction of the nearest surface water body of the River Irk. It is notable that groundwater levels are relatively consistent across the site between both the Chester Formation and Manchester Marls, indicating that groundwater in these units may be in continuity, owing to faulting and strata of more permeable rocks.

Geotechnical

11.0.4 The bedrock encountered on site was found to vary between the Chester Formation (sandstone) and Manchester Marls Formation (Predominantly mudstone with bands of siltstone and sandstone). The former was present on Plot NT02 only and is underlain by bedrock of the Manchester Marls formation. The Chester Formation is not present in the west of the site, where superficial deposits directly overly the Manchester Marl. A potential geological fault was identified through the site in the Phase 1 Desk Study Report.

11.0.5 Given the anticipated building loadings and the presence of contamination beneath the site, the adoption of a piled foundation solution is recommended for the development. Piles should be founded in the competent rock of the Chester Formation and Manchester Marls Formation and discussions should be held with piling contractors to establish design parameters. It is noted that bedrock recovery at the site is relatively poor, and the rock may have been affected by faulting. A piling risk assessment in accordance with published Environment Agency Guidance “Piling into Contaminated Sites” will be required prior to development. A number of buried obstructions were encountered on site and removal will be required prior to construction.

11.0.6 Further geotechnical investigation of the site is likely to be required to assess investigated areas, primarily a large part of NT03 which has been inaccessible. Bedrock in this location has not been assessed for the purposes of informing pile design of the anticipated high rise building currently proposed for this location. Additionally, it has not yet been definitively established whether a retaining structure is present at the southern boundary of NT03 supporting the Network Rail viaduct.

Environmental

11.0.7 Evidence of contamination has been recorded across the site in Made Ground deposits, including metals, asbestos and TPH. Owing to the short duration of use and the provision of hard standing across the majority of NT02, this is not considered to pose a significant risk to users of the temporary event space in NT02. However, this contamination poses a potential risk to users of the proposed residential development. In terms of remedial requirements for the identified areas of contamination, a soil capping layer should be employed within areas of soft landscaping in order to inhibit any potential pathways from site soils to future site users. The extent and nature of remediation works should be detailed by a future Remediation Strategy.

11.0.8 A body of evidence, including visual and olfactory evidence, soils testing, water sampling in this investigation, and water sampling by the previous site investigation, supports the presence of chlorinated solvent, TPH and benzene contamination in Plot NT02 with the potential to affect human health, groundwater and the River Irk. A clear source of this plume has not yet been identified; however, we believe it is likely to have arisen from onsite sources such as use of degreasers by the former boltworks.

11.0.9 The spatial distribution of this contamination plume will require further investigation and assessment, potentially through more detailed desk-based review, supplementary groundwater sampling, up and downstream water sampling from the River Irk, or further intrusive works. Depending on the results of this additional assessment, it may be necessary to construct a Detailed Quantitative Risk Assessment model within which the risks posed to controlled waters are more thoroughly assessed in order to allow for the specification of remedial clean-up targets for the contamination plume in NT02.

11.0.10 Given the potential presence of the aforementioned contamination within the area of Plot NT02 and potential risks posed toward construction / demolition contractors during the enabling works phase, it is recommended that the proposed contamination delineation works are completed (ideally) in advance of any below ground excavations or slab removal. The demolition of buildings to ground level would still be possible but, given the potential vapour exposure risks with soils in this area, grubbing out works of foundations and drainage etc should be postponed until such time as this issue is further assessed.

11.0.11 On the basis of Waste Acceptance Criteria testing and identification of Asbestos in soils at the site, it is likely that further testing of soils by contractors will be required to determine the likely waste classification of site soils.

11.0.12 Ground gas monitoring has revealed elevated levels of Carbon Dioxide and depleted Oxygen levels in monitoring wells installed into made ground and shallow natural deposits on Plot NT02. Carbon Dioxide levels are consistently above 5% on this plot and on occasion in exceedance of 10% and therefore the Plot has been assessed as being a Characteristic Situation 2 and thus requiring a gas membrane to be installed. On Plot NT03 there is no data to assess the ground gas regime due to the mound currently on the plot presenting an obstruction to properly assessing ground gas across the entire plot. It is recommended that ground gas monitoring wells are installed on Plot NT03 in a future supplementary phase of site investigation work. Plot NT04 has been characterised as Characteristic Situation 1 and no remedial measures are envisaged in regard to ground gas.

11.0.13 Similarly, large parts of the site, primarily a large part of NT03 which is located beneath the existing topsoil mound, has not yet been investigated. Further excavations are recommended in this location to complete the assessment of the site and identify any risks which may not yet have been established.

11.0.14 It is recommended that a full United Utilities Risk Assessment is in the locations or proposed remedial services, once these have been identified and following the completion of any earthworks or remedial works.

11.0.15 As required, any suspected sources of contamination discovered during the site development (outside those discussed in this report) should be brought to the attention of RoC Consulting and their implications assessed. Depending on the extent and severity, the findings and assessment of the current study may require re-interpretation and a remediation strategy proposed to support the sites development.

11.0.16 Copies of the current report, along with the Phase 1 Desktop Study, should be submitted to the local planning authority for consideration and comment. As required, any feedback received from the local authority should be passed back to RoC Consulting for review.

APPENDIX A – SITE DRAWINGS



Key to Symbols

- Approximate Site Boundary
- Approximate Plot Boundaries

1) All features or points of note are shown at approximate locations and extents.
2) Reference should be made to source information provided within this assessment when reviewing this drawing.

JOB NO	4328	SKETCH NO	4328-ROC-XX-XX-SK-ESK102	DRAWN BY
PROJECT TITLE	Plots NT02, NT03 & NT04 Dantzic Street	SKETCH TITLE	Site Location Plan and Plot Boundaries	RM

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NOTES

E 1 1 AWIN N TE

ITE FEAT E

- APPROX SITE BOUNDARY
- RIVER IRK
- PROPOSED DEVELOPMENT
- ROC RBH2XX — ROC AS DUG ROTARY BOREHOLE WITH MONITORING WELL
- ROC WS2XX — ROC AS DUG WINDOW SAMPLE BOREHOLE
- ROC WS2XX — ROC AS DUG WINDOW SAMPLE BOREHOLE WITH MONITORING WELL
- LK RBHX — LK CONSULT AS DUG ROTARY BOREHOLE
- ROC TP2XX — ROC AS DUG TRIAL PIT
- ROC HP201 — ROC AS DUG HANDPIT (NETWORK RAIL MOUND AND VIADUCT WALL INVESTIGATION)
- ROC RBH2XX — ROC ROTARY BOREHOLE (INCOMPLETE DUE TO CONSTRAINTS)
- ROC WS2XX — ROC WINDOW SAMPLE BOREHOLE (INCOMPLETE DUE TO CONSTRAINTS)
- ROC TP2XX — ROC TRIAL PIT (INCOMPLETE DUE TO CONSTRAINTS)

AWIN N TE

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Signal Gantry

REV.	DATE	DETAILS	DRN.	CHK.
02	OCT22	LAYOUT UPDATED	RM	LR
01	APR22	PHASE 2 PROPOSAL	RM	LR

DRAWING STATUS
INFORMATION

RIBA STAGE

DRAWN RM	DATE MAR 2022	SCALES 1:500
CHECKED LR	DATE MAR 2022	THE ABOVE SCALES APPLY WHEN PLOTTED AT A1 SIZE --DO NOT SCALE--
APPRVD. LR	DATE MAR 2022	EMAIL FOR DRAWINGS info@rocconsulting.com

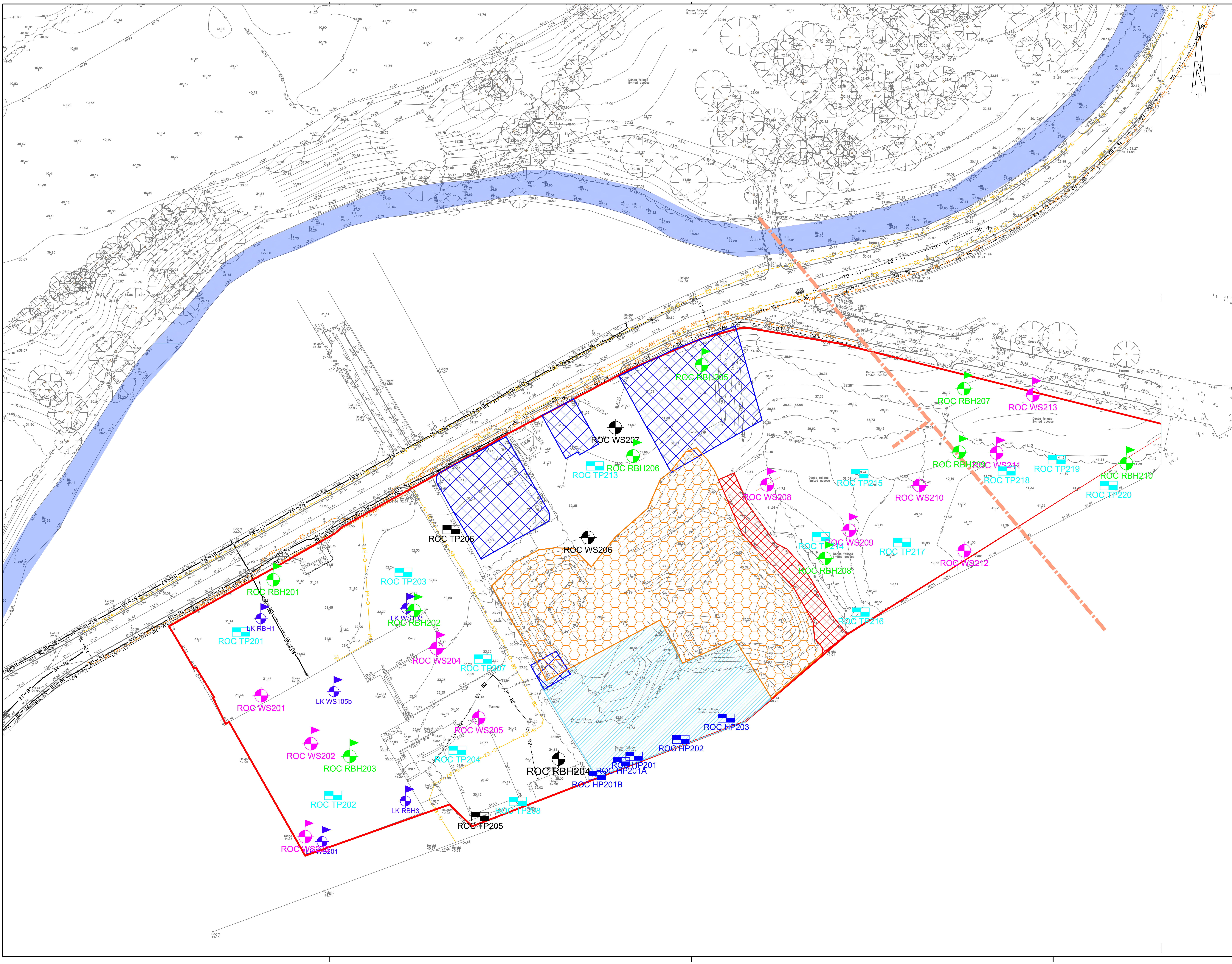
CLIENT
FAR EAST CONSORTIUM INTERNATIONAL LTD

PROJECT TITLE
PLOTS NT02, NT03 & NT04 NORTHERN GATEWAY

DRAWING TITLE
DRAFT PROPOSED DEVELOPMENT PLAN

DRAWING No.	REV.
4328-ROC-ZZ-XX-DR-ES-ES101	01

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NOTES

PROPOSED GROUND INVESTIGATIONS

- ROC RBH2XX — ROC AS DUG ROTARY BOREHOLE WITH MONITORING WELL
- ROC WS2XX — ROC AS DUG WINDOW SAMPLE BOREHOLE
- ROC WS2XX — ROC AS DUG WINDOW SAMPLE BOREHOLE WITH MONITORING WELL
- LK RBHX — LK CONSULT AS DUG BOREHOLE
- ROC TP2XX — ROC AS DUG TRIAL PIT
- ROC HP201 — ROC AS DUG HANDPIT (NETWORK RAIL MOUND AND VIADUCT WALL INVESTIGATION)
- ROC RBH2XX — ROC ROTARY BOREHOLE (INCOMPLETE DUE TO CONSTRAINTS)
- ROC WS2XX — ROC WINDOW SAMPLE BOREHOLE (INCOMPLETE DUE TO CONSTRAINTS)
- ROC TP2XX — ROC TRIAL PIT (INCOMPLETE DUE TO CONSTRAINTS)

SITE FEATURES

- APPROX SITE BOUNDARY
- APPROX FAULT ALIGNMENT
- RIVER IRK
- NETWORK RAIL LAND OWNERSHIP (ASSUMED)
- LAND OWNERSHIP BY OTHERS
- RYAN TOPSOIL LTD MOUND
- CUTAWAY UNSAFE TO ACCESS

DRAWING NOTES

1. TO BE READ IN CONJUNCTION WITH ROC CONSULTING PHASE 1 DESKTOP STUDY REF: 4328-ROC-ZZ-XX-RP-ES-PH1DTS AND PHASE 2 SITE INVESTIGATION REPORT REF: 4328-ROC-ZZ-XX-RP-ES-P2-101.
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3. EXISTING SITE LEVEL INFORMATION TAKEN FROM PARAGON SURVEYS TOPOGRAPHICAL SURVEY REF:PS-2158-TS--00
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REV.	DATE	DETAILS	DRN.	CHK.
04	SEP22	AS DUG LOCATIONS INCORPORATED	RM	LR
03	JUN22	PROPOSED DEVELOPMENT REMOVED	RM	LR
02	APR22	LIMITED ACCESS LOCATIONS REMOVED AND LOCATIONS REVISED	RM	LR
01	APR22	PHASE 2 PROPOSAL	RM	LR

DRAWING STATUS
INFORMATION

RIBA STAGE

DRAWN RM	DATE APR 2022	SCALES 1:500
CHECKED LR	DATE APR 2022	THE ABOVE SCALES APPLY WHEN PLOTTED AT A1 SIZE --DO NOT SCALE--
APPRVD. LR	DATE APR 2022	EMAIL FOR DRAWINGS info@rocconsulting.com

CLIENT
FAR EAST CONSORTIUM INTERNATIONAL LTD

PROJECT TITLE
PLOTS NT02, NT03 & NT04 NORTHERN GATEWAY

DRAWING TITLE
EXPLORATORY HOLE LOCATION PLAN

DRAWING No. 4328-ROC-ZZ-XX-DR-ES-ES102 — REV. 04

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NOTES

PROPOSED GROUND INVESTIGATIONS

ROC HP201 — ROC PROPOSED HAND PIT (NETWORK RAIL MOUND AND VIADUCT WALL INVESTIGATION)

ROC TP201 — ROC PROPOSED TRIAL PIT (GROUND CONTAMINATION AND EXISTING FOUNDATION EXPOSURE)

SITE FEATURES

- APPROX SITE BOUNDARY
- RIVER IRK
- NETWORK RAIL LAND OWNERSHIP (ASSUMED)
- RYAN TOPSOIL LTD MOUND
- CUTAWAY UNSAFE TO ACCESS
- APPROX LOCATION OF BT ASSETS
- APPROX LOCATION OF UU COMBINED SEWER
- APPROX LOCATION OF ENW LV CABLES
- APPROX LOCATION OF CADENT MP MAINS
- APPROX LOCATION OF CADENT LP MAINS
- APPROX LOCATION OF UU WATER

DRAWING NOTES

1. TO BE READ IN CONJUNCTION WITH ROC CONSULTING PHASE 1 DESKTOP STUDY REF: 4328-ROC-ZZ-XX-RP-ES-PH1DTS.
2. EXPLORATORY HOLE LOCATIONS SHOWN AT APPROXIMATE EXTENTS.
3. EXISTING SITE LEVEL INFORMATION TAKEN FROM PARAGON SURVEYS TOPOGRAPHICAL SURVEY REF:PS-2158-TS--00
4. PROPOSED DEVELOPMENT LAYOUT TAKEN FROM INFORMATION PROVIDED BY CLIENT IN MAR 2022.
5. EXISTING UTILITY LOCATIONS APPROXIMATED FROM SUPPLIED UTILITY PLANS AND PRECISION UTILITY MAPPING GPR SURVEY REF: PUM-11943-U-DR-0001 REV02 (SHEETS 7 & 10) .
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PIT DUG ALONG EXISTING WALL AT TIE IN POINT WITH PALISADE FENCING. NO WALL APPARENT IN PIT @0.80m. CONSTRAINED SPACE PREVENTING FURTHER EXCAVATION.

FOUNDATION EXPOSURE TERMINATED DUE TO LARGE FOOTING TO RELIC STEEL COLUMN REACHING 1.80mbgl AT ITS MAXIMUM DEPTH.



OLD PIPES ENCOUNTERED WITHIN PIT. UTILITY DUCT APPEARS TO CONTINUE IN E-W DIRECTION ALONG FENCELINE 0.40mbgl.



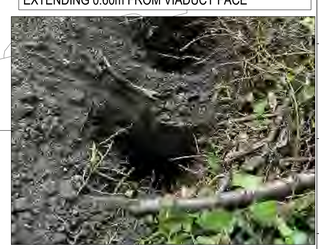
OLD CABLES WITHIN PIT @0.60-0.80mbgl.

ENCOUNTERED DRAINAGE RUN @ 0.80mbgl.

NOT COMPLETED DUE TO SUSPECTED DRAINAGE RUN.



CONCRETE FOOTING ENCOUNTERED AT 1.70mbgl EXTENDING 0.60m FROM VIADUCT FACE



UTILITY DUCT ENCOUNTERED RUNNING E-W ALONG FENCELINE

NOT COMPLETED DUE TO STRONG RADIO READING ON CAT.

NOT COMPLETED DUE TO OBSTRUCTION.

REV.	DATE	DETAILS	DRN.	CHK
05	SEP22	UPDATED POST SI WORKS	RM	LR
04	JUN22	PROPOSED DEVELOPMENT REMOVED	RM	LR
03	MAY22	GENERAL UPDATE	JFA	LR
02	APR22	SITE CONSTRAINTS ADDED	RM	LR
01	APR22	PHASE 2 PROPOSAL	RM	LR

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RIBA STAGE

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CLIENT: FAR EAST CONSORTIUM INTERNATIONAL LTD

PROJECT TITLE: PLOTS NT02, NT03 & NT04 NORTHERN GATEWAY

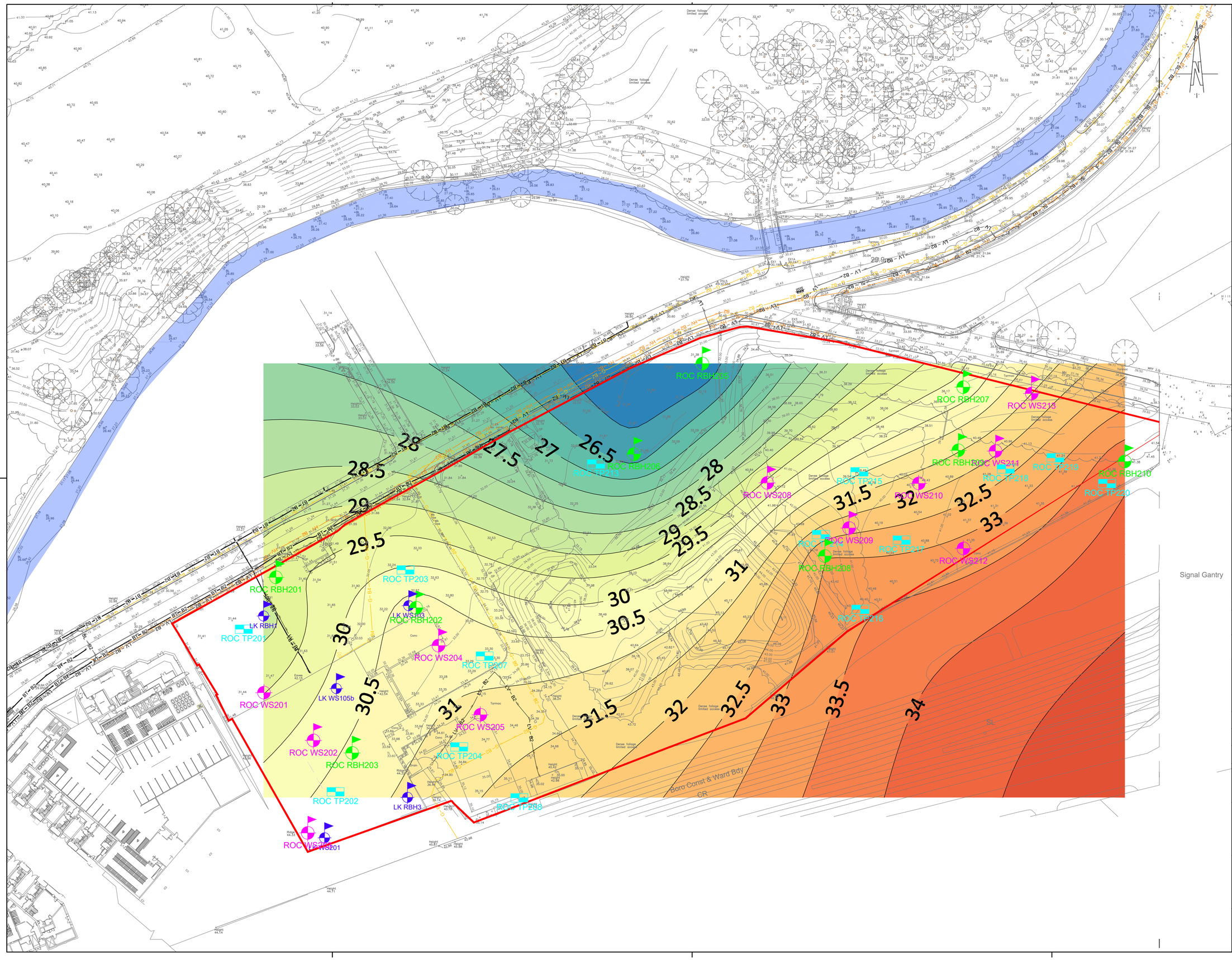
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REV.: 05

4328

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NOTES

PROPOSED GROUND INVESTIGATIONS

- ROC RBH201 — ROC PROPOSED ROTARY BOREHOLE
- ROC WS201 — ROC AS DUG WINDOW SAMPLE BOREHOLE
- ROC TP201 — ROC AS DUG TRIAL PIT
- LK RBHX — LK CONSULT AS DUG ROTARY BOREHOLE

SITE FEATURES

- APPROX SITE BOUNDARY
- RIVER IRK

CONTOUR KEY

DRAWING NOTES

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PROJECT TITLE
PLOTS NT02, NT03 & NT04 NORTHERN GATEWAY

DRAWING TITLE
BEDROCK LEVEL CONTOUR PLAN

DRAWING No.	REV.
4328-ROC-ZZ-XX-DR-ES-ES108	01

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NOTES

PROPOSED GROUND INVESTIGATIONS

- ROC RBH201 — ROC PROPOSED ROTARY BOREHOLE
- ROC WS201 — ROC AS DUG WINDOW SAMPLE BOREHOLE
- ROC TP201 — ROC AS DUG TRIAL PIT
- LK RBHX — LK CONSULT AS DUG ROTARY BOREHOLE

SITE FEATURES

- APPROX SITE BOUNDARY
- RIVER IRK

CONTOUR KEY

- FLOW DIRECTION

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2. EXPLORATORY HOLE LOCATIONS SHOWN AT APPROXIMATE EXTENTS.
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REV.	DATE	DETAILS	DRN.	CHK
01	SEP22	FIRST ISSUE	RM	LR

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INFORMATION

RIBA STAGE

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APPRVD. LR	DATE SEP 2022	EMAIL FOR DRAWINGS info@rocconsulting.com

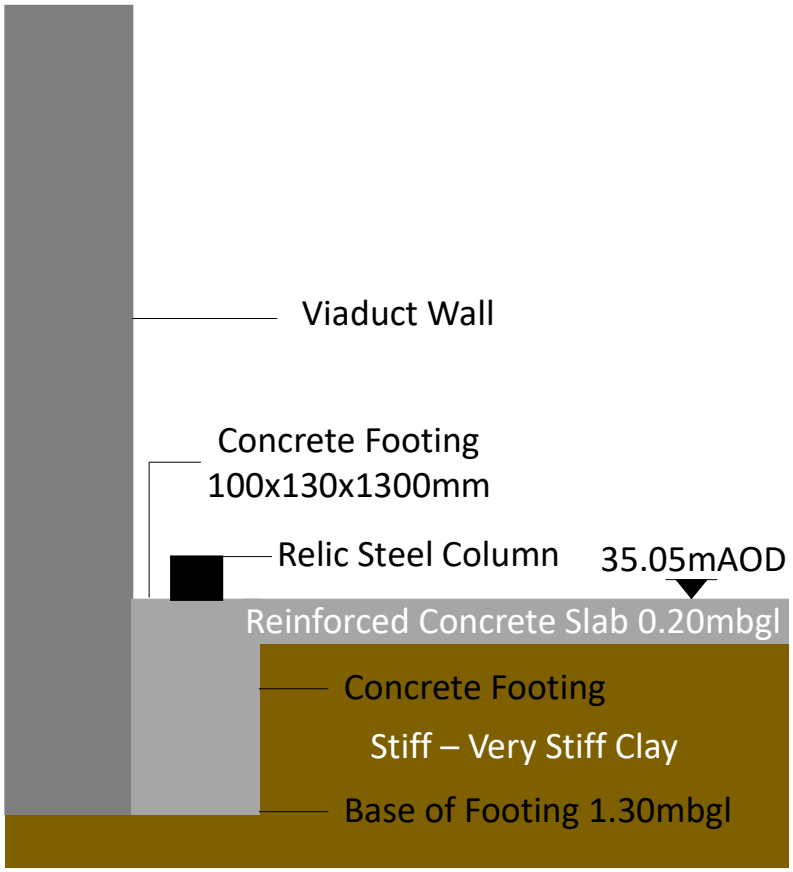
CLIENT
FAR EAST CONSORTIUM INTERNATIONAL LTD

PROJECT TITLE
PLOTS NT02, NT03 & NT04 NORTHERN GATEWAY

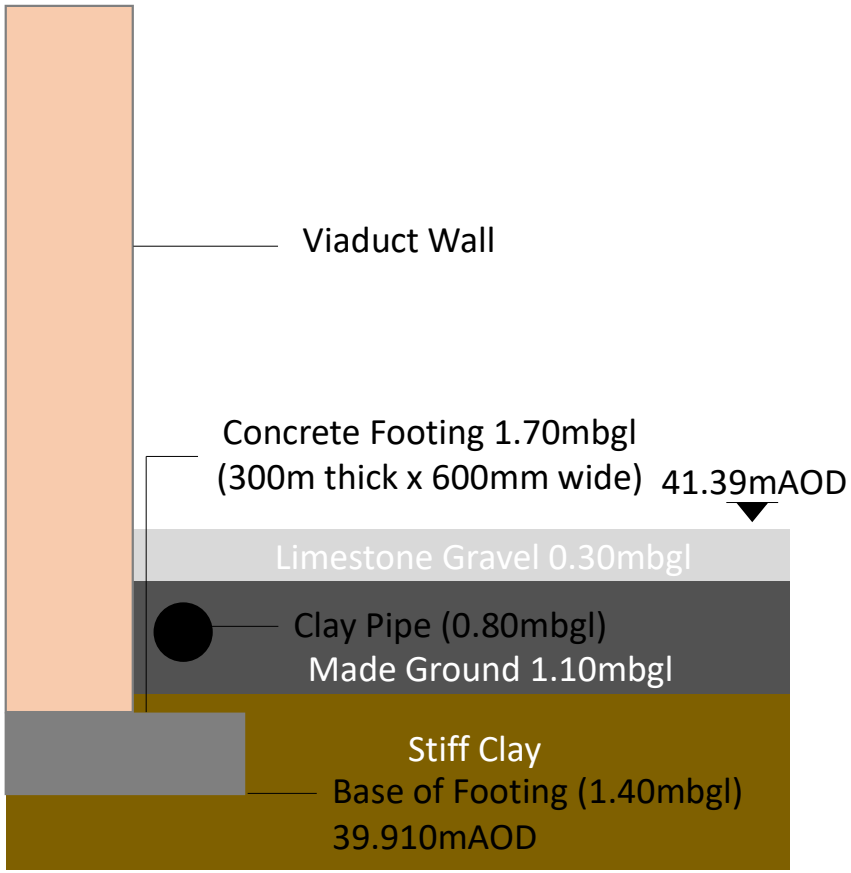
DRAWING TITLE
RESTING WATER LEVEL CONTOUR PLAN

DRAWING No.	REV.
4328-ROC-ZZ-XX-DR-ES-ES109	01

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TP208 Foundation Exposure



TP220 Foundation Exposure

JOB NO	4328	SKETCH NO	4328-ROC-ZZ-XX-SK-ES-ESK110	DRAWN BY : RM 02/09/2022
PROJECT TITLE	Plots NT02-NT04	SKETCH TITLE	Viaduct Foundation Exposure Sections	

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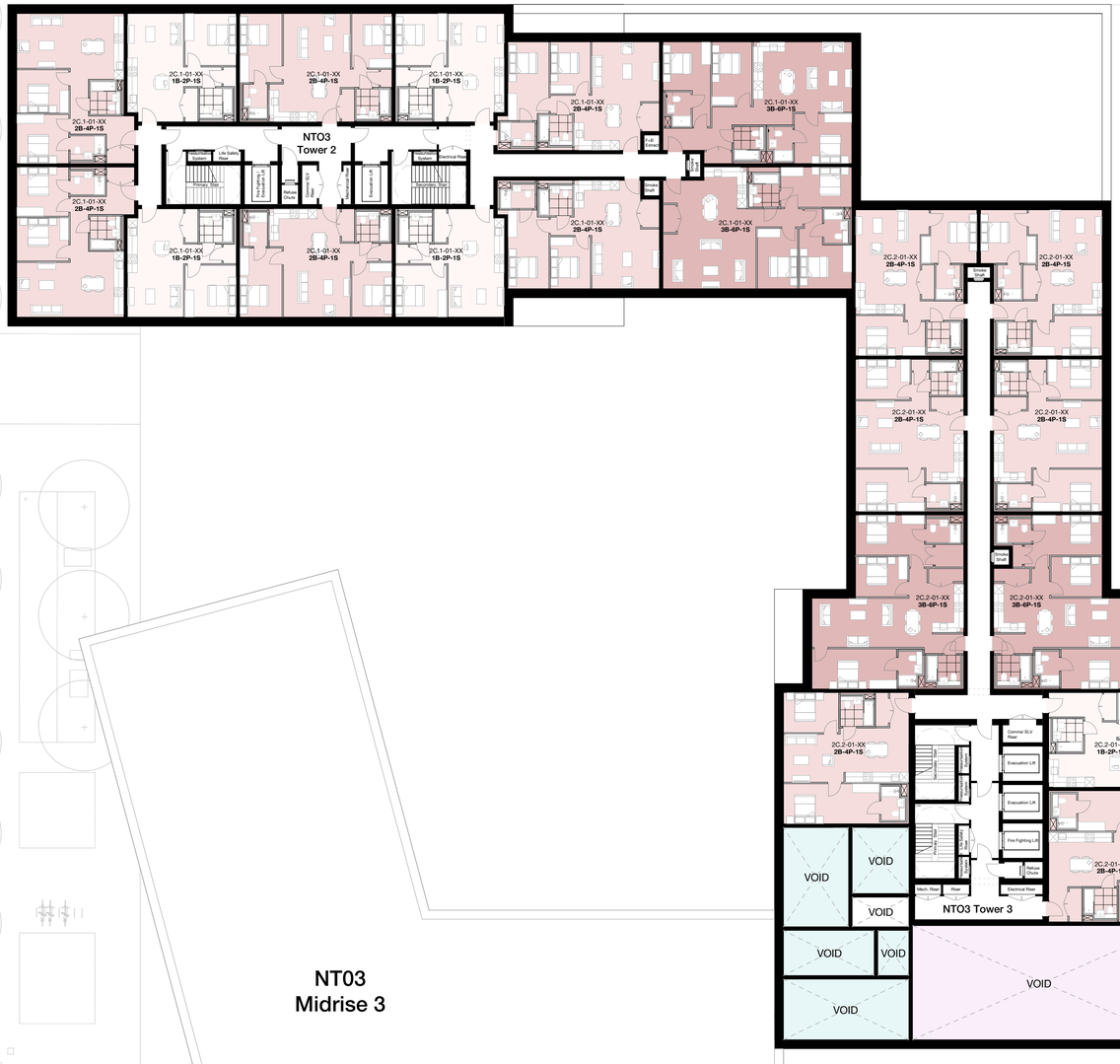
Rev	Description	Date
P1	Issued for Stage 1	29.07.22
P2	Issued for Information - ClubHouse & Townhouses	10.08.22
P3	Issued for information	11.10.22
P4	Issued for information	14.10.22

DRAFT

Dantzic Street

NT02
Amenity Club House





NT03
Midrise 3

N

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These plans are not to be used as the sole basis of any assessment of value, cost or areas. They are indicative layout drawings appropriate to the current stage of the project.
Areas / arrangement for the existing structures are indicative and have been based on OS data and information provided by MCC, not measured building surveys. Method of measurement follows the RICS Code of Measuring Practice. Suitable checks to ensure the accuracy of the information and the positioning of the area measure should be performed by yourselves to satisfy yourself of the dimensions and arrangements shown.

26-28 Hilton Street
Manchester M1 2EH
mail@hawkinsbrown.com
hawkinsbrown.com
Hawkins\
Brown

Project
Red Bank NT02/03
Dantzic Street
Manchester
M4 4HF

Drawing
Level 01 Floor Plan

Scale @ A1	Date
1 : 200	July 2022

Drawn By	Checked By
HECW	HBA

Job Number	Status	Purpose of Issue
210263	S2	Information

Drawing No.	Rev
RDB-HBA-2X-01-DR-AR-200101	P4

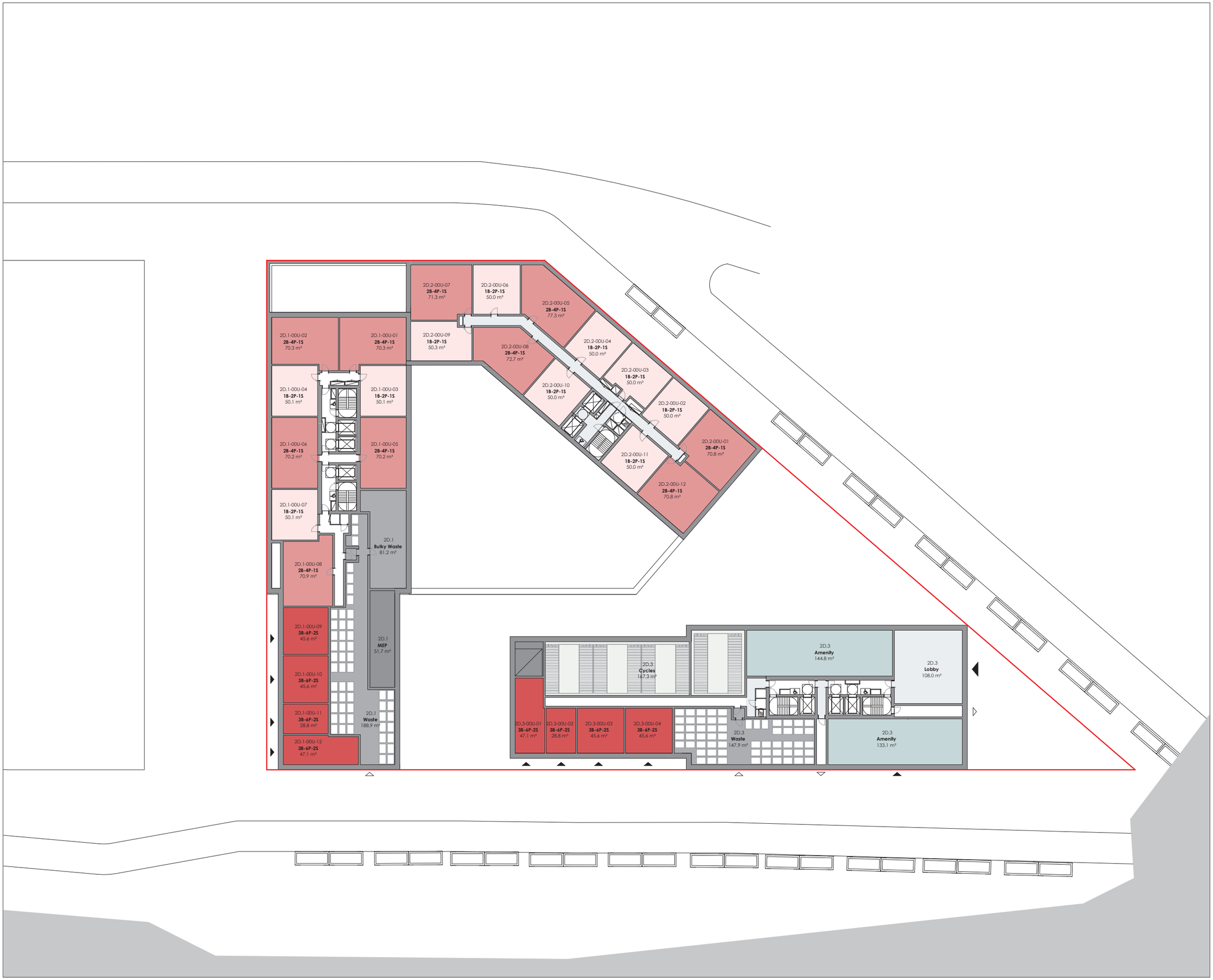
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0 5 15m

Key Metrics

Total NIA	1,827.8 m²
Total GIA	3,293.9 m²
C3-NIA:GIA	73.4 %
Wall Perimeter	515.6 m
Wall:Floor	47.0 %



Rev	Details	Date
P03.01	S0-Initial Status	19/09/2022
P02.04	S0-Initial Status	19/09/2022
P02.03	S0-Initial Status	22/08/2022
P02.02	S0-Initial Status	16/08/2022
P02.01	S4-Suitable for stage approval	29/07/2022

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3032 SB Rotterdam
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Proj. No.: RDB
Project: Red Bank Manchester
Status: S0-Initial Status
Sheet Name: GA Plan - Level 00U (Upper Ground)
Client: FEC
CDE ID: RDB-MLA-2D-00-DR-AR-310002
Scale: 1:250
Size: A1
Rev.: P03.01

COMPLEX CHALLENGES ...
MADE SIMPLE

APPENDIX B – EXPLORATORY HOLE LOGSHEETS

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 12/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384587.72 N399440.01
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP201	TP	31.44m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grey reinforced concrete slab (MADE GROUND)
					0.30	31.14		Clayey gravelly ashy SAND. Gravel is fine to coarse sub angular to angular of concrete, brick and clinker. High cobble content of whole and half bricks with occasional sandstone flags (MADE GROUND)
		0.50	ES					*...at 0.30mbgl remnants of a brick wall in western face*
					1.00	30.44		Soft light brown mottled reddish brown and yellowish brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse rounded of mudstone and sandstone. High cobble content of sandstone and mudstone cobbles (DEVENSIAN TILL)
					2.20	29.24		Reddish brown slightly gravelly medium SAND. Gravel is fine to coarse rounded of sandstone (CHESTER FORMATION)
					3.20	28.24		End of Borehole at 3.200m

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Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.50	1.60	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384614.55 N399392.47
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP202	TP	33.60m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grey reinforced concrete slab (MADE GROUND)
					0.25	33.35		Cobblestone setts (MADE GROUND)
					0.40	33.20		*...at 0.25 to 1.50mbgl concrete structure in northern face of pit*
		0.50	ES					Black gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, clinker and slag. High whole and half brick cobble content. Containing metal pipe fragments. Hydrocarbon odour (MADE GROUND)
					1.50	32.10		End of Borehole at 1.500m

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5

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	1.60	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Trial pit was terminated at 1.50mbgl due to the strong hydrocarbon odour being released from the arisings within a confined area 4. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 12/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384634.97 N399457.35
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP203	TP	32.24m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.05	32.19		Asphalt (MADE GROUND) Black sandy fine to coarse sub angular to angular GRAVEL of brick and concrete. High whole and half brick cobble content. Containing plastic bags, metal beams and posts, glass, fabric, timber. Strong hydrocarbon odour (MADE GROUND)
		1.20	ES		1.50	30.74		Brown slightly clayey gravelly SAND. Gravel is fine to coarse sub rounded to rounded of mudstone and sandstone. Low mudstone and sandstone cobble content. (DEVENSIAN TILL)
					2.40	29.84		Very soft light brown mottled orangish and reddish brown sandy gravelly CLAY. Gravel is fine to coarse sub rounded to rounded of mudstone and sandstone. Low sandstone and mudstone cobble content (DEVENSIAN TILL)
					2.90	29.34		Reddish brown slightly gravelly SAND. Gravel is fine to coarse rounded of sandstone and mudstone. Low sandstone and mudstone cobble content (CHESTER FORMATION)
					4.00	28.24		End of Borehole at 4.000m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
4.00	1.60	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384650.66 N399405.60
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP204	TP	34.61m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.60	ES		0.50	34.11		Grey sandy fine to coarse sub angular to angular GRAVEL of brick and concrete. High whole and half brick cobble content (MADE GROUND)
					0.90	33.71		Dark brown sandy gravelly CLAY. Gravel is fine to coarse of brick. High whole and half brick metal and rubber fragments (MADE GROUND)
								End of Borehole at 0.900m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.60	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Trial pit was terminated at 0.90mbgl due to encountering masonry floor obstruction 4. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384658.09 N399432.14
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP207	TP	33.30m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.05	33.25		Asphalt (MADE GROUND)
								Black slightly clayey gravelly SAND. Gravel is fine to medium sub angular to angular of brick and slate. (MADE GROUND)
					0.30	33.00		Cobblestone setts (MADE GROUND)
					0.42	32.88		Brown gravelly CLAY. Gravel is fine to medium sub angular to angular of brick and slate (MADE GROUND)
								...at 0.80mbgl blue small diameter alkathene water pipe
								...at 1.00mbgl 150mm diameter clay pipe
					1.50	31.80		End of Borehole at 1.500m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	1.60	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Trial pit was terminated at 1.50mbgl due to services strike 4. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 15/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384668.20 N399390.71
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP208	TP	35.12m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grey reinforced concrete slab (MADE GROUND)
					0.20	34.92		*...at 0 to 1.30mbgl large concrete footing in southern fact of trial pit*
								Stiff to very stiff orangish brown slightly gravelly CLAY. Gravel is fine to coarse sub angular to angular of sandstone and mudstone (DEVENISAN TILL)
					1.60	33.52		End of Borehole at 1.600m

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Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	2.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings 4. A sketch of the foundation exposure had been completed and is available on sketch 4328-ROC-ZZ-XX-SK-ES-ESK110

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 19/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384705.86 N399483.40
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP213	TP	32.00m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Greyish brown very gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, limestone and concrete. High whole and half brick cobble content (MADE GROUND)
					0.60	31.40		Stiff brown mottled black CLAY (DEVENSIAN TILL)
		0.80	ES					
					1.10	30.90		Firm light brown mottled grey slightly gravelly sandy CLAY. Gravel is fine to coarse rounded of sandstone (DEVENSIAN TILL)
		1.20	D					
					2.10	29.90		End of Borehole at 2.100m

1 2 3 4 5

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 18/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384756.33 N399467.65
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP214	TP	42.00m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	ES					Vegetation over dark brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, slate, sandstone and concrete. High whole and half brick cobble content. Contains frequent fabric and plastic with occasional rubber, rebar, sheet metal food containers (MADE GROUND)
								...at 1.50mbgl section of loose masonry wall
					2.00	40.00		End of Borehole at 2.000m

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Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Unstable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Trial pit was terminated at 2.00mbgl due to instability in north and south faces 4. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 18/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384767.60 N399486.01
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP215	TP	39.49m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		1.00	ES		1.00	38.49		Grass and small thorny bushes over brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, concrete, clinker and slag. High whole and half brick cobble content. Occasional timber fragments (MADE GROUND)
					2.00	37.49		Soft to firm dark brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub angular to angular of brick (MADE GROUND) *...at 1.20mbgl sandstone flag*
		2.50	D		3.00	36.49		Stiff brown mottled blueish grey CLAY (DEVENSIAN TILL)
								End of Borehole at 3.000m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 18/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384767.92 N399445.81
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP216	TP	40.40m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05	40.35		Asphalt (MADE GROUND)
		0.20	ES					Dark brown gravelly medium SAND. Gravel is fine to coarse sub angular to angular of brick. Low whole and half brick cobble content (MADE GROUND)
					0.25	40.15		Light brown slightly gravelly SAND. Gravel is fine to coarse rounded of sandstone (MADE GROUND)
					0.45	39.95		Dark brown gravelly clayey SAND. Gravel is fine to coarse of brick and slate. High whole and half brick cobble content. Contains glass and rebar. (MADE GROUND)
		0.60	ES					
					0.80	39.60		Firm brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub angular to angular of brick. (MADE GROUND)
					1.10	39.30		Dark brown slightly clayey gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, slate and coal. Low whole and half brick cobble content. Contains glass and occasional orange slag. (MADE GROUND)
		1.20	ES					
					2.70	37.70		Stiff light orangish brown mottled light grey slightly gravelly CLAY. Gravel is fine to medium subrounded to rounded of mudstone and sandstone (DEVENSIAN TILL)
					3.40	37.00		End of Borehole at 3.400m

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Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 18/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384779.95 N399466.05
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP217	TP	40.54m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.50	ES					Grass over brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, slate, clinker and slag. High cobble content of whole and half bricks and stone setts (MADE GROUND)
					1.10	39.44		Stiff brown mottled blueish grey CLAY (DEVENSIAN TILL)
					3.00	37.54		End of Borehole at 3.000m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 19/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384810.33 N399486.82
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP218	TP	41.22m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.50	ES		0.40	40.82		Light grey sandy fine to medium sub angular to angular GRAVEL of limestone (MADE GROUND)
								Dark brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick. High whole and half brick cobble content (MADE GROUND) *...at 0.40 to 1.70mbgl masonry wall running perpendicular to eastern pit face* *...at 0.40 to 2.80mbgl masonry wall in northern and southern faces of pit* *...at 0.60mbgl arch like structure in western face* *...at 1.20mbgl masonry floor*
					2.80	38.42		End of Borehole at 2.800m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	0.80	Unstable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Trial pit terminated at 2.80mbgl due to instability in eastern and western faces 4. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 19/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384824.89 N399490.08
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP219	TP	41.24m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.50	ES					Grass over dark brown gravelly sandy CLAY. Gravel is fine to coarse sub angular to angular of brick, slate and ceramic. Low whole and half brick cobble content and chunks of masonry wall (MADE GROUND)
					1.10	40.14		Stiff light brown sandy gravelly CLAY. Gravel is fine to coarse rounded of mudstone and sandstone. Low mudstone and sandstone cobble content (DEVENSIAN TILL)
		2.00	D					
					2.80	38.44		End of Borehole at 2.800m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings.

Trial Pit Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 18/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384839.99 N399482.57
Project No. : 4328	Crew Name:	Equipment: 13 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP220	TP	41.49m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Light greyish brown sandy fine to coarse sub angular to angular GRAVEL of limestone (MADE GROUND)
					0.30	41.19		
		0.70	ES					Dark brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick and concrete. Medium whole and half brick cobble content (MADE GROUND)
								...at 0.80mbgl 150mm diameter clay pipe encountered
					1.00	40.49		Stiff brown CLAY (DEVENSIAN TILL)
								...at 1.50 to 1.70mbgl concrete footing encountered in southern face
					1.70	39.79		End of Borehole at 1.000m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.60	1.00	Stable					

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole backfilled with arisings 4. A sketch of the foundation exposure had been completed and is available on sketch 4328-ROC-ZZ-XX-SK-ES-ESK110

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384593.59 N399421.44
Project No. : 4328	Crew Name: LD	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS201	WS	31.44m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.24	31.20		Grey concrete slab (MADE GROUND)
					0.30	31.14		Grey cobblestone blocks (MADE GROUND)
								End of Borehole at 0.300m

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Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 0.30mbgl due to cobblestone road and potential drainage pipes in close vicinity to borehole. 4. Upon completion borehole was backfilled with arisings.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 21/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384608.06 N399407.49
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS202	WS	32.05m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grey concrete slab (MADE GROUND)
					0.30	31.75		
								Black sandy fine to medium sub angular to angular GRAVEL of clinker (MADE GROUND)
					0.50	31.55		
								Soft slightly sandy gravelly CLAY. Gravel is fine to medium sub angular to angular of brick (MADE GROUND)
					1.00	31.05		
		1.20	SPT	N=15 (3,3/3,4,4,4)				Very soft brown mottled grey sandy CLAY. Solvent odour noted. (DEVENSIAN TILL)
		1.50	ES					
		2.00	SPT	N=15 (3,4/3,4,4,4)				
					2.50	29.55		
								Very dense slightly clayey red fine to medium SAND (CHESTER FORMATION)
		3.00	SPT	50 (10,13/50 for 275mm)				
					3.28	28.77		End of Borehole at 3.280m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 3.28mbgl due to SPT refusal in weathered sandstone 4. Upon completion borehole installed with a 50mm diameter standpipe with a response zone between 1.00 and 2.00mbgl.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 21/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384613.95 N399384.25
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS203	WS	33.59m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.25	33.34		Grey concrete slab (MADE GROUND)
		0.50	ES					Brown sandy fine to coarse sub angular to angular GRAVEL of brick (MADE GROUND)
					1.00	32.59		Soft light brown mottled orangish brown slightly sandy CLAY. (DEVENSIAN TILL)
		1.20	SPT	N=11 (2,3/2,3,3,3)				
								...at 1.50mbgl becoming firm
		2.00	SPT	N=6 (2,1/2,1,1,2)				
		2.50	D					*...at 2.40mbgl becoming stiff*
								...at 2.75 to 2.90mbgl clayey fine sand band
		3.00	SPT	50 (6,10/50 for 290mm)				*...at 3.00mbgl becoming very sandy*
					3.15	30.44		End of Borehole at 3.150m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 3.15mbgl due to SPT refusal in stiff clay 4. Upon completion borehole was installed with a 50mm standpipe with a response zone between 0.50 and 1.00mbgl

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384644.58 N399435.20
Project No. : 4328	Crew Name: LD	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS204	WS	32.91m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	32.81		Asphalt (MADE GROUND)
		0.40	ES					Black gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, slate and slag with occassional fragments of wire, metal, glass and plastic (MADE GROUND)
		1.20	SPT	N=18 (0,0/4,6,5,3)				
		1.40	ES		1.35	31.56		Stiff dark brown sandy slightly gravelly CLAY. Gravel is fine to medium sub angular to angular of brick. (MADE GROUND)
					1.65	31.26		Stiff light brown mottled white and orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
					1.90	31.01		Reddish brown fine to medium SAND (DEVENSIAN TILL)
		2.00	SPT	N=6 (1,1/1,2,1,2)	2.00	30.91		Stiff light brown mottled white and orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
					2.36	30.55		Medium dense reddish brown fine to medium SAND (CHESTER FORMATION)
		3.00	SPT	N=13 (2,2/3,4,3,3)				
		3.50	SPT	50 (25 for 145mm/50 for 265mm)				*...at 3.50mbgl becoming very dense*
					3.91	29.00		End of Borehole at 3.910m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 3.91mbgl due to SPT refusal in weathered sandstone 4. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 0.50 and 1.50mbgl.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384656.83 N399414.99
Project No. : 4328	Crew Name: LD	Drilling Equipment: Competiror 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS205	WS	34.41m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.60	33.81		Grey gravelly SAND. Gravel is fine to coarse sub angular to angular of concrete and brick with occasional whole and half brick cobbles (MADE GROUND)
								End of Borehole at 0.600m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 0.60mbgl due to encountering an un-recorded metal pipe 4. Upon completion borehole was backfilled with arisings.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 21/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384740.67 N399482.77
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS208	WS	41.72m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	ES		0.50	41.22		Soft to firm brown sandy slightly gravelly CLAY. Gravel is fine to medium sub angular to angular of brick. Frequent roots and rootlets with occasional fragments of ceramic (MADE GROUND)
		1.00	SPT	50 (15,10/50 for 250mm)	1.18	40.54		Very dense black gravelly SAND. Gravel is fine to coarse angular of asphalt (MADE GROUND)
								End of Borehole at 1.180m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 1.18mbgl due to SPT refusal on asphalt type material 4. Upon completion borehole was installed with a 50mm diameter standpipe with a response zone between 0.50 and 1.00mbgl.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 21/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384764.54 N399469.56
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS209	WS	40.19m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20	39.99		Light brown silty gravelly SAND. Gravel is fine to coarse angular of ceramic and brick. Frequent roots and rootlets (MADE GROUND - TOPSOIL)
		0.40	ES					Dark brown gravelly SAND. Gravel is fine to coarse sub rounded to sub angular of clinker (MADE GROUND)
		1.20	SPT	N=11 (2,3/2,3,3,3)				
					1.40	38.79		Firm brown slightly gravelly CLAY. Gravel is fine to medium angular of brick and clinker (MADE GROUND)
					1.75	38.44		*...at 1.65 to 1.75mbgl becoming dark brown*
		2.00	SPT	N=15 (3,3/4,3,4,4)				Firm to stiff light brown mottled grey slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
								...at 2.20mbgl becoming very stiff
		3.00	D					
		3.00	SPT	N=50 (7,7/10,12,13,15)				
					3.44	36.75		End of Borehole at 3.440m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 3.44mbgl due to SPT refusal in very stiff clay 4. Upon completion borehole was installed with a 50mm standpipe with a response zone between 0.50 and 1.50mbgl.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 22/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384768.39 N399479.63
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS210	WS	40.42m AoD	RM	1:25	Sheet 1 of 2

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.50	ES					Grass over dark brown slightly clayey gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, ceramic, clinker and slag. Occasional whole and half bricks (MADE GROUND)
		1.30	ES		1.20	39.22		Brown slightly sandy clayey fine to coarse sub rounded to angular GRAVEL of clinker and slag. Frequent roots and rootlets (MADE GROUND)
					1.40	39.02		Soft brown slightly sandy gravelly CLAY. Gravel is fine to medium sub angular to angular of brick (MADE GROUND)
					2.00	38.42		Firm brown sandy gravelly CLAY. Gravel is fine to coarse rounded of mudstone and sandstone (DEVENSIAN TILL)
					2.50	37.92		Brown fine to medium SAND (DEVENSIAN TILL)
					2.90	37.52		Firm reddish brown CLAY (DEVENSIAN TILL)
					3.10	37.32		Stiff reddish brown slightly clayey SILT (DEVENSIAN TILL)
					3.50	36.92		Stiff reddish brown silty CLAY (DEVENSIAN TILL)
					4.40	36.02		Stiff reddish brown slightly sandy clayey SILT (DEVENSIAN TILL)

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole was backfilled with arisings.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 22/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384768.39 N399479.63
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS210	WS	40.42m AoD	RM	1:25	Sheet 2 of 2

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					5.45	34.97		Stiff reddish brown slightly sandy clayey SILT (DEVENSIAN TILL)
								End of Borehole at 5.450m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Upon completion borehole was backfilled with arisings.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 22/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384789.54 N399483.08
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS211	WS	40.96m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES					Grass over dark brown gravelly SAND. Gravel is fine to coarse sub angular to angular of brick and ceramic with occasional whole and half brick cobbles and timber fragments (MADE GROUND)
					1.50	39.46		End of Borehole at 1.500m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 1.5mbgl due to an unknown obstruction within made ground deposits 4. Upon completion borehole was installed with a 50mm diameter standpipe with a response zone between 0.50 and 1.00mbgl.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 21/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384797.99 N399463.60
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Compeititor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS212	WS	41.35m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20	41.15		Light grey sandy fine to coarse sub angular to angular GRAVEL of limestone (MADE GROUND)
					0.50	40.85		Reddish brown sandy fine to coarse sub angular to angular GRAVEL of brick. (MADE GROUND - RELIC BRICK WALL)
								End of Borehole at 0.500m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole terminated at 0.50mbgl due to encountering a relic brick wall within the handpit 4. Upon completion borehole was backfilled with arisings.

Percussion Drilling Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 22/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384817.95 N399508.90
Project No. : 4328	Crew Name: LD, TH	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS213	WS	37.29m AoD	RM	1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.50	ES					Brown gravelly SAND. Gravel is fine to coarse rounded to sub angular of brick, mudstone and sandstone (MADE GROUND)
					1.00	36.29		
		1.20	SPT	N=17 (3,3/3,4,5,5)				Stiff brown slightly gravelly CLAY. Gravel is fine to medium sub rounded to rounded of sandstone and mudstone (DEVENSIAN TILL)
								...at 1.50mbgl becoming very stiff reddish brown
		2.00	SPT	N=50 (6,10/50 for 245mm)				
					2.40	34.89		End of Borehole at 2.400m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed. 3. Borehole was terminated at 2.40mbgl due to SPT refusal in very stiff clay 4. Upon completion borehole was installed with a 50mm diameter standpipe with a response zone between 0.50 and 1.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 11/07/2022 - 12/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384597.08 N399455.18
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH201	RO+RC	31.40m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.15	31.25		Dark brown wood chippings (MADE GROUND)
								0.50	30.90		Grey Concrete (MADE GROUND)
								0.90	30.50		Dark greyish brown clayey gravelly medium to coarse ashy SAND. Gravel is fine to coarse subangular to angular of brick and sandstone (MADE GROUND)
											Light brown slightly silty sandy CLAY (DEVENSIAN TILL)
								2.00	29.40		Reddish brown SAND (CHESTER FORMATION)
								3.50	27.90		Reddish brown SANDSTONE (CHESTER FORMATION)

1 2 3 4 5 6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
11.80 25.10	140 85	13.20	140					0.00	25.10								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 11/07/2022 - 12/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384597.08 N399455.18
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH201	RO+RC	31.40m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Reddish brown SANDSTONE (CHESTER FORMATION)
							85mm	11.80	19.60		
		11.80 - 13.20		102	0	0					Reddish brown MUDSTONE recovered as CLAY (MANCHESTER MARLS FORMATION)
							85mm	13.23	18.17		
		13.20 - 14.60		101	87	76		13.59 13.77	17.81 17.63		Extremely weak reddish brown MUDSTONE joints horizontal close to medium spaced completely weathered to clay in places (MANCHESTER MARLS FORMATION)
								14.17 14.22	17.23 17.18		Extremely weak grey SILTSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm				Extremely weak reddish brown MUDSTONE completely weathered to clay in places (MANCHESTER MARLS FORMATION)
		14.60 - 16.10		95	78	56					Very weak grey SILTSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
											Extremely weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm				*...at 14.42 to 14.62mbgl non intact*
											...at 15.30 to 15.35mbgl gravelly clay infill
		16.10 - 17.60		100	95	77					*...at 16.02 to 16.10mbgl non intact*
											...at 16.02 to 16.20mbgl band of weak grey siltstone
											...at 16.60 to 16.65mbgl gravelly clay infill
							85mm				*...at 17.64 to 17.69mbgl non intact*
								17.88	13.52		*...at 17.74 to 17.88mbgl becoming destructured to clay*
		17.60 - 19.10		69	44	34		18.19	13.21		Weak grey SILTSTONE (MANCHESTER MARLS FORMATION)
											Weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm				*...at 18.29 to 18.48mbgl destructured to clay*
		19.10 - 20.60		98	98	69					*...at 19.40 to 19.45mbgl becoming destructured to clay*
								19.85	11.55		
								19.90	11.50		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
11.80 25.10	140 85	13.20	140					0.00	25.10								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 11/07/2022 - 12/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384597.08 N399455.18
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH201	RO+RC	31.40m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								20.08	11.32		Weak interbedded MUDSTONE and SILTSTONE thickly laminated (MANCHESTER MARLS FORMATION)
							85mm				Weak grey SILTSTONE (MANCHESTER MARLS FORMATION)
		20.60 - 22.10		100	100	97					Weak reddish brown fine grained SANDSTONE joints horizontal medium to closely spaced (MANCHESTER MARLS FORMATION)
							85mm				
		22.10 - 23.60		69	56	48		22.67	8.73		Weak grey fine grained SANDSTONE (MANCHESTER MARLS FORMATION)
								22.85	8.55		*...at 22.68 to 22.75mbgl becoming weathered with clay infill*
							85mm				Weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
								23.85	7.55		*...at 22.85 to 23.04mbgl destructured to clay*
								24.08	7.32		*...at 23.40 to 23.50mbgl non intact*
		23.60 - 25.10		76	56	49					*...at 23.60 to 23.85mbgl destructured to clay*
											Weak interbedded MUDSTONE and SILTSTONE extremely close bedding (MANCHESTER MARLS FORMATION)
								25.10	6.30		Weak reddish brown fine grained SANDSTONE joints horizontal close to medium spaced (MANCHESTER MARLS FORMATION)
											End of Borehole at 25.100m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
11.80 25.10	140 85	13.20	140					0.00	25.10								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384638.05 N399446.26
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH202	RO+RC	32.76m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.10	32.66		Asphalt (MADE GROUND)
											Black gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, slate and slag. Occassional fragments of wood, metal, plastic and glass (MADE GROUND)
								1.35	31.41		Dark brown sandy slightly gravelly CLAY. Gravel is fine to medium sub angular to angular of brick (MADE GROUND)
								1.65	31.11		Light brown mottled orangish brown and white slightly sandy slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
								2.00	30.76		Reddish brown fine to medium SAND (WEATHERED CHESTER FORMATION)
								3.20	29.56		Reddish brown SANDSTONE (CHESTER FORMATION)
							85mm	9.90	22.86		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
7.00	140	12.00	140					0.00	25.00								
9.40	85																
9.40	140																
25.00	85																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384638.05 N399446.26
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH202	RO+RC	32.76m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		9.90 - 11.50		102	26	20		11.14	21.62		Reddish brown MUDSTONE recovered as sightly sandy CLAY (MANCHESTER MARL FORMATION)
		11.50 - 13.00		99	36	32	85mm	11.61	21.15		Extremely weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
								12.54	20.22		Reddish brown MUDSTONE recovered as reddish brown clay (MANCHESTER MARLS FORMATION)
		13.00 - 14.50		103	85	71	85mm	12.72 13.01 13.09 13.16	20.04 19.75 19.67 19.60		Very weak grey and yellow SILTSTONE with occasional reddish brown staining. Bedding horizontal thickly laminated (MANCHESTER MARLS FORMATION) Very weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION) Weak reddish brown MUDSTONE with occasional grey spotting. Joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
		14.50 - 16.00		96	85	57	85mm	14.45 14.60 14.74 14.96 14.99	18.31 18.16 18.02 17.80 17.77		Grey SILTSTONE recovered as fine to medium sub angular GRAVEL (MANCHESTER MARLS FORMATION) Very weak reddish brown MUDSTONE with occasional grey patches joints horizontal close to medium spaced (MANCHESTER MARLS FORMATION)
		16.00 - 17.50		93	70	10	85mm	15.71 16.02	17.05 16.74		Weak grey and yellow thickly laminated SILTSTONE with reddish brown patches (MANCHESTER MARLS FORMATION) Weak grey and yellow thickly laminated SILTSTONE (MANCHESTER MARLS FORMATION) Weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
		17.50 - 19.00		98	58	43	85mm	17.21 17.28 17.50 17.92 17.98 18.13	15.55 15.48 15.26 14.84 14.78 14.63		Weak light brown and yellow SILSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION) Very weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION) Reddish brown MUDSTONE recovered as fine to coarse sub angular gravel (MANCHESTER MARLS FORMATION)
		19.00 - 20.50		91	81	56	85mm	19.45 19.59	13.31 13.17		Very weak reddish brown MUDSTONE joints horizontal very close to closely spaced (MANCHESTER MARLS FORMATION) *...at 16.26 to 16.29mbgl band of weak grey siltstone* Weak light grey SILTSTONE (MANCHESTER MARLS

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
7.00	140	12.00	140					0.00	25.00								
9.40	85																
9.40	140																
25.00	85																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 13/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384638.05 N399446.26
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH202	RO+RC	32.76m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
							85mm				MUDSTONE recovered as reddish brown fine to coarse sub angular to angular gravel (MANCHESTER MARLS FORMATION)
		20.50 - 22.00		89	80	75					Very weak light grey fine to medium grained SANDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
											...at 17.60mbgl reddish brown stained crack
								21.71	11.05		Very weak reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
								22.00	10.76		Weak grey and yellow thickly laminated SILTSTONE (MANCHESTER MARLS FORMATION)
											Weak reddish brown MUDSTONE joints horizontal very closely to closely spaced (MANCHESTER MARLS FORMATION)
											...at 19.10 to 19.13mbgl 60 degree fracture
											Weak light grey SILTSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
											Weak reddish brown and grey fine grained SANDSTONE joints horizontal close to medium spaced (MANCHESTER MARLS FORMATION)
											...at 21.48 to 21.53mbgl clay infill
											Weak reddish brown MUDSTONE with some inter bedded grey SILTSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								25.00	7.76		Reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
											End of Borehole at 25.000m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
7.00	140	12.00	140					0.00	25.00								
9.40	85																
9.40	140																
25.00	85																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 25/07/2022 - 27/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384619.36 N399403.83
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH203	RO+RC	33.59m AoD	RM	1:50	Sheet 1 of 2

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.30	33.29		Grey reinforced CONCRETE (MADE GROUND)
								1.20	32.39		Black gravelly SAND. Gravel is fine to coarse sub angular to angular of brick, clinker and slag. Frequent whole and half brick cobbles (MADE GROUND)
								2.30	31.29		Brown mottled orangish brown slightly sandy slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
								3.50	30.09		Reddish brown fine SAND. Very strong solvent odour (CHESTER FORMATION)
		5.00 - 6.50		31	9	0	85mm				Reddish brown SANDSTONE (CHESTER FORMATION)
		8.00 - 9.50		90	34	22	85mm	8.00	25.59		Very weak reddish brown fine grained SANDSTONE inter-bedded with bands of fine sand. Joints are horizontal closely spaced (CHESTER FORMATION)

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.00	140	4.50	150					0.00	19.50								
6.50	85	16.00	140														
8.00	140																
9.50	85																
10.50	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 10.00 and 15.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 25/07/2022 - 27/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384619.36 N399403.83
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH203	RO+RC	33.59m AoD	RM	1:50	Sheet 2 of 2

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Very weak reddish brown fine grained SANDSTONE inter-bedded with bands of fine sand. Joints are horizontal closely spaced (CHESTER FORMATION)
		10.50 - 12.00		53	0	0	85mm				*...at 10.50 to 11.30mbgl recovered as sand*
		12.00 - 13.50		45	0	0	85mm				*...at 12.00 to 12.67mbgl recovered as sand*
		13.50 - 15.00		18	9	0	85mm				*...at 13.50 to 13.64mbgl recovered as sand* *...at 13.70 to 13.77mbgl band of grey siltstone*
		15.00 - 16.50		85	68	31	85mm	15.07	18.52		Very weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION) *...at 15.14 to 15.23mbgl non intact* *...at 15.45 to 15.57mbgl non intact* *...at 15.84 to 15.89mbgl yellowish grey siltstone* *...at 16.08 to 16.10mbgl sand infill*
		16.50 - 18.00		90	90	0	85mm				*...at 16.69mbgl becoming weak*
								19.50	14.09		End of Borehole at 19.500m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.00	140	4.50	150					0.00	19.50								
6.50	85	16.00	140														
8.00	140																
9.50	85																
10.50	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 10.00 and 15.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 12/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384721.68 N399517.64
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH205	RO+RC	31.38m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Brown sandy fine to coarse sub angular to angular GRAVEL of brick and concrete (MADE GROUND) `
								2.00	29.38		Brown slightly gravelly CLAY. Gravel is fine sub rounded of mudstone and sandstone (DEVENSIAN TILL)
								5.80	25.58		Reddish brown mottled grey slightly silty CLAY (DEVENSIAN TILL)
		7.50 - 9.00		75	0	0	85mm	7.50	23.88		Reddish brown MUDSTONE recovered as sightly gravelly clay. Gravel is fine to coarse subangular (MANCHESTER MARLS FORMATION)
		9.00 - 10.50		51	12	0	85mm	9.00	22.38		Very weak reddish brown MUDSTONE bedding horizontal closely spaced (MANCHESTER MARLS FORMATION) ...*at 9.05 to 9.57mbgl clay infill*

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	3.00	150					0.00	25.00								
18.00	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 10.00 and 15.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 12/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384721.68 N399517.64
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH205	RO+RC	31.38m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Very weak reddish brown MUDSTONE bedding horizontal closely spaced (MANCHESTER MARLS FORMATION)
		10.50 - 12.00		53	19	7	85mm	10.50	20.88		Very weak reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS)
											...at 10.50 to 10.64mbgl non intact
											...at 10.69 to 10.72mbgl non intact
											...at 10.79 to 11.12mbgl non intact
		12.00 - 13.50		91	0	0	85mm				...at 12.00 to 13.37mbgl destructured to clay
		13.50 - 15.00		89	49	37	85mm				...at 13.50 to 13.99mbgl destructured to clay
											...at 14.11 to 14.37mbgl clay infill
											...at 14.54 to 14.70mbgl non intact
											...at 14.64mbgl becoming weak
		15.00 - 16.50		87	47	34	85mm	15.92	15.46		Weak grey fine to medium grained SANDSTONE (MANCHESTER MARLS)
								16.12	15.26		Weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARL FORMATION)
		16.50 - 18.00		85	39	31	85mm				...at 17.02 to 17.70mbgl recovered as clay
								18.00	13.38		Reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	3.00	150					0.00	25.00								
18.00	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 10.00 and 15.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 12/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384721.68 N399517.64
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH205	RO+RC	31.38m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
								25.00	6.38		End of Borehole at 25.000m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	3.00	150					0.00	25.00								
18.00	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 10.00 and 15.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384701.70 N399491.17
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH206	RO+RC	32.00m AoD	RM	1:25	Sheet 1 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Brown sandy GRAVEL. Gravel is fine to coarse sub anguar to angular of brick and concrete (MADE GROUND)
								2.00	30.00		Brown slightly gravelly CLAY. Gravel is fine sub rounded of mudstone and sandstone (DEVENSIAN TILL)

1 2 3 4 5

Hole Diameter

Depth Base	Diameter
5.80	140
19.20	85
25.00	140

Casing Diameter

Depth Base	Diameter
7.20	140

Chiselling

Depth Top	Depth Base	Duration	Tool

Inclination and Orientation

Depth Top	Depth Base	Inclination	Orientation
0.00	25.00		

Drilling Flush

Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon complete borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384701.70 N399491.17
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH206	RO+RC	32.00m AoD	RM	1:25	Sheet 2 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Brown slightly gravelly CLAY. Gravel is fine sub rounded of mudstone and sandstone (DEVENSIAN TILL)
							85mm	5.80	26.20		Reddish brown mottled grey slightly silty CLAY (DEVENSIAN TILL)
		5.80 - 7.20		90	0	0					
							85mm				
								7.65	24.35		Very weak yellowish brown fine grained SANDSTONE joints horizontal closely spaced (CHESTER FORMATION)
		7.20 - 8.70		93	43	21		7.93	24.07		*...at 7.65 to 7.93mbgl non intact*
											Weak reddish brown fine grained SANDSTONE (CHESTER FORMATION)
											...at 8.18 to 8.30mbgl non intact
											...at 8.50 to 8.64mbgl non intact
							85mm	8.70	23.30		Very weak reddish brown fine grained SANDSTONE recovered primarily as gravel with some small tabular sandstone discs (CHESTER FORMATION)
								9.20	22.80		Reddish brown gravelly CLAY. Gravel is fine to medium sub angular to angular of mudstone lithorelicts (CHESTER FORMATION)
		8.70 - 10.20		64	35	17		9.41	22.59		Weak reddish brown fine to medium grained SANDSTONE with occasionally clayey sand infill joints horizontal closely to medium spaced (CHESTER FORMATION)

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.80	140	7.20	140					0.00	25.00								
19.20	85																
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon complete borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384701.70 N399491.17
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH206	RO+RC	32.00m AoD	RM	1:25	Sheet 3 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
							85mm				Weak reddish brown fine to medium grained SANDSTONE with occasionally clayey sand infill joints horizontal closely to medium spaced (CHESTER FORMATION)
		10.20 - 11.70		98	74	72					*...at 10.38 to 10.55mbgl non intact* *...at 10.74 to 10.87mbgl non intact* *...at 10.87 to 11.48mbgl occasional fine gravel inclusions and black speckling at joints*
							85mm	11.70	20.30		Reddish brown SANDSTONE recovered as clayey sandy sub angular fine to coarse gravel (CHESTER FORMATION)
		11.70 - 13.20		42	0	0					
							85mm				
		13.20 - 14.70		67	43	38		13.82 13.97	18.18 18.03		Weak reddish brown fine grained SANDSTONE (CHESTER FORMATION) *...at 13.92 to 14.09mbgl vertical fracture* Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm				*...at 14.70 to 14.86mbgl non intact*

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.80	140	7.20	140					0.00	25.00								
19.20	85																
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon complete borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384701.70 N399491.17
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH206	RO+RC	32.00m AoD	RM	1:25	Sheet 4 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		14.70 - 16.20		100	81	54					Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
											…at 15.26mbgl becoming weak dark reddish brown mudstone
							85mm	16.20	15.80		
		16.20 - 17.70		94	45	43					Grey SILTSTONE and reddish brown MUDSTONE recovered as fine to coarse sub angular to subrounded gravel (MANCHESTER MARLS FORMATION)
								16.86	15.14		Weak reddish brown MUDSTONE joints are horizontally closely spaced (MANCHESTER MARLS FORMATION)
											…at 17.20 to 17.70mbgl becoming very weak
							85mm				*…at 17.70 to 18.04mbgl becoming weak*
		17.70 - 19.20		100	88	83					*…at 18.18 to 18.30mbgl non intact*
								18.36	13.64		Weak grey fine to medium grained SANDSTONE. Joints are horizontal medium spaced with occasional black patches and reddish brown staining with up to 20mm penetration (MANCHESTER MARLS FORMATION)
											...at 19.09 to 19.20mbgl non intact
							85mm	19.20	12.80		Very weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		19.20 - 20.70		84	62	37					*…at 19.42 to 19.54mbgl non intact*
								19.63	12.37		Very weak grey SILTSTONE (MANCHESTER MARLS FORMATION)
								19.66	12.34		Reddish brown slightly gravelly CLAY. Gravel is fine to medium sub angular to
								19.76	12.24		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.80	140	7.20	140					0.00	25.00								
19.20	85																
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon complete borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 14/07/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384701.70 N399491.17
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH206	RO+RC	32.00m AoD	RM	1:25	Sheet 5 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								20.15	11.85		Reddish brown slightly gravelly CLAY. Gravel is fine to medium sub angular to angular of mudstone (MANCHESTER MARLS FORMATION)
								20.25	11.75		Weak reddish brown MUDSTONE inter-bedded with bands of weak grey SILTSTONE. Completely weathered to clay in places (MANCHESTER MARLS FORMATION)
								20.70	11.30		Medium strong light grey fine to medium grained SANDSTONE (MANCHESTER MARLS FORMATION)
											Medium strong reddish brown MUDSTONE joints horizontal closely spaced (MANCHESTER MARLS FORMATION)
											Reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
								25.00	7.00		End of Borehole at 25.000m

21 22 23 24 25

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
5.80	140	7.20	140					0.00	25.00								
19.20	85																
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon complete borehole was installed was a 50mm diameter standpipe with a response zone between 21.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 10/08/2022 - 11/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384797.90 N399510.73
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH207	RO+RC	36.17m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Brown gravelly SAND. Gravel is fine to coarse rounded to angular of brick, mudstone and sandstone (MADE GROUND)
								1.00	35.17		Brown slightly gravelly CLAY. Gravel is fine to medium sub rounded to rounded of sandstone and mudstone (DEVENSIAN TILL)
								1.50	34.67		Reddish brown slightly gravelly CLAY. Gravel is fine to medium rounded of mudstone (DEVENSIAN TILL)
		6.00 - 7.50		60	31	13	85mm	6.00	30.17		Extremely weak reddish brown MUDSTONE joints are horizontal closely spaced(MANCHESTER MARLS FORMATION)
								6.80	29.37		*...at 6.00 to 6.31mbgl non intact*
								6.89	29.28		*...at 6.31 to 6.40mbgl becoming clay*
											...at 6.40 to 6.50mbgl non intact
											...at 6.72 to 6.75mbgl grey siltstone
		7.50 - 9.00		87	25	11	85mm	7.63	28.54		Medium strong yellowish brown fine grained SANDSTONE with black spotting (MANCHESTER MARLS FORMATION)
								7.72	28.45		Very weak reddish brown MUDSTONE joints horizontal very closely spaced (MANCHESTER MARLS FORMATION)
								8.50	27.67		Very weak reddish brown and grey SILTSTONE (MANCHESTER MARLS FORMATION)
								8.66	27.51		Reddish brown MUDSTONE recovered as gravelly CLAY. Gravel is fine to medium sub angular (MANCHESTER MARLS FORMATION)
		9.00 - 10.50		77	36	20	85mm	9.00	27.17		*...at 8.29 to 8.37mbgl tabular discs of mudstone*
								9.44	26.73		Very weak reddish brown MUDSTONE
								9.73	26.44		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	1.50	150					0.00	25.00								
19.50	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 10/08/2022 - 11/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384797.90 N399510.73
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH207	RO+RC	36.17m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
							85mm	10.50	25.67		Very weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		10.50 - 12.00		91	59	47		11.17	25.00		Reddish brown gravelly CLAY. Gravel is fine to medium sub angular of mudstone (MANCHESTER MARLS FORMATION)
								11.37	24.80		Grey and yellow fine to coarse sub angular to sub rounded siltstone and sandstone GRAVEL (MANCHESTER MARLS FORMATION)
							85mm				Very weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		12.00 - 13.50		80	18	0					*...at 9.40 to 9.53mbgl destructured to gravelly clay*
											Medium strong dark grey SILTSTONE (MANCHESTER MARLS FORMATION)
											Very weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm	13.50	22.67		*...at 10.60 to 10.74mbgl non intact*
											...10.94 to 11.08mbgl non intact
		13.50 - 15.00		87	6	0					Weak grey SILTSTONE (MANCHESTER MARLS FORMATION)
											...at 11.22 to 11.37mbgl non intact
											Very weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely to medium spaced (MANCHESTER MARLS FORMATION)
								14.72	21.45		*...at 12.00 to 12.10mbgl non intact*
							85mm				*...at 12.16 to 12.44mbgl destructured to clay*
											...at 12.55 to 12.95mbgl destructured to clay
		15.00 - 16.50		73	25	13					*...at 12.95 to 13.00mbgl non intact*
											...13.00 to 13.10mbgl destructured to cla
											...at 13.15 to 13.20mbgl non intact
											Reddish brown MUDSTONE recovered as gravelly CLAY. Gravel is fine to coarse sub angular (MANCHESTER MARLS FORMATION)
							85mm				Very weak reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
		16.50 - 18.00		89	29	8					*...at 15.00 to 15.13mbgl gravel is fine to coarse sub angular to sub rounded of mudstone*
											...at 15.32 to 15.70mbgl clay infill
											...at 15.74 to 15.88mbgl clay infill
											...at 16.03 to 16.14mbgl non intact
								18.00	18.17		*...at 16.71 to 16.91mbgl non intact*
											...at 16.97 to 17.29mbgl non intact
											...at 17.45 to 17.81 mbgl non intact
											Reddish brown MUDSTONE (MANCHESTER MARLS)

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	1.50	150					0.00	25.00								
19.50	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 10/08/2022 - 11/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384797.90 N399510.73
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH207	RO+RC	36.17m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Reddish brown MUDSTONE (MANCHESTER MARLS)
								25.00	11.17		End of Borehole at 25.000m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
6.00	140	1.50	150					0.00	25.00								
19.50	85	6.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 03/08/2022 - 05/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384757.48 N399461.38
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH208	RO+RC	42.00m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.20	41.80		Light brown slightly silty gravelly SAND. Gravel is fine to coarse angular of ceramic and brick (MADE GROUND)
								1.40	40.60		Dark brown gravelly SAND. Gravel is fine to coarse sub angular to sub rounded of clinker and brick (MADE GROUND)
								1.80	40.20		Brown slightly gravelly CLAY gravel is fine to medium angular of brick and clinker (MADE GROUND)
											Light brown mottled grey slightly gravelly CLAY. Gravel is fine rounded of sandstone and mudstone (DEVENSIAN TILL)
								10.00	32.00		

1 2 3 4 5 6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00	140	4.50	150					0.00	24.00								
24.00	85	12.00	140														

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 19.00 and 24.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 03/08/2022 - 05/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384757.48 N399461.38
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH208	RO+RC	42.00m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Reddish brown MUDSTONE (MANCHESTER MARLS FORMATIONS)
							85mm	12.00	30.00		
								12.09	29.91		Reddish brown fine to medium sub angular mudstone and sandstone GRAVEL (MANCHESTER MARLS FORMATION)
		12.00 - 13.50		79	68	57					Weak reddish brown fine grained SANDSTONE joints are horizontal medium spaced (MANCHESTER MARLS FORMATION)
								13.00	29.00		*...at 12.75 to 12.80mbgl non intact*
							85mm	13.50	28.50		Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								13.69	28.31		
								13.85	28.15		Reddish brown slightly gravelly clayey SAND. Gravel is fine to medium subrounded of SANDSTONE (MANCHESTER MARLS FORMATION)
		13.50 - 15.00		81	64	42		14.10	27.90		Weak reddish brown clayey SANDSTONE (MANCHESTER MARLS FORMATION)
							85mm				Weak grey SILTSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		15.00 - 16.50		93	50	44					Weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
											...at 14.10 to 14.15mbgl clay infill
											...at 15.00 to 15.16mbgl non intact
											...at 15.25 to 15.48mbgl non intact
							85mm				*...at 15.53 to 15.58mbgl clay infill*
											...at 15.70 to 15.80mbgl becoming destructured to clay
								16.95	25.05		*...at 16.07 to 16.17mbgl clay infill*
		16.50 - 18.00		78	65	51					*...at 16.60 to 16.82mbgl non intact*
								17.52	24.48		Strong reddish brown clayey fine grained SANDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm	18.00	24.00		
								18.21	23.79		Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								18.44	23.56		
								18.66	23.34		*...at 17.58 to 17.61mbgl clay infill*
		18.00 - 19.50		86	81	60					Medium strong yellowish brown fine grained SANDSTONE (MANCHESTER MARLS FORMATION)
							85mm				Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								19.89	22.11		*...at 18.28 to 18.29 clay infilled fracture*

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00	140	4.50	150					0.00	24.00								
24.00	85	12.00	140														

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 19.00 and 24.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 03/08/2022 - 05/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384757.48 N399461.38
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH208	RO+RC	42.00m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		19.50 - 21.00		92	60	15		20.13	21.87		Medium strong grey SILTSTONE joints are horizontal closely spaced (MANCHESTER MARLS)
							85mm	21.00	21.00		Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		21.00 - 22.50		90	21	7		21.20	20.80		*...at 19.50 to 19.80mbgl non intact*
											Medium strong grey fine grained SANDSTONE and SILTSTONE (MANCHESTER MARLS FORMATION)
											...at 20.10 to 20.13mbgl mudstone gravel infilled fracture
							85mm				Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		22.50 - 24.00		66	20	15					Grey fine to coarse sub angular sandstone GRAVEL (MANCHESTER MARLS FORMATION)
											Weak reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
											...at 21.20 to 21.86mbgl becoming destructured to clay
											...at 22.50 to 22.82mbgl becoming destructured to clay
								24.00	18.00		End of Borehole at 24.000m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00	140	4.50	150					0.00	24.00								
24.00	85	12.00	140														

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 19.00 and 24.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 29/07/2022 - 02/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384796.49 N399492.29
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH209	RO+RC	40.46m AoD	RM	1:25	Sheet 1 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.40	40.06		Brown sandy fine to coarse sub angular to angular brick GRAVEL (MADE GROUND)
											Grey sandy fine to coarse sub angular to angular brick and ceramic GRAVEL. Occassional whole and half brick cobbles and timber fragements (MADE GROUND)
											…at 1.50 to 2.00mbgl becoming slightly clayey
								2.00	38.46		Greyish brown gravelly CLAY. Gravel is fine to coarse sub angular to angular of brick. Occassional glass fragments (MADE GROUND)
								3.00	37.46		Reddish brown slightly gravelly CLAY. Gravel is fine to medium sub rounded to rounded of mudstone (DEVENSIAN TILL)
								4.00	36.46		Reddish brown slightly gravelly clayey SAND. Gravel is fine to medium sub rounded to rounded of mudstone (DEVENSIAN TILL)
								5.00	35.46		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00 24.00	140 85	4.50 12.00	150 140					0.00	24.00								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 12.00 and 17.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 29/07/2022 - 02/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384796.49 N399492.29
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH209	RO+RC	40.46m AoD	RM	1:25	Sheet 2 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Brown sandy gravelly CLAY. Gravel fine to coarse sub angular of mudstone (DEVENSIAN TILL)
								6.00	34.46		Reddish brown slightly gravelly clayey SAND. Gravel is fine to coarse sub angular of mudstone (DEVENSIAN TILL)
								7.50	32.96		Reddish brown slightly gravelly sandy CLAY. Gravel is fine to medium sub angular of mudstone (DEVENSIAN TILL)
								9.00	31.46		Extremely weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)

6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00	140	4.50	150					0.00	24.00								
24.00	85	12.00	140														

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 12.00 and 17.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 29/07/2022 - 02/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384796.49 N399492.29
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH209	RO+RC	40.46m AoD	RM	1:25	Sheet 3 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Extremely weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm				
											...at 12.13 to 12.18mbgl reddish brown clay
											...at 12.29 to 12.35mbgl reddish brown clay
								12.52	27.94		
								12.66	27.80		Very weak reddish brown SILTSTONE (MANCHESTER MARLS FORMATION)
		12.00 - 13.50		107	100	48					Reddish brown MUDSTONE recovered as slightly gravelly clay. Gravel is fine to medium sub angular (MANCHESTER MARLS FORMATION)
								13.12	27.34		
											Weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								13.40	27.06		
							85mm				*...at 13.32 to 13.50mbgl no longer clayey*
								13.60	26.86		Strong yellowish brown fine grained SANDSTONE with grey, red and dark grey staining joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								13.80	26.66		Strong yellowish brown and reddish brown SILTSTONE with dark grey staining (MANCHESTER MARLS FORMATION)
		13.50 - 15.00		87	67	39					Weak reddish brown MUDSTONE joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm	15.00	25.46		

11 12 13 14 15

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00 24.00	140 85	4.50 12.00	150 140					0.00	24.00								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 12.00 and 17.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 29/07/2022 - 02/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384796.49 N399492.29
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH209	RO+RC	40.46m AoD	RM	1:25	Sheet 4 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		15.00 - 16.50		93	27	7					Reddish brown MUDSTONE recovered as reddish brown slightly gravelly clay. Gravel is fine to medium sub rounded to sub angular (MANCHESTER MARLS FORMATION)
											…at 15.00 to 15.40mbgl becoming very gravelly
											…at 15.40 to 15.70mbgl becoming slightly gravelly
											…at 15.70 to 16.10mbgl becoming mottled grey silty sandy gravelly
								16.10	24.36		Strong grey SILTSTONE with some dark grey staining joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
		16.50 - 18.00		20	0	0	85mm	16.50	23.96		Reddish brown MUDSTONE and grey SILTSTONE recovered as fine to medium sub angular mudstone and siltstone gravel (MANCHESTER MARLS FORMATION)
		18.00 - 19.50		97	61	46	85mm	18.00	22.46		Reddish brown MUDSTONE recovered as gravelly clay. Gravel is fine to coarse sub rounded to sub angular (MANCHESTER MARLS FORMATION)
								18.58	21.88		Weak reddish brown MUDSTONE bedding horizonal joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
											…at 18.70 to 18.95mbgl destructured to clay
							85mm				*…at 19.75 to 19.95mbgl becoming destructured to clay*

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00	140	4.50	150					0.00	24.00								
24.00	85	12.00	140														

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 12.00 and 17.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 29/07/2022 - 02/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384796.49 N399492.29
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH209	RO+RC	40.46m AoD	RM	1:25	Sheet 5 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		19.50 - 21.00		33	33	0					Weak reddish brown MUDSTONE bedding horizonal joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
							85mm	21.00	19.46		
		21.00 - 22.50		95	69	27					Weak reddish brown MUDSTONE completely weathered to clay in places joints are horizontal closely spaced (MANCHESTER MARLS FORMATION) *…at 21.00 to 21.10mbgl becoming clayey fine to coarse sub angular mudstone gravel* *…at 21.30 to 21.60mbgl becoming destructured to clay* *…at 21.60 to 21.76mbgl vertical fracture* *…at 21.76 to 22.01mbgl 80 degree fracture* *…at 22.10 to 22.21mbgl 80 degree fracture*
							85mm	22.60	17.86		
		22.50 - 24.00		97	0	0					Reddish brown MUDSTONE recovered as gravelly clay. Gravel is fine to medium sub angular to angular of mudstone (MANCHESTER MARLS FORMATION)
								24.00	16.46		End of Borehole at 24.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
12.00 24.00	140 85	4.50 12.00	150 140					0.00	24.00								

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 12.00 and 17.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 08/08/2022 - 09/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384845.14 N399489.02
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH210	RO+RC	41.38m AoD	RM	1:50	Sheet 1 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.40	40.98		Paving cobbles (MADE GROUND)
								0.50	40.88		Grey fine to medium sandy fine to coarse sub angular to angular sandstone GRAVEL (MADE GROUND)
								1.00	40.38		Greyish brown gravelly ashy SAND. Gravel is fine to coarse sub angular to angular of brick, sandstone (MADE GROUND)
											Brown slightly gravelly CLAY. Gravel is fine to medium of mudstone and occassional mudstone and sandstone cobbles (DEVENSIAN TILL)
								4.50	36.88		Reddish brown slightly gravelly very sandy CLAY. Gravel is fine to medium sub rounded to sub angular of mudstone (DEVENSIAN TILL)
								7.50	33.88		Very weak reddish brown MUDSTONE with bands of grey SILTSTONE and SANDSTONE (MANCHESTER MARLS FORMATION)
		9.00 - 10.50		90	85	63	85mm	9.06	32.32		Weak reddish brown MUDSTONE with orange and grey staining joints are horizontal closely spaced (MANCHESTER MARLS FORMATION)
								9.67	31.71		*...at 9.32 to 9.40mbgl non intact*

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
9.00	140	1.50	150					0.00	25.00								
22.50	85	9.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology the accuracy of measured water strikes is questionable and therefore water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 08/08/2022 - 09/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384845.14 N399489.02
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH210	RO+RC	41.38m AoD	RM	1:50	Sheet 2 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Weak grey SILTSONE (MANCHESTER MARLS FORMATION)
							85mm	10.50	30.88		…at 10.07 to 10.39mbgl becoming greyish brown and reddish brown
								10.64	30.74		Reddish brown MUDSTONE recovered as fine to coarse sub angular GRAVEL (MANCHESTER MARLS FORMATION)
		10.50 - 12.00		43	33	27		10.75	30.63		Weak grey SILTSTONE (MANCHESTER MARLS FORMATION)
											…at 10.68 to 10.75mbgl non intact
							85mm				Very weak reddish brown MUDSTONE completely weathered to clay in places (MANCHESTER MARLS FORMATION)
											…at 12.05 to 12.43mbgl destructured to clay
		12.00 - 13.50		91	57	27					…at 12.48 to 12.61mbgl destructured to clay …at 12.61 to 12.76mbgl 15 degree bedding …at 12.76 to 12.78mbgl gravel infilled joint …at 12.78 to 13.13mbgl horizontal bedding …at 13.13 to 13.37mbgl 10 degree bedding
							85mm				…at 13.50 to 13.86mbgl non intact
		13.50 - 15.00		84	30	26					…at 14.02 to 14.55mbgl destructured to clay
							85mm				…at 15.00 to 15.25mbgl non intact
											…at 15.35 to 15.53mbgl destructured to clay
		15.00 - 16.50		79	51	46					…at 15.62mbgl to 15.87 destructured to clay
		16.50 - 18.00		50	17	7	85mm				
							85mm	18.00	23.38		Reddish brown MUDSTONE recovered as slightly gravelly CLAY. Gravel is fine to medium sub angular (MANCHESTER MARLS FORMATION)
								18.33	23.05		
		18.00 - 19.50		49	0	0					Reddish brown MUDSTONE recovered as fine to coarse sub angular to angular GRAVEL (MANCHESTER MARLS FORMATION)
							85mm				
								19.72	21.66		Weak reddish brown MUDSTONE

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
9.00	140	1.50	150					0.00	25.00								
22.50	85	9.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology the accuracy of measured water strikes is questionable and therefore water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Rotary Core Log

Project Name: Plots NT02-NT04	Client: FEC	Date: 08/08/2022 - 09/08/2022
Location: Manchester	Contractor: DMW Drilling Ltd	Co-ords: E384845.14 N399489.02
Project No. : 4328	Crew Name: D.G, L.L	Drilling Equipment: Massenza MI3

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH210	RO+RC	41.38m AoD	RM	1:50	Sheet 3 of 3

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		19.50 - 21.00		78	51	15		20.44	20.94		Weak reddish brown MUDSTONE inter-bedded with weak grey SILTSTONE (MANCHESTER MARLS FORMATION) *...at 19.82 to 19.98mbgl non intact* *...at 20.20 to 20.29mbgl non intact* *...at 20.33 to 20.37mbgl becoming grey* *...at 20.37 to 20.44mbgl non intact* Weak reddish brown MUDSTONE (MANCHESTER MARLS FORMATION)
								25.00	16.38		End of Borehole at 25.000m

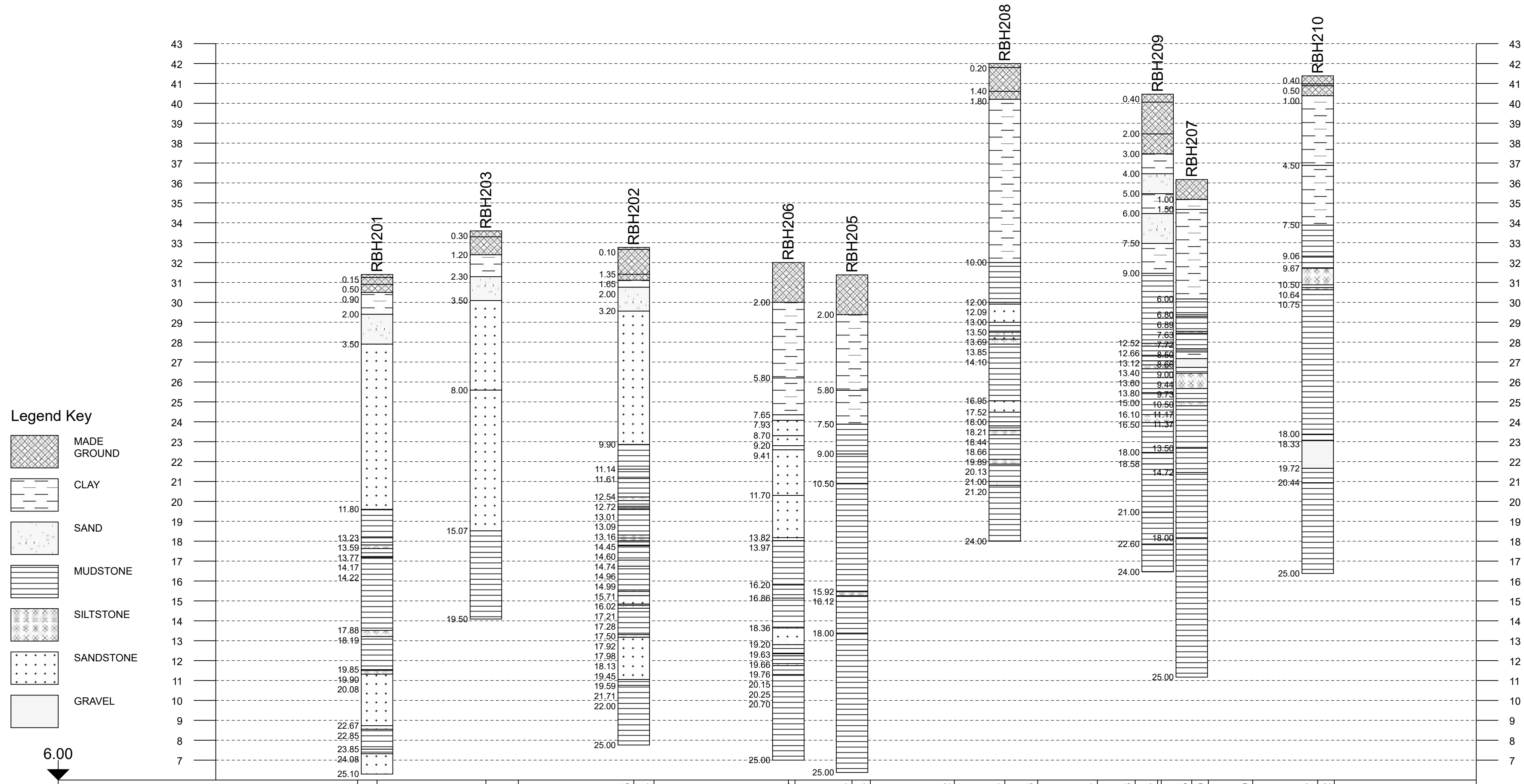
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
9.00	140	1.50	150					0.00	25.00								
22.50	85	9.00	140														
25.00	140																

Remarks

1. Location CAT scanned before breaking ground 2. Due to the drilling methodology the accuracy of measured water strikes is questionable and therefore water strikes were not recorded 3. Upon completion borehole was installed was a 50mm diameter standpipe with a response zone between 20.00 and 25.00mbgl.

Project Id: 4328	Title: Section line 1
Project Title: Plots NT02-NT04	Vertical Scale: 1:284
Location: Manchester	Horizontal Scale: 1:2908
Client: FEC	Engineer: RM

RoC CONSULTING



Chainage (m): 0.00, 10.00, 65.96, 82.64, 141.95, 152.34, 221.41, 221.83, 254.14, 263.54, 306.72, 332.64, 349.56, 380.24, 399.66, 413.09, 413.10, 428.75, 437.29, 460.09, 493.47, 502.02

Offset (m): 2.52, 1.04, 1.78, 1.82, 0.91, 3.04, 5.22, 4.30, 2.10, 2.34, 0.93, 0.55, 3.91

Elevation (mAOD): 31.40, 33.59, 32.76, 32.00, 31.38, 41.72, 42.00, 40.54, 40.96, 40.46, 36.17, 37.29, 41.38

APPENDIX C – CHEMICAL TESTING RESULTS

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

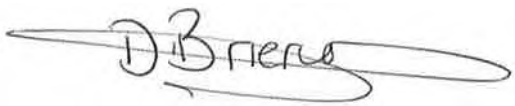
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/07002
Issue Number: 1 **Date:** 01 August, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: M15 4PZ Plots - NT02-NT04
Project Ref: 4328
Order No: PO1781
Date Samples Received: 15/07/22
Date Instructions Received: 20/07/22
Date Analysis Completed: 29/07/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.32	8.69	7.91	8.29	10.04	8.74	7.97	pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	65	237	866	28	322	39	46	mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	4	<1	3	1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0921	0.0266	0.0234	0.0623	0.0722	0.0518	0.0275	N/A	0.0003	A-T-032 FOC
Antimony$_D$	9	11	76	7	25	6	<5	mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	44	13	18	40	26	8	31	mg/kg	1	A-T-024s
Barium$_D$	169	271	376	213	179	282	120	mg/kg	1	A-T-024s
Beryllium$_D$	2.0	0.7	0.9	1.6	1.2	0.7	0.6	mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	1.7	<1.0	2.8	1.0	1.3	<1.0	2.4	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	3.3	2.0	5.2	3.6	2.4	2.1	1.4	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	144	84	148	162	206	1140	76	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	32	25	39	37	21	27	27	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	32	25	39	37	21	27	27	mg/kg	1	Calc
Lead$_D$$^{M\#}$	284	391	847	386	7660	261	101	mg/kg	1	A-T-024s
Mercury$_D$	0.41	0.97	1.65	0.63	2.89	1.90	<0.17	mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	5	2	5	10	4	2	4	mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	37	21	37	45	32	26	21	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	1	<1	1	2	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	42	29	39	42	29	32	34	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	836	356	557	440	419	334	78	mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (3 no)$_A$	-	*	-	-	*	-	-			A-T-001
pH (leachable)$_A$$^{\#}$	-	7.04	-	-	8.79	-	-	pH	0.01	A-T-031w
Sulphate (leachable)$_A$$^{\#}$	-	283.89	-	-	386.87	-	-	mg/l	1	A-T-026w
DOC (leachable)$_A$$^{\#}$	-	34.5	-	-	21.9	-	-	mg/l	2	A-T-032w
Antimony (leachable)$_A$	-	88	-	-	16	-	-	µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	7	-	-	12	-	-	µg/l	1	A-T-025w
Boron (leachable)$_A$	-	474	-	-	137	-	-	µg/l	10	A-T-025w
Barium (leachable)$_A$	-	68	-	-	7	-	-	µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-025w

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
Copper (leachable)$_A$	-	8	-	-	85	-	-	µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	<1	-	-	18	-	-	µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	<0.05	-	-	<0.05	-	-	mg/l	0.05	A-T-040w
Chromium (trivalent)	-	<0.05	-	-	<0.05	-	-	mg/l	0.05	Calc
Lead (leachable)$_A$	-	7	-	-	13	-	-	µg/l	1	A-T-025w
Mercury (leachable)$_A$	-	<0.1	-	-	<0.1	-	-	µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	75	-	-	73	-	-	µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	4	-	-	<2	-	-	µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	1	-	-	7	-	-	µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	6	-	-	5	-	-	µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	7	-	-	<2	-	-	µg/l	2	A-T-025w
1,2,4-Trimethylbenzene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w
Isopropylbenzene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w
n-propylbenzene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w
Styrene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w
Carbon Disulphide (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-006w

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	Chrysotile	Chrysotile & Amosite	Amosite & Chrysotile	Chrysotile	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	Cement	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	Loose Insulation	-	Loose Fibres	Loose Fibres	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	Yes	N/A	N/A	N/A	N/A			A-T-045
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing)$_{D}$	-	0.003	2.563	0.007	0.007	-	-	% w/w	0.001	A-T-054

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.10	1.60	0.61	2.01	36	0.39	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.07	0.20	0.05	0.10	0.49	0.09	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.58	1.65	0.95	3.67	38	0.91	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	2.39	2.60	2.29	11	53.5	3.92	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	2.30	2.57	2.25	10.9	36.8	6.91	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	2.74	2.88	2.62	11.5	47.8	7.29	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.87	1.19	1.00	4.57	21.5	3.55	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	1.09	0.96	0.91	4.01	19	2.36	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	2.66	2.80	2.43	11.2	80.8	4.17	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.25	0.30	0.25	1.21	6.23	0.78	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	5.06	6.18	5.75	24.4	175	7.75	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	*0.10*	*1.88*	*0.49*	*1.44*	20	*0.29*	*<0.01*	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	1.08	1.39	1.19	5.71	24.3	4.35	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.04	3.06	0.24	0.26	10.6	0.08	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	3.21	7.99	3.81	15.2	204	2.47	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	4.74	5.86	5.19	23.8	155	7.98	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	27.3	43.1	30	131	929	53.3	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	-	0.38	-	-	0.32	-	-	µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	-	0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	-	0.04	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	-	0.03	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	-	0.15	-	-	0.03	-	-	µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	-	0.05	-	-	0.06	-	-	µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	-	<0.02	-	-	<0.02	-	-	µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	-	<0.02	-	-	3.43	-	-	µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	-	<0.02	-	-	0.08	-	-	µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	-	0.16	-	-	0.03	-	-	µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	-	0.83	-	-	3.95	-	-	µg/l	0.02	A-T-019w
Phenols (speciated HPLC)										
Phenol$_A$	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Cresols$_A$	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Xylenols$_A$	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Resorcinol$_A$	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
Speciated PCB-EC7 & WHO12 (leachable)										
PCB BZ 28 (leachable)$_A$	-	0.017	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 52 (leachable)$_A$	-	0.013	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 101 (leachable)$_A$	-	0.008	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 118 (leachable)$_A$	-	0.006	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 138 (leachable)$_A$	-	0.005	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 153 (leachable)$_A$	-	0.004	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 180 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 77 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 81 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 105 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 114 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 123 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 126 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 156 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 157 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 167 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 169 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
PCB BZ 189 (leachable)$_A$	-	<0.002	-	-	<0.002	-	-	µg/l	0.002	A-T-004w
Total Speciated PCB-EC7 & WHO12 (leachable)$_A$	-	0.053	-	-	<0.002	-	-	µg/l	0.002	A-T-004w

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Dibenzofuran$_A$	-	1210	-	-	461	153	-	µg/kg	100	A-T-052s
Carbazole$_A$	-	400	-	-	481	259	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	-	<500	-	-	<500	<1000	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	-	158	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	-	1510	-	-	412	<100	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Phenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
n-Dioctylphthalate$_A$	-	<500	-	-	<500	<500	-	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	-	<200	-	-	<100	<500	-	µg/kg	100	A-T-052s
Nitrobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Isophorone$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachloroethane$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Perylene$_A$	-	743	-	-	1200	1190	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
VOC										
Dichlorodifluoromethane$_{A}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Chloromethane$_{A}$	-	<10	-	-	<10	<10	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dichloromethane$_{A}$	-	<5	-	-	<5	<5	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	-	<5	-	-	<5	<5	-	µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	-	<1	-	-	12	<1	-	µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	-	<10	-	-	<10	<10	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
Chlorobenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Isopropylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	-	<2	-	-	<2	-	-	µg/l	1	A-T-022w
Ali >C6-C8 (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
Ali >C8-C10 (leachable)$_A$	-	<10	-	-	<10	-	-	µg/l	10	A-T-055w
Ali >C10-C12 (leachable)$_A$	-	<10	-	-	<10	-	-	µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	-	<10	-	-	<10	-	-	µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	-	17	-	-	<10	-	-	µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	-	105	-	-	<20	-	-	µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	-	18	-	-	<10	-	-	µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	-	140	-	-	<20	-	-	µg/l	10	A-T-055w
Aro >C5-C7 (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
Aro >C7-C8 (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
Aro >C8-C10 (leachable)$_A$	-	<10	-	-	<10	-	-	µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	-	19	-	-	14	-	-	µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	-	30	-	-	19	-	-	µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	-	32	-	-	12	-	-	µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	-	<10	-	-	<10	-	-	µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	-	81	-	-	45	-	-	µg/l	20	A-T-055w
TPH (Ali & Aro >C5-C44) (leachable)$_A$	-	221	-	-	45	-	-	µg/l	20	A-T-055w
BTEX - Benzene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
BTEX - Toluene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
BTEX - Ethyl Benzene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
BTEX - o Xylene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
BTEX - m & p Xylene (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
MTBE (leachable)$_A$	-	<1	-	-	<1	-	-	µg/l	1	A-T-022w
Aro >C21-C35 (leachable)$_A$	-	<20	-	-	<20	-	-	µg/l	20	A-T-055w

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP203	TP203	TP207	TP202	WS204	WS204			
Depth to Top	0.50	0.30	1.20	0.20	0.50	0.40	1.40			
Depth To Bottom										
Date Sampled	12-Jul-22	12-Jul-22	12-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22	13-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4ABE	4ABE	4AB	4AB	4AB	5ABE			
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<5	<10	-	<5	-	-	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<5	<10	-	<5	-	-	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	2	14	<10	-	9	-	-	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	4	29	142	-	19	-	-	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	130	384	1610	-	43	-	-	mg/kg	1	A-T-055s
Ali >C35-C44$_A$	26	90	87	-	34	-	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	162	517	1840	-	105	-	-	mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<5	<10	-	8	-	-	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	16	<10	-	22	-	-	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	10	90	51	-	146	-	-	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	85	204	899	-	413	-	-	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	226	352	867	-	623	-	-	mg/kg	1	A-T-055s
Aro >C35-C44$_A$	16	24	<10	-	25	-	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	338	685	1820	-	1240	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	501	1200	3660	-	1340	-	-	mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/8	22/07002/9	22/07002/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS205	TP204	TP203							
Depth to Top	0.30	0.60	2.50							
Depth To Bottom										
Date Sampled	13-Jul-22	13-Jul-22	12-Jul-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AB	4ABE	5A							
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	10.56	7.88	7.81					pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	149	1470	10					mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0553	0.0502	<0.0003					N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5	8	<5					mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	103	119	1					mg/kg	1	A-T-024s
Barium$_D$	184	353	122					mg/kg	1	A-T-024s
Beryllium$_D$	1.1	2.0	0.6					mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	<1.0	1.1	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.5	2.6	0.8					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	77	231	51					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	28	28	28					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Chromium (trivalent)	28	28	28					mg/kg	1	Calc
Lead$_D$$^{M\#}$	343	709	18					mg/kg	1	A-T-024s
Mercury$_D$	4.47	1.52	0.67					mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	4	8	<1					mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	30	42	19					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	1	2	<1					mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	55	55	28					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	181	341	45					mg/kg	5	A-T-024s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/8	22/07002/9	22/07002/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS205	TP204	TP203							
Depth to Top	0.30	0.60	2.50							
Depth To Bottom										
Date Sampled	13-Jul-22	13-Jul-22	12-Jul-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AB	4ABE	5A							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A							A-T-045

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/8	22/07002/9	22/07002/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS205	TP204	TP203							
Depth to Top	0.30	0.60	2.50							
Depth To Bottom										
Date Sampled	13-Jul-22	13-Jul-22	12-Jul-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AB	4ABE	5A							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.10	0.07	0.02					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.03	0.02	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.26	0.19	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.82	1.04	0.06					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.94	0.89	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.03	1.18	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.73	0.59	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.35	0.44	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.91	1.28	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.15	0.14	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	1.80	2.33	0.12					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	*0.08*	*0.05*	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.66	0.63	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.04	0.05	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	1.13	1.10	0.13					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	1.69	2.36	0.11					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	10.7	12.4	0.48					mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/8	22/07002/9	22/07002/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS205	TP204	TP203							
Depth to Top	0.30	0.60	2.50							
Depth To Bottom										
Date Sampled	13-Jul-22	13-Jul-22	12-Jul-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AB	4ABE	5A							
Phenols (speciated HPLC)										
Phenol$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Cresols$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Xylenols$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Resorcinol$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/07002

Client Project Name: M15 4PZ Plots - NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07002/8	22/07002/9	22/07002/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS205	TP204	TP203							
Depth to Top	0.30	0.60	2.50							
Depth To Bottom										
Date Sampled	13-Jul-22	13-Jul-22	12-Jul-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AB	4ABE	5A							
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	-					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	1	-					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	4	-					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	65	-					mg/kg	1	A-T-055s
Ali >C35-C44$_A$	-	12	-					mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	81	-					mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	-					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	1	-					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	7	-					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	22	-					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	39	-					mg/kg	1	A-T-055s
Aro >C35-C44$_A$	-	6	-					mg/kg	1	A-T-055s
Total Aromatics$_A$	-	75	-					mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	-	157	-					mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: M15 4PZ Plots - NT02-NT04

Clients Project No: 4328

Project No: 22/07002

Date Received: 20/07/2022 (am)

Cool Box Temperatures (°C): 17.4

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/07002/1	22/07002/2	22/07002/3	22/07002/4	22/07002/5	22/07002/6	22/07002/7	22/07002/8	22/07002/9	22/07002/10
Client Sample No										
Client Sample ID/Depth	TP201 0.50m	TP203 0.30m	TP203 1.20m	TP207 0.20m	TP202 0.50m	WS204 0.40m	WS204 1.40m	WS205 0.30m	TP204 0.60m	TP203 2.50m
Date Sampled	12/07/22	12/07/22	12/07/22	13/07/22	13/07/22	13/07/22	13/07/22	13/07/22	13/07/22	12/07/22
A-T-004w		27/07/2022			27/07/2022					
A-T-006s		25/07/2022			25/07/2022	28/07/2022				
A-T-006w		25/07/2022			25/07/2022					
A-T-019s	28/07/2022	28/07/2022	28/07/2022	28/07/2022	29/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022
A-T-019w		27/07/2022			27/07/2022					
A-T-022s	25/07/2022	25/07/2022	25/07/2022		25/07/2022				25/07/2022	
A-T-022w		26/07/2022			26/07/2022					
A-T-024s	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	28/07/2022
A-T-025w		25/07/2022			25/07/2022					
A-T-026s	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	27/07/2022
A-T-026w		25/07/2022			25/07/2022					
A-T-027s	27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022	27/07/2022	28/07/2022
A-T-031s	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	27/07/2022
A-T-031w		25/07/2022			25/07/2022					
A-T-032 FOC	26/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	28/07/2022
A-T-032w		25/07/2022			25/07/2022					
A-T-040s	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	27/07/2022
A-T-040w		27/07/2022			27/07/2022					
A-T-042sTCN	25/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	25/07/2022	29/07/2022
A-T-044	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	27/07/2022
A-T-045	21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022	25/07/2022
A-T-050s	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	22/07/2022	27/07/2022	28/07/2022
A-T-052s		29/07/2022			28/07/2022	29/07/2022				
A-T-054		27/07/2022	27/07/2022	27/07/2022	27/07/2022					
A-T-055s	26/07/2022	26/07/2022	26/07/2022		26/07/2022				26/07/2022	
A-T-055w		27/07/2022			27/07/2022					
Calc	26/07/2022	28/07/2022	26/07/2022	26/07/2022	28/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	28/07/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 22/07217/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 22/07217
Issue Number: 2 **Date:** 19 August, 2022

Client:
ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: Plots NT02-NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 21/07/22
Date Instructions Received: 25/07/22
Date Analysis Completed: 19/08/22

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	9.13	9.07	8.28	8.22	7.35	8.91	8.49	pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	21	<10	24	368	48	107	37	mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	6	39	19	329	2	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0235	0.0398	0.1613	0.1981	0.3143	0.0674	0.0852	N/A	0.0003	A-T-032 FOC
Antimony$_D$	52	12	469	494	963	133	17	mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	10	13	77	69	84	23	17	mg/kg	1	A-T-024s
Barium$_D$	379	188	1410	473	797	538	228	mg/kg	1	A-T-024s
Beryllium$_D$	0.6	1.0	1.7	1.7	2.4	1.2	1.3	mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	1.3	1.7	5.3	4.6	4.6	2.7	1.8	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	151	171	7580	6820	11800	1770	178	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	116	32	40	37	32	43	22	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	116	32	40	37	32	43	22	mg/kg	1	Calc
Lead$_D$$^{M\#}$	367	373	12000	8900	19000	3920	382	mg/kg	1	A-T-024s
Mercury$_D$	0.75	0.38	5.98	2.51	26.6	6.44	0.55	mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	7	2	9	9	10	4	4	mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	33	37	60	54	55	34	35	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	33	45	86	73	64	39	40	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	239	143	1400	1320	1230	597	152	mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (3 no)$_A$	-	*	-	-	-	*	-			A-T-001
pH (leachable)$_A$$^{\#}$	-	8.29	-	-	-	8.12	-	pH	0.01	A-T-031w
Sulphate (leachable)$_A$$^{\#}$	-	<1.00	-	-	-	133.19	-	mg/l	1	A-T-026w
DOC (leachable)$_A$$^{\#}$	-	22.0	-	-	-	15.8	-	mg/l	2	A-T-032w
Antimony (leachable)$_A$	-	7	-	-	-	36	-	µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	3	-	-	-	3	-	µg/l	1	A-T-025w
Boron (leachable)$_A$	-	11	-	-	-	137	-	µg/l	10	A-T-025w
Barium (leachable)$_A$	-	147	-	-	-	37	-	µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-025w

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
Copper (leachable)$_A$	-	66	-	-	-	17	-	µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	2	-	-	-	26	-	µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	<0.05	-	-	-	<0.05	-	mg/l	0.05	A-T-040w
Chromium (trivalent)	-	<0.05	-	-	-	<0.05	-	mg/l	0.05	Calc
Lead (leachable)$_A$	-	141	-	-	-	12	-	µg/l	1	A-T-025w
Mercury (leachable)$_A$	-	<0.1	-	-	-	<0.1	-	µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	8	-	-	-	16	-	µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	4	-	-	-	<2	-	µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	1	-	-	-	1	-	µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	8	-	-	-	2	-	µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	84	-	-	-	10	-	µg/l	2	A-T-025w
Carbon Disulphide (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w
1,2,4-Trimethylbenzene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w
Isopropylbenzene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w
n-propylbenzene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w
Styrene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-006w

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.07	0.30	0.12	0.14	0.08	0.13	0.20	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.02	<0.01	0.04	0.07	0.02	0.02	0.05	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.16	0.35	0.30	0.41	0.18	0.25	0.46	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.71	0.70	1.06	1.50	0.72	0.86	1.51	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.78	0.63	0.95	1.56	0.69	0.91	1.65	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	*0.89*	*0.72*	*1.05*	*1.61*	*0.79*	*0.97*	*1.63*	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.58	0.41	0.66	1.04	0.50	0.60	1.00	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.31	0.25	0.35	0.59	0.28	0.32	0.58	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.83	0.81	1.22	1.71	0.90	1.00	1.71	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.12	0.09	0.13	0.22	0.11	0.12	0.22	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	1.44	1.83	2.77	3.04	1.48	1.95	2.94	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.04	0.16	0.10	0.12	0.06	0.09	0.20	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.60	0.46	0.70	1.15	0.53	0.62	1.05	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.04	0.08	0.12	0.11	0.14	0.04	0.12	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.65	1.74	1.62	1.85	0.84	1.02	1.89	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	1.43	1.67	2.67	3.01	1.62	1.90	3.29	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	8.67	10.2	13.9	18.1	8.94	10.8	18.5	mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	-	<0.02	-	-	-	<0.02	-	µg/l	0.02	A-T-019w

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
Speciated PCB-EC7 & WHO12 (leachable)										
PCB BZ 28 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 52 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 101 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 118 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 138 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 153 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 180 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 77 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 81 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 105 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 114 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 123 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 126 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 156 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 157 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 167 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 169 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
PCB BZ 189 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w
Total Speciated PCB-EC7 & WHO12 (leachable)$_A$	-	<0.002	-	-	-	<0.002	-	µg/l	0.002	A-T-004w

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Dibenzofuran$_A$	-	143	-	-	322	1970	-	µg/kg	100	A-T-052s
Carbazole$_A$	-	193	-	-	308	1440	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	-	<500	-	-	<500	<1000	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Methylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	-	<100	-	-	495	1260	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Phenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
n-Dioctylphthalate$_A$	-	<500	-	-	<500	<500	-	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	-	<600	-	-	<600	<600	-	µg/kg	100	A-T-052s
Nitrobenzene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Isophorone$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachloroethane$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	-	<100	-	-	<100	<100	-	µg/kg	100	A-T-052s
Perylene$_A$	-	400	-	-	542	2240	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
VOC										
Dichlorodifluoromethane$_{A}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Chloromethane$_{A}$	-	<10	-	-	<10	<10	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dichloromethane$_{A}$	-	<5	-	-	<5	<5	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	-	<5	-	-	<5	<5	-	µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	-	<10	-	-	<10	<10	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
Chlorobenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_A$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Ethylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
m & p Xylene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
o-Xylene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Styrene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromoform$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Isopropylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_A$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
Bromobenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
n-Propylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
2-Chlorotoluene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
4-Chlorotoluene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
tert-Butylbenzene$_A^{\#}$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
sec-Butylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
4-Isopropyltoluene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_A$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
n-Butylbenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_A$	-	<2	-	-	<2	<2	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_A$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s
Hexachlorobutadiene$_A^{\#}$	-	<1	-	-	<1	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_A$	-	<3	-	-	<3	<3	-	µg/kg	3	A-T-006s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
Ali >C6-C8 (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
Ali >C8-C10 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Ali >C10-C12 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	-	<20	-	-	-	<20	-	µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	-	<20	-	-	-	<20	-	µg/l	10	A-T-055w
Aro >C5-C7 (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
Aro >C7-C8 (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
Aro >C8-C10 (leachable)$_A$	-	30	-	-	-	13	-	µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	-	10	-	-	-	12	-	µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	-	<10	-	-	-	<10	-	µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	-	40	-	-	-	25	-	µg/l	20	A-T-055w
TPH (Ali & Aro >C5-C44) (leachable)$_A$	-	40	-	-	-	25	-	µg/l	20	A-T-055w
BTEX - Benzene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
BTEX - Toluene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
BTEX - Ethyl Benzene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
BTEX - o Xylene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
BTEX - m & p Xylene (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
MTBE (leachable)$_A$	-	<1	-	-	-	<1	-	µg/l	1	A-T-022w
Aro >C21-C35 (leachable)$_A$	-	<20	-	-	-	<20	-	µg/l	20	A-T-055w

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP216	TP216	TP216	TP217	TP215	TP214	TP220			
Depth to Top	0.20	0.60	1.20	0.50	1.00	0.80	0.70			
Depth To Bottom										
Date Sampled	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	18-Jul-22	19-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	5A	4ABE	4ABDE	4AE	4ABE	4ABE			
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	-	-	2	<1	-	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	<1	-	-	2	<1	-	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	2	-	-	5	2	-	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	2	-	-	5	9	-	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	38	-	-	117	178	-	mg/kg	1	A-T-055s
Ali >C35-C44$_A$	-	13	-	-	34	130	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	55	-	-	166	319	-	mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	1	-	-	2	<1	-	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	2	-	-	4	2	-	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	10	-	-	9	7	-	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	40	-	-	24	26	-	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	90	-	-	82	110	-	mg/kg	1	A-T-055s
Aro >C35-C44$_A$	-	7	-	-	12	116	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	151	-	-	133	261	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	-	206	-	-	298	580	-	mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	<0.01	-	-	<0.01	<0.01	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.11	8.09						pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	504	344						mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	9						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0728	0.0877						N/A	0.0003	A-T-032 FOC
Antimony$_D$	28	77						mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	58	26						mg/kg	1	A-T-024s
Barium$_D$	263	494						mg/kg	1	A-T-024s
Beryllium$_D$	1.7	1.0						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	1.3	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	3.1	3.1						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	579	1160						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	34	24						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	34	24						mg/kg	1	Calc
Lead$_D$$^{M\#}$	1560	1840						mg/kg	1	A-T-024s
Mercury$_D$	3.19	2.46						mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	5	3						mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	47	30						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	70	39						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	239	2000						mg/kg	5	A-T-024s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	Chrysotile								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	Loose fibres								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing)$_{D}$	-	0.007						% w/w	0.001	A-T-054

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.16	0.13						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.10	0.08						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.44	0.42						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.29	1.77						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.29	1.85						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	*1.28*	*1.95*						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.72	1.12						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.47	0.67						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.45	1.87						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.17	0.24						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	2.90	3.71						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.17	0.14						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.77	1.22						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.11	0.12						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.25	1.76						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.90	3.93						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	16.5	21						mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	-						µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Dibenzofuran$_A$	150	-						µg/kg	100	A-T-052s
Carbazole$_A$	164	-						µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-						µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-						µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-						µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-						µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-						µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-						µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	162	-						µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-						µg/kg	100	A-T-052s
Phenol$_A$	<100	-						µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-						µg/kg	100	A-T-052s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
n-Dioctylphthalate$_A$	<500	-						µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<600	-						µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-						µg/kg	100	A-T-052s
Isophorone$_A$	<100	-						µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-						µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	<100	-						µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-						µg/kg	100	A-T-052s
Perylene$_A$	528	-						µg/kg	100	A-T-052s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
VOC										
Dichlorodifluoromethane$_{A}$	<1	-						µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	-						µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	-						µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	-						µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	-						µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	-						µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	-						µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
Chlorobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	-						µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	-						µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	-						µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	-						µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	-						µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	-						µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	-						µg/kg	3	A-T-006s

Envirolab Job Number: 22/07217

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07217/8	22/07217/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP218	TP219								
Depth to Top	0.50	0.50								
Depth To Bottom										
Date Sampled	19-Jul-22	19-Jul-22								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	4AB	4AB								
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	1	-						mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-						mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	2	-						mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	4	-						mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	28	-						mg/kg	1	A-T-055s
Ali >C35-C44$_A$	13	-						mg/kg	1	A-T-055s
Total Aliphatics$_A$	49	-						mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	-						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	4	-						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	16	-						mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	60	-						mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	183	-						mg/kg	1	A-T-055s
Aro >C35-C44$_A$	11	-						mg/kg	1	A-T-055s
Total Aromatics$_A$	275	-						mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	324	-						mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02-NT04

Clients Project No: 4328

Project No: 22/07217

Date Received: 25/07/2022 (am)

Cool Box Temperatures (°C): 16.5

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/07217/1	22/07217/2	22/07217/3	22/07217/4	22/07217/5	22/07217/6	22/07217/7	22/07217/8	22/07217/9
Client Sample No									
Client Sample ID/Depth	TP216 0.20m	TP216 0.60m	TP216 1.20m	TP217 0.50m	TP215 1.00m	TP214 0.80m	TP220 0.70m	TP218 0.50m	TP219 0.50m
Date Sampled	18/07/22	18/07/22	18/07/22	18/07/22	18/07/22	18/07/22	19/07/22	19/07/22	19/07/22
A-T-004w		01/08/2022				01/08/2022			
A-T-006s		03/08/2022			03/08/2022	03/08/2022		03/08/2022	
A-T-006w		29/07/2022				01/08/2022			
A-T-019s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-019w		02/08/2022				02/08/2022			
A-T-022s		01/08/2022			01/08/2022	01/08/2022		01/08/2022	
A-T-022w		02/08/2022				02/08/2022			
A-T-024s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-025w		02/08/2022				02/08/2022			
A-T-026s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	03/08/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-026w		29/07/2022				29/07/2022			
A-T-027s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-031s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-031w		28/07/2022				28/07/2022			
A-T-032 FOC	01/08/2022	01/08/2022	01/08/2022	01/08/2022	01/08/2022	01/08/2022	01/08/2022	01/08/2022	01/08/2022
A-T-032w		01/08/2022				01/08/2022			
A-T-040s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	02/08/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-040w		29/07/2022				29/07/2022			
A-T-042sTCN	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-044	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022	28/07/2022
A-T-045	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022
A-T-050s	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022
A-T-052s		01/08/2022			01/08/2022	01/08/2022		01/08/2022	
A-T-054									19/08/2022
A-T-055s		02/08/2022			02/08/2022	02/08/2022		02/08/2022	
A-T-055w		02/08/2022				02/08/2022			
Calc	29/07/2022	02/08/2022	29/07/2022	29/07/2022	02/08/2022	02/08/2022	29/07/2022	29/07/2022	29/07/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

SVOC Tentatively Identified Compounds
(Note: TIC Results are reported on an as received basis and are not moisture corrected).

Appendix to Envirolab Report:

Lab Client Sample ID	22/07379/2		
Client Sample ID	WS203		
Depth to top	0.50m		
Depth to bottom			
Top 10	Compound	CAS number	Estimated Concentration µg/kg
1	Cyclic octaatomic sulphur	10544-50-0	4605.469075
2			0
3			0
4			0
5			0
6			0
7			0
8			0
9			0
10			0

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	22/07379		
Issue Number:	1	Date:	8-Aug-22

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager:	Reece McGuinness
Project Name:	Plots NT02-NT04
Project Ref:	4328
Order No:	1781
Date Samples Received:	26-Jul-22
Date Instructions Received:	28-Jul-22
Date Analysis Completed:	8-Aug-22

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

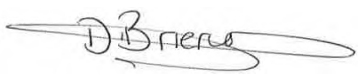
IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	22/07379/2				
Client Sample Number								
Client Sample ID				WS203				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				21/07/2022				
Sample Type				Soil - ES				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**9.56**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.35**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.19**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**NDP**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**12.6**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**3.94**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH\_CU\_1D\_AL}$	A-T-007	N	N	**44**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.014	**0.140**	0.5	2	25
Barium	A-T-025	N	N	0.007	**0.070**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	0.015	**0.150**	0.5	10	70
Copper	A-T-025	N	N	0.029	**0.290**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.036	**0.360**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.002	**0.020**	0.5	10	50
Antimony	A-T-025	N	N	0.004	**0.040**	0.06	0.7	5
Selenium	A-T-025	N	N	0.006	**0.060**	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	**0.020**	4	50	200
Chloride	A-T-026	N	N	20	**204**	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	**<1**	10	150	500
Sulphate as SO_4	A-T-026	N	N	230	**2298**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	306	**3060**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	10.6				
Conductivity (µS/cm)	A-T-037	N	N	613				
Mass Sample (kg)				0.185				
Dry Matter (%)	A-T-044	N	N	94.7				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	22/07379/5				
Client Sample Number						Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				WS211				
Depth to Top				0.3				
Depth to Bottom								
Date Sampled				22/07/2022				
Sample Type				Soil - ES				
Sample Matrix Code				5ABE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.08**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.25**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.07**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**8.4**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**5.56**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**3.44**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH\_CU\_1D\_AL}$	A-T-007	N	N	**56**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.002	**0.020**	0.5	2	25
Barium	A-T-025	N	N	0.083	**0.830**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	0.032	**0.320**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.004	**0.040**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.023	**0.230**	0.5	10	50
Antimony	A-T-025	N	N	0.007	**0.070**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.057	**0.570**	4	50	200
Chloride	A-T-026	N	N	9	**89**	800	15000	25000
Fluoride	A-T-026	N	N	0.3	**3.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	16	**157**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	120	**1200**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	34.10	**341**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	8.5				
Conductivity (µS/cm)	A-T-037	N	N	240				
Mass Sample (kg)				0.223				
Dry Matter (%)	A-T-044	N	N	78.5				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/07379
Issue Number: 1 **Date:** 08 August, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: Plots NT02-NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 26/07/22
Date Instructions Received: 28/07/22
Date Analysis Completed: 08/08/22

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
% Stones >10mm$_A$	<0.1	<0.1	5.2	20.6	3.5	36.8	22.2	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.16	9.56	6.78	8.09	8.08	8.15	8.02	pH	0.01	A-T-031s
Electrical conductivity @ 20degC$_D$	-	1590	-	-	-	-	-	µs/cm	10	A-T-037s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	165	485	27	16	34	58	54	mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1	11	<1	<1	2	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0032	0.1258	0.1221	0.0612	0.0556	0.0500	0.1272	N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5	6	1050	14	35	29	19	mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	<1	28	126	10	16	19	35	mg/kg	1	A-T-024s
Barium$_D$	84	429	598	322	317	303	317	mg/kg	1	A-T-024s
Beryllium$_D$	0.7	1.4	1.9	0.7	1.3	0.8	1.2	mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	<1.0	2.1	<1.0	1.8	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	0.9	4.3	11.3	2.9	2.2	1.4	2.0	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	10	178	13800	669	264	313	226	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	22	34	76	46	28	16	19	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	22	34	76	46	28	16	19	mg/kg	1	Calc
Lead$_D$$^{M\#}$	9	313	18100	394	520	472	906	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	0.39	5.68	1.47	0.66	1.08	3.12	mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1	6	12	7	2	3	4	mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	18	51	100	59	41	20	30	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	22	45	177	34	37	24	33	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	186	3980	934	758	241	230	mg/kg	5	A-T-024s
Redox Potential (water soluble)$_D$	-	133	-	-	-	-	-	mV		Probe
TAME$_A$	-	<0.1	-	-	-	-	-	mg/kg	0.1	A-T-022s
Leachate Prep BS EN 12457-1 (2:1) (3 no)$_A$	*	-	-	-	-	-	-			A-T-001
pH (leachable)$_A$$^{\#}$	8.55	-	-	-	-	-	-	pH	0.01	A-T-031w
Sulphate (leachable)$_A$$^{\#}$	59.39	-	-	-	-	-	-	mg/l	1	A-T-026w
DOC (leachable)$_A$$^{\#}$	16.2	-	-	-	-	-	-	mg/l	2	A-T-032w
Antimony (leachable)$_A$	1	-	-	-	-	-	-	µg/l	1	A-T-025w
Arsenic (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Boron (leachable)$_A$	63	-	-	-	-	-	-	µg/l	10	A-T-025w

Envirolab Job Number: 22/07379 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
Barium (leachable)$_A$	17	-	-	-	-	-	-	µg/l	1	A-T-025w
Beryllium (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Cadmium (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Copper (leachable)$_A$	8	-	-	-	-	-	-	µg/l	4	A-T-025w
Chromium (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	<0.05	-	-	-	-	-	-	mg/l	0.05	A-T-040w
Chromium (trivalent)	<0.05	-	-	-	-	-	-	mg/l	0.05	Calc
Lead (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Mercury (leachable)$_A$	<0.1	-	-	-	-	-	-	µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Nickel (leachable)$_A$	<2	-	-	-	-	-	-	µg/l	2	A-T-025w
Selenium (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Vanadium (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-025w
Zinc (leachable)$_A$	5	-	-	-	-	-	-	µg/l	2	A-T-025w
1,2,4-Trimethylbenzene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
Isopropylbenzene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
n-propylbenzene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
Styrene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
Carbon Disulphide (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	Chrysotile	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	Loose Fibres	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.06	0.03	0.13	0.20	0.06	0.73	0.51	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	0.04	0.25	<0.01	0.30	0.24	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.09	0.22	0.65	0.11	1.78	1.61	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	0.31	0.89	1.07	0.25	3.35	4.46	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	0.44	1.07	2.11	0.26	2.63	3.12	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	0.44	1.36	1.76	0.27	2.68	3.34	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	0.26	0.65	2.17	0.15	1.19	1.37	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	0.16	0.49	0.59	0.09	0.95	1.19	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	0.37	1.33	1.24	0.28	3.48	4.64	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	0.06	0.13	0.36	<0.04	0.30	0.35	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	0.48	2.99	2.52	0.61	9.15	13.6	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.02	0.02	0.10	0.15	0.04	1.01	0.65	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	0.27	0.77	2.26	0.17	1.42	1.69	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.15	0.06	0.05	0.08	0.07	1.76	0.21	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.35	2.05	1.24	0.44	7.66	7.05	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	0.52	2.62	2.29	0.59	8.59	12.6	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.30	3.86	14.9	18.9	3.39	47	56.6	mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	1.53	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	0.24	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	0.28	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	0.41	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	0.20	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	0.23	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	0.08	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	0.08	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	0.39	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	2.17	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	0.59	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	0.10	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	0.55	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	0.15	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	2.11	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	9.11	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Phenols (speciated HPLC)										
Phenol$_A$	<0.2	<0.2	-	-	-	-	-	mg/kg	0.2	A-T-050s
Cresols$_A$	<0.2	<0.2	-	-	-	-	-	mg/kg	0.2	A-T-050s
Xylenols$_A$	<0.2	<0.2	-	-	-	-	-	mg/kg	0.2	A-T-050s
Resorcinol$_A$	<0.2	<0.2	-	-	-	-	-	mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
Speciated PCB-EC7 & WHO12 (leachable)										
PCB BZ 28 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 52 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 101 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 118 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 138 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 153 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 180 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 77 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 81 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 105 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 114 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 123 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 126 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 156 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 157 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 167 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 169 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
PCB BZ 189 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w
Total Speciated PCB-EC7 & WHO12 (leachable)$_A$	<0.002	-	-	-	-	-	-	µg/l	0.002	A-T-004w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Dibenzofuran$_A$	136	<100	-	-	-	457	-	µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100	-	-	-	615	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500	-	-	-	<500	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100	-	-	-	463	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
n-Dioctylphthalate$_A$	<500	<500	-	-	-	<500	-	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	-	-	-	<100	-	µg/kg	100	A-T-052s
Perylene$_A$	<100	204	-	-	-	1430	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
SVOC+TICS (UKWIR)										
SVOC TICs (Tentatively Identified Compounds)$_A$	-	Appended	-	-	-	-	-			A-T-052s
Acenaphthylene$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Acenaphthene$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Anthracene$_A$	-	151	-	-	-	-	-	µg/kg	100	A-T-052s
Benzo(a)anthracene$_A$	-	630	-	-	-	-	-	µg/kg	100	A-T-052s
Benzo(b)fluoranthene$_A$	-	1050	-	-	-	-	-	µg/kg	100	A-T-052s
Benzo(k)fluoranthene$_A$	-	273	-	-	-	-	-	µg/kg	100	A-T-052s
Benzo(a)pyrene$_A$	-	968	-	-	-	-	-	µg/kg	100	A-T-052s
Benzo(ghi)perylene$_A$	-	548	-	-	-	-	-	µg/kg	100	A-T-052s
Chrysene$_A$	-	718	-	-	-	-	-	µg/kg	100	A-T-052s
Fluoranthene$_A$	-	978	-	-	-	-	-	µg/kg	100	A-T-052s
Fluorene$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Indeno(1,2,3-cd)pyrene$_A$	-	490	-	-	-	-	-	µg/kg	100	A-T-052s
Phenanthrene$_A$	-	692	-	-	-	-	-	µg/kg	100	A-T-052s
Pyrene$_A$	-	1070	-	-	-	-	-	µg/kg	100	A-T-052s
Naphthalene$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Dibenzo(ah)anthracene$_A$	-	133	-	-	-	-	-	µg/kg	100	A-T-052s
Cresol & Chlorinated Phenol Total$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Phenols Total (from SVOC)$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
SVOC Total (excl. PAH/Phenols/Cresols and Chlorophenols)$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
SVOC Total (excl. PAH/Phenols/Cresols/Chlorophenols/Ethers/Nitrobenzene)$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s
Ethers Total (from SVOC)$_A$	-	<100	-	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
VOC										
Dichlorodifluoromethane$_{A}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	<10	-	-	-	<10	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	<5	-	-	-	<5	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	<5	-	-	-	<5	-	µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	<2	-	-	-	<2	-	µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	30	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	<10	-	-	-	<10	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	<3	-	-	-	<3	-	µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s

Envirolab Job Number: 22/07379 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
Chlorobenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2	-	-	-	<2	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2	-	-	-	<2	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3	-	-	-	<3	-	µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	<1	-	-	-	<1	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3	-	-	-	<3	-	µg/kg	3	A-T-006s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
VOC+TICS (UKWIR)										
VOC Total (excl. BTEX)$_A$	-	30	-	-	-	-	-	µg/kg	10	A-T-006s
BTEX Total (from VOC)$_A$	-	<1	-	-	-	-	-	µg/kg	1	A-T-006s
VOC TICs$_A$	-	None detected	-	-	-	-	-			A-T-006s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
TPH CWG (UKWIR) with Clean Up										
Total Aliphatics$_{A}$	-	29	-	-	-	-	-	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C10-C16)$_{A}^{\#}$	-	8	-	-	-	-	-	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C8-C10)$_{A}^{\#}$	-	3	-	-	-	-	-	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C16-C35)$_{A}^{\#}$	-	71	-	-	-	-	-	mg/kg	1	A-T-055s
Total Aromatics$_{A}$	-	54	-	-	-	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)$_{A}$	-	83	-	-	-	-	-	mg/kg	1	A-T-055s
BTEX and MTBE Total$_{A}$	-	<0.01	-	-	-	-	-	mg/kg	0.01	A-T-022s
VPH total (>C5-C8)$_{A}^{\#}$	-	<0.01	-	-	-	-	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
Ali >C6-C8 (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
Ali >C8-C10 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C10-C12 (leachable)$_A$	29	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	207	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	277	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	434	-	-	-	-	-	-	µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	159	-	-	-	-	-	-	µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	1106	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C5-C7 (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
Aro >C7-C8 (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
Aro >C8-C10 (leachable)$_A$	16	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	72	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	299	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	265	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	12	-	-	-	-	-	-	µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	766	-	-	-	-	-	-	µg/l	20	A-T-055w
TPH (Ali & Aro >C5-C44) (leachable)$_A$	1872	-	-	-	-	-	-	µg/l	20	A-T-055w
BTEX - Benzene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
BTEX - Toluene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
BTEX - Ethyl Benzene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
BTEX - o Xylene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
BTEX - m & p Xylene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
MTBE (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-022w
Aro >C21-C35 (leachable)$_A$	102	-	-	-	-	-	-	µg/l	20	A-T-055w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS202	WS203	WS209	WS208	WS211	WS210	WS210			
Depth to Top	1.50	0.50	0.40	0.40	0.30	0.50	1.30			
Depth To Bottom										
Date Sampled	21-Jul-22	21-Jul-22	21-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22	22-Jul-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	6	4AB	4AE	6ABE	5ABE	4ABE	4ABE			
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	-	<10	-	<1	-	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	-	<10	-	<1	-	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	2	-	<10	-	2	-	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	3	-	16	-	4	-	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	5	24	-	462	-	60	-	mg/kg	1	A-T-055s
Ali >C35-C44$_A$	1	5	-	132	-	35	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	34	-	610	-	102	-	mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	3	-	18	-	1	-	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	1	-	<10	-	10	-	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	6	4	-	62	-	42	-	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	4	8	-	298	-	150	-	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	5	38	-	956	-	399	-	mg/kg	1	A-T-055s
Aro >C35-C44$_A$	<1	2	-	63	-	16	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	16	56	-	1390	-	619	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	22	90	-	2010	-	719	-	mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	-	<0.01	-	<0.01	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
% Stones >10mm$_A$	6.0							% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	9.76							pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	120							mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1							mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0032							N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5							mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	3							mg/kg	1	A-T-024s
Barium$_D$	58							mg/kg	1	A-T-024s
Beryllium$_D$	0.8							mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	0.7							mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	12							mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	11							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Chromium (trivalent)	11							mg/kg	1	Calc
Lead$_D$$^{M\#}$	14							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	12							mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15							mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	26							mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (3 no)$_A$	*									A-T-001
pH (leachable)$_A$$^{\#}$	11.14							pH	0.01	A-T-031w
Sulphate (leachable)$_A$$^{\#}$	80.98							mg/l	1	A-T-026w
DOC (leachable)$_A$$^{\#}$	50.3							mg/l	2	A-T-032w
Antimony (leachable)$_A$	1							µg/l	1	A-T-025w
Arsenic (leachable)$_A$	5							µg/l	1	A-T-025w
Boron (leachable)$_A$	69							µg/l	10	A-T-025w
Barium (leachable)$_A$	4							µg/l	1	A-T-025w
Beryllium (leachable)$_A$	<1							µg/l	1	A-T-025w
Cadmium (leachable)$_A$	<1							µg/l	1	A-T-025w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
Copper (leachable)$_A$	34							µg/l	4	A-T-025w
Chromium (leachable)$_A$	3							µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	<0.05							mg/l	0.05	A-T-040w
Chromium (trivalent)	<0.05							mg/l	0.05	Calc
Lead (leachable)$_A$	<1							µg/l	1	A-T-025w
Mercury (leachable)$_A$	<0.1							µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	24							µg/l	1	A-T-025w
Nickel (leachable)$_A$	5							µg/l	2	A-T-025w
Selenium (leachable)$_A$	4							µg/l	1	A-T-025w
Vanadium (leachable)$_A$	14							µg/l	1	A-T-025w
Zinc (leachable)$_A$	2							µg/l	2	A-T-025w
1,2,4-Trimethylbenzene (leachable)$_A$	13							µg/l	1	A-T-006w
Isopropylbenzene (leachable)$_A$	<1							µg/l	1	A-T-006w
n-propylbenzene (leachable)$_A$	<1							µg/l	1	A-T-006w
Styrene (leachable)$_A$	3							µg/l	1	A-T-006w
Carbon Disulphide (leachable)$_A$	<1							µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	<1							µg/l	1	A-T-006w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
PAH-16MS										
Acenaphthene$_A^{M\#}$	10.5							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.07							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	6.13							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.73							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.18							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.24							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.08							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.72							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	6.14							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	9.41							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	3.12							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	25.5							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	4.46							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	67.3							mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	401.40							µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	7.33							µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	57.04							µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	4.10							µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	0.39							µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	0.54							µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	0.05							µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	0.21							µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	3.28							µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02							µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	46.17							µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	211.08							µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	0.07							µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	1623.52							µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	278.39							µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	32.89							µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	2670							µg/l	0.02	A-T-019w
Phenols (speciated HPLC)										
Phenol$_A$	<0.2							mg/kg	0.2	A-T-050s
Cresols$_A$	<0.2							mg/kg	0.2	A-T-050s
Xylenols$_A$	<0.2							mg/kg	0.2	A-T-050s
Resorcinol$_A$	<0.2							mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
Speciated PCB-EC7 & WHO12 (leachable)										
PCB BZ 28 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 52 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 101 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 118 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 138 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 153 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 180 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 77 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 81 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 105 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 114 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 123 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 126 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 156 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 157 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 167 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 169 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
PCB BZ 189 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w
Total Speciated PCB-EC7 & WHO12 (leachable)$_A$	<0.002							µg/l	0.002	A-T-004w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100							µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100							µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100							µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100							µg/kg	100	A-T-052s
Dibenzofuran$_A$	10900							µg/kg	100	A-T-052s
Carbazole$_A$	1730							µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100							µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500							µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100							µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100							µg/kg	100	A-T-052s
4-Nitrophenol$_A$	429							µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	142							µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100							µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100							µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100							µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100							µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100							µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100							µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	1410							µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	190							µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100							µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100							µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100							µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100							µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100							µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100							µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100							µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	14100							µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100							µg/kg	100	A-T-052s
Phenol$_A$	<100							µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100							µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100							µg/kg	100	A-T-052s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
n-Dioctylphthalate$_A$	<500							µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100							µg/kg	100	A-T-052s
Nitrobenzene$_A$	176							µg/kg	100	A-T-052s
Isophorone$_A$	<100							µg/kg	100	A-T-052s
Hexachloroethane$_A$	4830							µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	<100							µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100							µg/kg	100	A-T-052s
Perylene$_A$	<100							µg/kg	100	A-T-052s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
VOC										
Dichlorodifluoromethane$_A$	<1							µg/kg	1	A-T-006s
Chloromethane$_A$	<10							µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A^\#$	<1							µg/kg	1	A-T-006s
Bromomethane$_A^\#$	<1							µg/kg	1	A-T-006s
Chloroethane$_A^\#$	<1							µg/kg	1	A-T-006s
Trichlorofluoromethane$_A^\#$	<1							µg/kg	1	A-T-006s
1,1-Dichloroethene$_A^\#$	<1							µg/kg	1	A-T-006s
Carbon Disulphide$_A^\#$	<1							µg/kg	1	A-T-006s
Dichloromethane$_A$	<5							µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A^\#$	<1							µg/kg	1	A-T-006s
1,1-Dichloroethane$_A^\#$	<1							µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A^\#$	<1							µg/kg	1	A-T-006s
2,2-Dichloropropane$_A^\#$	<1							µg/kg	1	A-T-006s
Bromochloromethane$_A^\#$	<5							µg/kg	5	A-T-006s
Chloroform$_A^\#$	<1							µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A^\#$	<1							µg/kg	1	A-T-006s
1,1-Dichloropropene$_A^\#$	<1							µg/kg	1	A-T-006s
Carbon Tetrachloride$_A^\#$	<1							µg/kg	1	A-T-006s
1,2-Dichloroethane$_A^\#$	<2							µg/kg	2	A-T-006s
Benzene$_A^\#$	<1							µg/kg	1	A-T-006s
Trichloroethene$_A^\#$	6							µg/kg	1	A-T-006s
1,2-Dichloropropane$_A^\#$	<1							µg/kg	1	A-T-006s
Dibromomethane$_A^\#$	<1							µg/kg	1	A-T-006s
Bromodichloromethane$_A^\#$	<10							µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A^\#$	<1							µg/kg	1	A-T-006s
Toluene$_A^\#$	<1							µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A^\#$	<1							µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A^\#$	<1							µg/kg	1	A-T-006s
1,3-Dichloropropane$_A^\#$	<1							µg/kg	1	A-T-006s
Tetrachloroethene$_A^\#$	<1							µg/kg	1	A-T-006s
Dibromochloromethane$_A^\#$	<3							µg/kg	3	A-T-006s
1,2-Dibromoethane$_A^\#$	<1							µg/kg	1	A-T-006s

Envirolab Job Number: 22/07379 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
Chlorobenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1							µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	2							µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	3							µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	2							µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1							µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	8							µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2							µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	23							µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	2							µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1							µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2							µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3							µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1							µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3							µg/kg	3	A-T-006s

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	<1							µg/l	1	A-T-022w
Ali >C6-C8 (leachable)$_A$	<1							µg/l	1	A-T-022w
Ali >C8-C10 (leachable)$_A$	<50							µg/l	10	A-T-055w
Ali >C10-C12 (leachable)$_A$	108							µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	62							µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	54							µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	1659							µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	175							µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	2058							µg/l	10	A-T-055w
Aro >C5-C7 (leachable)$_A$	<1							µg/l	1	A-T-022w
Aro >C7-C8 (leachable)$_A$	2							µg/l	1	A-T-022w
Aro >C8-C10 (leachable)$_A$	623							µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	9761							µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	10700							µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	3148							µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	<50							µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	24580							µg/l	20	A-T-055w
TPH (Ali & Aro >C5-C44) (leachable)$_A$	26640							µg/l	20	A-T-055w
BTEX - Benzene (leachable)$_A$	<1							µg/l	1	A-T-022w
BTEX - Toluene (leachable)$_A$	2							µg/l	1	A-T-022w
BTEX - Ethyl Benzene (leachable)$_A$	5							µg/l	1	A-T-022w
BTEX - o Xylene (leachable)$_A$	10							µg/l	1	A-T-022w
BTEX - m & p Xylene (leachable)$_A$	10							µg/l	1	A-T-022w
MTBE (leachable)$_A$	<1							µg/l	1	A-T-022w
Aro >C21-C35 (leachable)$_A$	346							µg/l	20	A-T-055w

Envirolab Job Number: 22/07379

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/07379/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	25-Jul-22									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
TPH UKCWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<5							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	8							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	19							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	21							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	273							mg/kg	1	A-T-055s
Ali >C35-C44$_A$	24							mg/kg	1	A-T-055s
Total Aliphatics$_A$	346							mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	7							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	70							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	559							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	354							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	64							mg/kg	1	A-T-055s
Aro >C35-C44$_A$	<5							mg/kg	1	A-T-055s
Total Aromatics$_A$	1060							mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44)$_A$	1410							mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02-NT04

Clients Project No: 4328

Project No: 22/07379

Date Received: 28/07/2022 (am)

Cool Box Temperatures (°C): 13.5

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	22/07379/8
Client Sample No								
Client Sample ID/Depth	WS202 1.50m	WS203 0.50m	WS209 0.40m	WS208 0.40m	WS211 0.30m	WS210 0.50m	WS210 1.30m	RBH203 3.00m
Date Sampled	21/07/22	21/07/22	21/07/22	22/07/22	22/07/22	22/07/22	22/07/22	25/07/22
A-T-004s		03/08/2022			03/08/2022			
A-T-004w	03/08/2022							03/08/2022
A-T-006s	02/08/2022	02/08/2022				02/08/2022		02/08/2022
A-T-006w	03/08/2022							03/08/2022
A-T-007s		02/08/2022			02/08/2022			
A-T-019s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-019w	03/08/2022							03/08/2022
A-T-022s	04/08/2022	08/08/2022		08/08/2022	04/08/2022	04/08/2022		04/08/2022
A-T-022w	03/08/2022							03/08/2022
A-T-024s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-025w	06/08/2022	08/08/2022			08/08/2022			06/08/2022
A-T-026s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-026w	03/08/2022	08/08/2022			08/08/2022			03/08/2022
A-T-027s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-030s		29/07/2022			02/08/2022			
A-T-031s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-031w	02/08/2022	08/08/2022			08/08/2022			02/08/2022
A-T-032 FOC	04/08/2022	01/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022
A-T-032s		01/08/2022			04/08/2022			
A-T-032w	03/08/2022	08/08/2022			08/08/2022			03/08/2022
A-T-037s		02/08/2022						
A-T-037w		08/08/2022			08/08/2022			
A-T-040s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-040w	03/08/2022							03/08/2022
A-T-042sTCN	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022	04/08/2022
A-T-044	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-045	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	29/07/2022	
A-T-050s	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022
A-T-050w		08/08/2022			08/08/2022			
A-T-052s	04/08/2022	05/08/2022				04/08/2022		04/08/2022
A-T-055s	04/08/2022	04/08/2022		08/08/2022		04/08/2022		04/08/2022
A-T-055w	03/08/2022							03/08/2022

Lab Sample ID	22/07379/1	22/07379/2	22/07379/3	22/07379/4	22/07379/5	22/07379/6	22/07379/7	22/07379/8
Client Sample No								
Client Sample ID/Depth	WS202 1.50m	WS203 0.50m	WS209 0.40m	WS208 0.40m	WS211 0.30m	WS210 0.50m	WS210 1.30m	RBH203 3.00m
Date Sampled	21/07/22	21/07/22	21/07/22	22/07/22	22/07/22	22/07/22	22/07/22	25/07/22
A-T-ANCs		02/08/2022			02/08/2022			
Calc	05/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	02/08/2022	05/08/2022
Calc-no stones		08/08/2022			08/08/2022			
Probe		02/08/2022						
Probe (w)		08/08/2022			08/08/2022			

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/08782
Issue Number: 1 **Date:** 30 September, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Linden Richardson/Reece McGuinness
Project Name: Plots NT02-NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 06/09/22
Date Instructions Received: 07/09/22
Date Analysis Completed: 29/09/22

Approved by:



Richard Wong
Client Manager

UKAS TESTING 1247

Envirolab Job Number: 22/08782

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
pH (w)$_{A}^{\#}$	7.80	7.71						pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	504	447						mg/l Ca CO3	2	A-T-049w
Sulphate (w)$_{A}^{\#}$	85	78						mg/l	1	A-T-026w
DOC (w)$_{A}^{\#}$	7.5	<2.0						mg/l	2	A-T-032w
Arsenic (dissolved)$_{A}^{\#}$	1	5						µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2						µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	101	93						mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	15	8						µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Iron (dissolved)$_{A}^{\#}$	38	190						µg/l	10	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Manganese (dissolved)$_{A}^{\#}$	52	58						µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1						µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	<2						µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	6	5						µg/l	2	A-T-025w

Envirolab Job Number: 22/08782

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Phenols (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Xylenols (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w

Envirolab Job Number: 22/08782

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
SVOC (w)										
1,2,4-Trichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,2-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,3-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,4-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
2,4,5-Trichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4,6-Trichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dimethylphenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dinitrotoluene$_A$	<1	<1						µg/l	1	A-T-052w
2,6-Dinitrotoluene$_A$	<1	<1						µg/l	1	A-T-052w
2-Chloronaphthalene$_A$	<1	<1						µg/l	1	A-T-052w
2-Chlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2-Methylnaphthalene$_A$	<1	<1						µg/l	1	A-T-052w
2-Methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
2-Nitrophenol$_A$	<1	<1						µg/l	1	A-T-052w
4-Bromophenyl phenyl ether$_A$	<1	<1						µg/l	1	A-T-052w
4-Chloro-3-methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroisopropyl)ether$_A$	<1	<1						µg/l	1	A-T-052w
3+4-Methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
4-Nitrophenol$_A$	<1	<1						µg/l	1	A-T-052w
Acenaphthene$_A$	<1	<1						µg/l	1	A-T-052w
Acenaphthylene$_A$	<1	<1						µg/l	1	A-T-052w
Anthracene$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroethyl)ether$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroethoxy)methane$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-ethylhexyl)phthalate$_A$	<10	<10						µg/l	10	A-T-052w
Benzo(a)anthracene$_A$	<1	<1						µg/l	1	A-T-052w
Butylbenzyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Benzo(b)fluoranthene$_A$	<1	<1						µg/l	1	A-T-052w
Benzo(k)fluoranthene$_A$	<1	<1						µg/l	1	A-T-052w
Benzo(a)pyrene$_A$	<1	<1						µg/l	1	A-T-052w
Benzo(ghi)perylene$_A$	<1	<1						µg/l	1	A-T-052w

Envirolab Job Number: 22/08782 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
Carbazole$_A$	<1	<1						µg/l	1	A-T-052w
Chrysene$_A$	<1	<1						µg/l	1	A-T-052w
Dibenzofuran$_A$	<1	<1						µg/l	1	A-T-052w
n-Dibutylphthalate$_A$	<1	<1						µg/l	1	A-T-052w
n-Dioctylphthalate$_A$	<10	<10						µg/l	10	A-T-052w
n-Nitroso-n-dipropylamine$_A$	<1	<1						µg/l	1	A-T-052w
Diethyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Dimethyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Dibenzo(ah)anthracene$_A$	<1	<1						µg/l	1	A-T-052w
Fluorene$_A$	<1	<1						µg/l	1	A-T-052w
Fluoranthene$_A$	<1	<1						µg/l	1	A-T-052w
Hexachlorobutadiene$_A$	<1	<1						µg/l	1	A-T-052w
Hexachlorobenzene SVOC$_A$	<1	<1						µg/l	1	A-T-052w
Pentachlorophenol SVOC$_A$	<1	<1						µg/l	1	A-T-052w
Phenol$_A$	<1	<1						µg/l	1	A-T-052w
Hexachloroethane$_A$	<1	<1						µg/l	1	A-T-052w
Nitrobenzene$_A$	<1	<1						µg/l	1	A-T-052w
Naphthalene$_A$	<1	<1						µg/l	1	A-T-052w
Isophorone$_A$	<1	<1						µg/l	1	A-T-052w
Hexachlorocyclopentadiene$_A$	<1	<1						µg/l	1	A-T-052w
Phenanthrene$_A$	<1	<1						µg/l	1	A-T-052w
Pyrene$_A$	<1	<1						µg/l	1	A-T-052w
Indeno(1,2,3-cd)pyrene$_A$	<1	<1						µg/l	1	A-T-052w
Perylene$_A$	<1	<1						µg/l	1	A-T-052w

Envirolab Job Number: 22/08782

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
VOC (w)										
Dichlorodifluoromethane$_A$	<1	<1						µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10						µg/l	10	A-T-006w
Vinyl Chloride$_A$	<1	<1						µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5						µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	<5						µg/l	5	A-T-006w
Chloroform$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	<2						µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Benzene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	<10						µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Toluene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	<3						µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1						µg/l	1	A-T-006w

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
1,1,1,2-Tetrachloroethane$_A$	<1	<1						µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Bromoform$_A^\#$	<1	<1						µg/l	1	A-T-006w
Styrene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1						µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	<1						µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	<2						µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	<2						µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	<3						µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	<3						µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	<1						µg/l	1	A-T-006w

Envirolab Job Number: 22/08782

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/08782/1	22/08782/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH205	BH206								
Depth to Top	6.50	7.00								
Depth To Bottom										
Date Sampled	02-Sep-22	02-Sep-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5						µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5						µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	<10						µg/l	10	A-T-055w
Total Aromatics $(w)_A$	<10	<10						µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10						µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02-NT04

Clients Project No: 4328

Project No: 22/08782

Date Received: 07/09/2022 (am)

Cool Box Temperatures (°C): 17.8

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/08782/1	22/08782/2
Client Sample No		
Client Sample ID/Depth	BH205 6.50m	BH206 7.00m
Date Sampled	02/09/22	02/09/22
A-T-006w	13/09/2022	12/09/2022
A-T-019w	13/09/2022	13/09/2022
A-T-022w	12/09/2022	12/09/2022
A-T-025w	29/09/2022	29/09/2022
A-T-026w	09/09/2022	09/09/2022
A-T-031w	12/09/2022	12/09/2022
A-T-032w	13/09/2022	22/09/2022
A-T-049w	21/09/2022	21/09/2022
A-T-050w	12/09/2022	12/09/2022
A-T-052w	16/09/2022	16/09/2022
A-T-055w	15/09/2022	15/09/2022
Calc-As Recd	15/09/2022	15/09/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/09132
Issue Number: 1 **Date:** 30 September, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: Plots NT02-NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 16/09/22
Date Instructions Received: 20/09/22
Date Analysis Completed: 30/09/22

Approved by:



Richard Wong
Client Manager

UKAS TESTING 1247

Envirolab Job Number: 22/09132

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
pH (w)$_{A}^{\#}$	7.28	7.16	7.10	7.11				pH	0.01	A-T-031w
Sulphate (w)$_{A}^{\#}$	188	360	271	124				mg/l	1	A-T-026w
DOC (w)$_{A}^{\#}$	<2.0	3.3	<2.0	2.5				mg/l	2	A-T-032w
Arsenic (dissolved)$_{A}^{\#}$	1	2	7	<1				µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	<0.2	<0.2				µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	98	140	142	95				mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	6	10	7	6				µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<1	10	6	6				µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	2	<1	<1				µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1				µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	3	<2	<2				µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	3	<1	<1				µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	21	13	10	8				µg/l	2	A-T-025w

Envirolab Job Number: 22/09132

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
PAH 16MS (w)										
Acenaphthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Acenaphthylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Chrysene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluorene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Naphthalene (w)$_{A}^{\#}$	<0.01	<0.01	0.09	<0.01				µg/l	0.01	A-T-019w
Phenanthrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Pyrene (w)$_{A}^{\#}$	<0.01	0.03	<0.01	<0.01				µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_{A}^{\#}$	<0.01	0.03	0.09	<0.01				µg/l	0.01	A-T-019w

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
SVOC (excluding PAH-16) (w)										
1,2,4-Trichlorobenzene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
1,2-Dichlorobenzene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
1,3-Dichlorobenzene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
1,4-Dichlorobenzene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,4,5-Trichlorophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,4,6-Trichlorophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,4-Dichlorophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,4-Dimethylphenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,4-Dinitrotoluene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2,6-Dinitrotoluene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2-Chloronaphthalene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2-Chlorophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2-Methylnaphthalene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2-Methylphenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
2-Nitrophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
4-Bromophenyl phenyl ether$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
4-Chloro-3-methylphenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Bis(2-chloroisopropyl)ether$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
3+4-Methylphenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
4-Nitrophenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Bis(2-chloroethyl)ether$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Bis(2-chloroethoxy)methane$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Bis(2-ethylhexyl)phthalate$_A$	<10	<10	<10	<10				µg/l	10	A-T-052w
Butylbenzyl phthalate$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Carbazole$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Dibenzofuran$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
n-Dibutylphthalate$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
n-Dioctylphthalate$_A$	<10	<10	<10	<10				µg/l	10	A-T-052w
n-Nitroso-n-dipropylamine$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Diethyl phthalate$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Dimethyl phthalate$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Hexachlorobutadiene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w

Envirolab Job Number: 22/09132

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
Hexachlorobenzene SVOC$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Pentachlorophenol SVOC$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Phenol$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Hexachloroethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Nitrobenzene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Isophorone$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Hexachlorocyclopentadiene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w
Perylene$_A$	<1	<1	<1	<1				µg/l	1	A-T-052w

Envirolab Job Number: 22/09132

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
VOC (w)										
Dichlorodifluoromethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10	<10	<10				µg/l	10	A-T-006w
Vinyl Chloride$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5	<5	<5				µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-006w
Chloroform$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Benzene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	<10	<10	<10				µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Toluene$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	<3	<3	<3				µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w

Envirolab Job Number: 22/09132 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
1,1,1,2-Tetrachloroethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromoform$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Styrene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	<3	<3	<3				µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	<3	<3	<3				µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w

Envirolab Job Number: 22/09132

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH207	RBH209	RBH208	RBH210						
Depth to Top	22.00	21.50	15.50	22.00						
Depth To Bottom										
Date Sampled	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22						
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A$	<10	<10	<10	<10				µg/l	10	A-T-055w
Total Aromatics (w)$_A$	<10	<10	<10	<10				µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	<10	<10	<10	<10				µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02-NT04

Clients Project No: 4328

Project No: 22/09132

Date Received: 20/09/2022 (am)

Cool Box Temperatures (°C): 13.3

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/09132/1	22/09132/2	22/09132/3	22/09132/4
Client Sample No				
Client Sample ID/Depth	RBH207 22.00m	RBH209 21.50m	RBH208 15.50m	RBH210 22.00m
Date Sampled	14/09/22	14/09/22	14/09/22	14/09/22
A-T-006w	26/09/2022	26/09/2022	26/09/2022	26/09/2022
A-T-019w	23/09/2022	23/09/2022	23/09/2022	23/09/2022
A-T-022w	22/09/2022	22/09/2022	22/09/2022	22/09/2022
A-T-025w	30/09/2022	24/09/2022	24/09/2022	24/09/2022
A-T-026w	21/09/2022	21/09/2022	21/09/2022	21/09/2022
A-T-031w	22/09/2022	22/09/2022	22/09/2022	22/09/2022
A-T-032w	22/09/2022	28/09/2022	28/09/2022	28/09/2022
A-T-049w	26/09/2022	26/09/2022	26/09/2022	26/09/2022
A-T-052w	28/09/2022	28/09/2022	28/09/2022	28/09/2022
A-T-055w	23/09/2022	23/09/2022	23/09/2022	23/09/2022
Calc-As Recd	23/09/2022	23/09/2022	23/09/2022	23/09/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

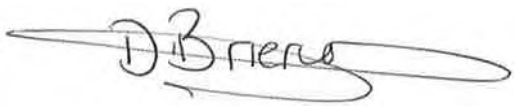
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/09651
Issue Number: 1 **Date:** 12 October, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: Plots NT02-NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 03/10/22
Date Instructions Received: 03/10/22
Date Analysis Completed: 12/10/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

UKAS TESTING 1247

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
pH (w)$_{A}^{\#}$	7.26	7.22	7.09	7.09	7.10	7.27	7.31	pH	0.01	A-T-031w
Sulphate (w)$_{A}^{\#}$	298	299	412	416	93	99	162	mg/l	1	A-T-026w
DOC - Dissolved Organic Carbon (w)$_{A}^{\#}$	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	mg/l	2	A-T-032w
Arsenic (dissolved)$_{A}^{\#}$	12	13	4	4	<1	<1	2	µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	136	119	203	181	129	109	102	mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	4	<4	12	8	12	8	7	µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	4	5	17	16	11	19	6	µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	<2	8	8	4	<2	<2	µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	<1	<1	<1	1	<1	<1	µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	14	16	11	10	12	7	6	µg/l	2	A-T-025w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.02	0.02	<0.01	0.02	0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Phenols (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Xylenols (w)$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w

Envirolab Job Number: 22/09651 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
SVOC (w)										
1,2,4-Trichlorobenzene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
1,2-Dichlorobenzene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
1,3-Dichlorobenzene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
1,4-Dichlorobenzene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,4,5-Trichlorophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,4,6-Trichlorophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,4-Dichlorophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,4-Dimethylphenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,4-Dinitrotoluene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2,6-Dinitrotoluene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2-Chloronaphthalene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2-Chlorophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2-Methylnaphthalene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2-Methylphenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
2-Nitrophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
4-Bromophenyl phenyl ether$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
4-Chloro-3-methylphenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Bis(2-chloroisopropyl)ether$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
3+4-Methylphenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
4-Nitrophenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Acenaphthene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Acenaphthylene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Anthracene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Bis(2-chloroethyl)ether$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Bis(2-chloroethoxy)methane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Bis(2-ethylhexyl)phthalate$_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-052w
Benzo(a)anthracene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Butylbenzyl phthalate$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Benzo(b)fluoranthene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Benzo(k)fluoranthene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Benzo(a)pyrene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Benzo(ghi)perylene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Carbazole$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Chrysene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Dibenzofuran$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
n-Dibutylphthalate$_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	1	A-T-052w
n-Dioctylphthalate$_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-052w
n-Nitroso-n-dipropylamine$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Diethyl phthalate$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Dimethyl phthalate$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Dibenzo(ah)anthracene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Fluorene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Fluoranthene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Hexachlorobutadiene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Hexachlorobenzene SVOC$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Pentachlorophenol SVOC$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Phenol$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Hexachloroethane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Nitrobenzene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Naphthalene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Isophorone$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Hexachlorocyclopentadiene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Phenanthrene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Pyrene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Indeno(1,2,3-cd)pyrene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w
Perylene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-052w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
VOC (w)										
Dichlorodifluoromethane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-006w
Vinyl Chloride$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromomethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chloroethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Trichlorofluoromethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A$$^\#$	2	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-006w
Carbon Disulphide$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloroethene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloroethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A$$^\#$	2	<1	<1	<1	2	<1	<1	µg/l	1	A-T-006w
Bromochloromethane$_A$$^\#$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-006w
Chloroform$_A$$^\#$	<1	<1	<1	<1	54	<1	<1	µg/l	1	A-T-006w
2,2-Dichloropropane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichloroethane$_A$$^\#$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloropropene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Benzene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Carbon Tetrachloride$_A$$^\#$	<1	<1	<1	<1	95	<1	<1	µg/l	1	A-T-006w
Dibromomethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichloropropane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromodichloromethane$_A$$^\#$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-006w
Trichloroethene$_A$$^\#$	<1	<1	4	3	480	<1	<1	µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Toluene$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,3-Dichloropropane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Dibromochloromethane$_A$$^\#$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
1,2-Dibromoethane$_A$$^\#$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w

Envirolab Job Number: 22/09651 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chlorobenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Ethylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
m & p Xylene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromoform$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Styrene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
o-Xylene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Isopropylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromobenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
2-Chlorotoluene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
n-propylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
4-Chlorotoluene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
4-Isopropyltoluene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
sec-Butylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
tert-Butylbenzene$_{A}^{\#}$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,3-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
n-butylbenzene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_{A}^{\#}$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_{A}^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_{A}^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
Hexachlorobutadiene$_{A}^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH201	RBH201 (2)	RBH202	RBH202 (2)	RBH203	RBH205	RBH207			
Depth to Top	22	22	23	23	13	22	22.5			
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22			
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-055w
Total Aromatics $(w)_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
pH (w)$_{A}^{\#}$	7.06	7.11	7.07	7.21	7.23			pH	0.01	A-T-031w
Sulphate (w)$_{A}^{\#}$	252	414	123	201	197			mg/l	1	A-T-026w
DOC - Dissolved Organic Carbon (w)$_{A}^{\#}$	<2.0	<2.0	<2.0	<2.0	<2.0			mg/l	2	A-T-032w
Arsenic (dissolved)$_{A}^{\#}$	10	2	<1	21	21			µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	<0.2	<0.2	<0.2			µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	150	202	117	159	182			mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	6	4	<4	<4	7			µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	12	<1	<1	<1	2			µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1	<0.1			µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	3	<2	<2	<2			µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	2	<1	<1	<1			µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	3	2	5	15	16			µg/l	2	A-T-025w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
PAH 16MS (w)										
Acenaphthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	0.38	0.34			µg/l	0.01	A-T-019w
Acenaphthylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	0.02	0.02			µg/l	0.01	A-T-019w
Anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	0.09	0.08			µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Chrysene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Fluorene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Naphthalene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	0.02	0.02			µg/l	0.01	A-T-019w
Phenanthrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01			µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	0.51	0.46			µg/l	0.01	A-T-019w
Phenols (speciated HPLC) (w)										
Phenol (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01			mg/l	0.01	A-T-050w
Cresols (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01			mg/l	0.01	A-T-050w
Xylenols (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01			mg/l	0.01	A-T-050w
Resorcinol (w) $_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01			mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01			mg/l	0.01	A-T-050w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
SVOC (w)										
1,2,4-Trichlorobenzene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
1,2-Dichlorobenzene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
1,3-Dichlorobenzene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
1,4-Dichlorobenzene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,4,5-Trichlorophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,4,6-Trichlorophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,4-Dichlorophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,4-Dimethylphenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,4-Dinitrotoluene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2,6-Dinitrotoluene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2-Chloronaphthalene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2-Chlorophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2-Methylnaphthalene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2-Methylphenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
2-Nitrophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
4-Bromophenyl phenyl ether$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
4-Chloro-3-methylphenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Bis(2-chloroisopropyl)ether$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
3+4-Methylphenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
4-Nitrophenol$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Acenaphthene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Acenaphthylene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Anthracene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Bis(2-chloroethyl)ether$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Bis(2-chloroethoxy)methane$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Bis(2-ethylhexyl)phthalate$_A$	<10	<10	<10	<10	<10			µg/l	10	A-T-052w
Benzo(a)anthracene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Butylbenzyl phthalate$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Benzo(b)fluoranthene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Benzo(k)fluoranthene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Benzo(a)pyrene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Benzo(ghi)perylene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w

Envirolab Job Number: 22/09651 **Client Project Name: Plots NT02-NT04**

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
Carbazole$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Chrysene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Dibenzofuran$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
n-Dibutylphthalate$_A$	<5	<5	<5	<5	<5			µg/l	1	A-T-052w
n-Dioctylphthalate$_A$	<10	<10	<10	<10	<10			µg/l	10	A-T-052w
n-Nitroso-n-dipropylamine$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Diethyl phthalate$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Dimethyl phthalate$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Dibenzo(ah)anthracene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Fluorene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Fluoranthene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Hexachlorobutadiene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Hexachlorobenzene SVOC$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Pentachlorophenol SVOC$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Phenol$_A$	<1	<1	<1	14	8			µg/l	1	A-T-052w
Hexachloroethane$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Nitrobenzene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Naphthalene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Isophorone$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Hexachlorocyclopentadiene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Phenanthrene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Pyrene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Indeno(1,2,3-cd)pyrene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w
Perylene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-052w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
VOC (w)										
Dichlorodifluoromethane$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10	<10	<10	<10			µg/l	10	A-T-006w
Vinyl Chloride$_A$	<1	<1	<1	16	15			µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	234	218			µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5	<5	<5	<5			µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	256	267			µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-006w
Chloroform$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	<2	<2	<2	<2			µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Benzene$_A^{\#}$	<1	<1	<1	258	186			µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	<10	<10	<10	<10			µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	<1	<1	<1	2	2			µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Toluene$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	<3	<3	<3	<3			µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
1,1,1,2-Tetrachloroethane$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Bromoform$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Styrene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	<2	<2	<2	<2			µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	<2	<2	<2	<2			µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	<3	<3	<3	<3			µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	<3	<3	<3	<3			µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	<1	<1	<1	<1			µg/l	1	A-T-006w

Envirolab Job Number: 22/09651

Client Project Name: Plots NT02-NT04

Client Project Ref: 4328

Lab Sample ID	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH208	RBH209	RBH210	BH01	BH01 (2)					
Depth to Top	21.5	15.5	22	13	13					
Depth To Bottom										
Date Sampled	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22	27-Sep-22					
Sample Type	Water - EW	Water - EW	Water - EW	Water - EW	Water - EW					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A					
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	<5	<5	<5	<5	11			µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	<5	<5	<5	<5	11			µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1	247	180			µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5	<5			µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	<5	<5	<5	7	6			µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	<5	<5	<5	9	7			µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A$	<10	<10	<10	<10	<10			µg/l	10	A-T-055w
Total Aromatics (w)$_A$	<10	<10	<10	263	193			µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	<10	<10	<10	263	204			µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1	247	180			µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1	<1	<1			µg/l	1	A-T-022w

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02-NT04

Project No: 22/09651

Date Received: 03/10/2022 (am)

Cool Box Temperatures (°C): 10.4, 9.8, 9.9, 10.1, 9.2 10.4

Clients Project No: 4328

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/09651/1	22/09651/2	22/09651/3	22/09651/4	22/09651/5	22/09651/7	22/09651/8	22/09651/9	22/09651/10	22/09651/11	22/09651/12	22/09651/13
Client Sample No												
Client Sample ID/Depth	RBH201 22m	RBH201 (2) 22m	RBH202 23m	RBH202 (2) 23m	RBH203 13m	RBH205 22m	RBH207 22.5m	RBH208 21.5m	RBH209 15.5m	RBH210 22m	BH01 13m	BH01 (2) 13m
Date Sampled	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22	27/09/22
A-T-006w	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022
A-T-019w	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
A-T-022w	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022
A-T-025w	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022
A-T-026w	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
A-T-031w	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
A-T-032w	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022	11/10/2022
A-T-049w	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
A-T-050w	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022	08/10/2022
A-T-052w	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
A-T-055w	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
Calc-As Recd	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

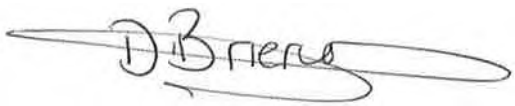
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/09831
Issue Number: 1 **Date:** 17 October, 2022

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Reece McGuinness
Project Name: Plots NT02 - NT04
Project Ref: 4328
Order No: 1781
Date Samples Received: 06/10/22
Date Instructions Received: 07/10/22
Date Analysis Completed: 17/10/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

UKAS TESTING 1247

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
pH (w)$_{A}^{\#}$	7.08	7.25						pH	0.01	A-T-031w
Sulphate (w)$_{A}^{\#}$	99	93						mg/l	1	A-T-026w
DOC - Dissolved Organic Carbon (w)$_{A}^{\#}$	<2.0	<2.0						mg/l	2	A-T-032w
Arsenic (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2						µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	118	122						mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	<4	4						µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	8	8						µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1						µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	4	7						µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	2	3						µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	7	37						µg/l	2	A-T-025w

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	<0.01						µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.01	<0.01						µg/l	0.01	A-T-019w
Phenols (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Xylenols (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01	<0.01						mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01	<0.01						mg/l	0.01	A-T-050w

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
SVOC (excluding PAH-16) (w)										
1,2,4-Trichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,2-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,3-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
1,4-Dichlorobenzene$_A$	<1	<1						µg/l	1	A-T-052w
2,4,5-Trichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4,6-Trichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dichlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dimethylphenol$_A$	<1	<1						µg/l	1	A-T-052w
2,4-Dinitrotoluene$_A$	<1	<1						µg/l	1	A-T-052w
2,6-Dinitrotoluene$_A$	<1	<1						µg/l	1	A-T-052w
2-Chloronaphthalene$_A$	<1	<1						µg/l	1	A-T-052w
2-Chlorophenol$_A$	<1	<1						µg/l	1	A-T-052w
2-Methylnaphthalene$_A$	<1	<1						µg/l	1	A-T-052w
2-Methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
2-Nitrophenol$_A$	<1	<1						µg/l	1	A-T-052w
4-Bromophenyl phenyl ether$_A$	<1	<1						µg/l	1	A-T-052w
4-Chloro-3-methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroisopropyl)ether$_A$	<1	<1						µg/l	1	A-T-052w
3+4-Methylphenol$_A$	<1	<1						µg/l	1	A-T-052w
4-Nitrophenol$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroethyl)ether$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-chloroethoxy)methane$_A$	<1	<1						µg/l	1	A-T-052w
Bis(2-ethylhexyl)phthalate$_A$	<10	<10						µg/l	10	A-T-052w
Butylbenzyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Carbazole$_A$	<1	<1						µg/l	1	A-T-052w
Dibenzofuran$_A$	<1	<1						µg/l	1	A-T-052w
n-Dibutylphthalate$_A$	<1	<1						µg/l	1	A-T-052w
n-Dioctylphthalate$_A$	<10	<10						µg/l	10	A-T-052w
n-Nitroso-n-dipropylamine$_A$	<1	<1						µg/l	1	A-T-052w
Diethyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Dimethyl phthalate$_A$	<1	<1						µg/l	1	A-T-052w
Hexachlorobutadiene$_A$	<1	<1						µg/l	1	A-T-052w

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
Hexachlorobenzene SVOC$_A$	<1	<1						µg/l	1	A-T-052w
Pentachlorophenol SVOC$_A$	<1	<1						µg/l	1	A-T-052w
Phenol$_A$	<1	<1						µg/l	1	A-T-052w
Hexachloroethane$_A$	<1	<1						µg/l	1	A-T-052w
Nitrobenzene$_A$	<1	<1						µg/l	1	A-T-052w
Isophorone$_A$	<1	<1						µg/l	1	A-T-052w
Hexachlorocyclopentadiene$_A$	<1	<1						µg/l	1	A-T-052w
Perylene$_A$	<1	<1						µg/l	1	A-T-052w

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
VOC (w)										
Dichlorodifluoromethane$_A$	<1	<1						µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10						µg/l	10	A-T-006w
Vinyl Chloride$_A$	<1	<1						µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5						µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	2	3						µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	<5						µg/l	5	A-T-006w
Chloroform$_A^{\#}$	77	33						µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	<2						µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Benzene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	104	58						µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	<10						µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	572	250						µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	1	<1						µg/l	1	A-T-006w
Toluene$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	<3						µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	<1						µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1						µg/l	1	A-T-006w

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
1,1,1,2-Tetrachloroethane$_A$	<1	<1						µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Bromoform$_A^\#$	<1	<1						µg/l	1	A-T-006w
Styrene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1						µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	<1						µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	<2						µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	<1						µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	<2						µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	<3						µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	<3						µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	<1						µg/l	1	A-T-006w

Envirolab Job Number: 22/09831

Client Project Name: Plots NT02 - NT04

Client Project Ref: 4328

Lab Sample ID	22/09831/1	22/09831/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH203	BH03								
Depth to Top	10.00	10.00								
Depth To Bottom										
Date Sampled	04-Oct-22	04-Oct-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5						µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5						µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	18	13						µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	<10						µg/l	10	A-T-055w
Total Aromatics $(w)_A$	18	13						µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	18	13						µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1						µg/l	1	A-T-022w

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: ROCP LIMITED, Commercial Wharf 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Project: Plots NT02 - NT04

Clients Project No: 4328

Project No: 22/09831

Date Received: 07/10/2022 (am)

Cool Box Temperatures (°C): 14.4

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/09831/1	22/09831/2
Client Sample No		
Client Sample ID/Depth	RBH203 10.00m	BH03 10.00m
Date Sampled	04/10/22	04/10/22
A-T-006w	12/10/2022	12/10/2022
A-T-019w	12/10/2022	12/10/2022
A-T-022w	13/10/2022	13/10/2022
A-T-025w	15/10/2022	15/10/2022
A-T-026w	14/10/2022	14/10/2022
A-T-031w	14/10/2022	14/10/2022
A-T-032w	17/10/2022	17/10/2022
A-T-049w	17/10/2022	17/10/2022
A-T-050w	14/10/2022	14/10/2022
A-T-052w	14/10/2022	14/10/2022
A-T-055w	12/10/2022	12/10/2022
Calc-As Recd	13/10/2022	13/10/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Reece McGuinnes
ROC Consulting Ltd
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Manchester
M15 4PZ

t: 0161 8339737

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i2 Analytical Ltd.
7 Woodshots Meadow,
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Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-79465

Project / Site name:	Plots NT02-NT04	**Samples received on:**	19/08/2022
Your job number:	4328	**Samples instructed on/ Analysis started on:**	19/08/2022
Your order number:	1792	**Analysis completed by:**	01/09/2022
Report Issue Number:	1	**Report issued on:**	05/09/2022
Samples Analysed:	11 soil samples		

Signed:

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 22-79465
Project / Site name: Plots NT02-NT04
Your Order No: 1792

Lab Sample Number				2397685	2397686	2397687	2397688	2397689
Sample Reference				RBH202	RBH201	RBH207	RBH203	RBH210
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				16.36-16.44	14.32-14.38	6.80-6.89	15.23-15.30	10.24-10.35
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	5.1	7.4	4	4.9	6
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3	0.3	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.0	8.7	9.3	8.5	9.0
Total Sulphate as SO4	mg/kg	50	MCERTS	65	160	440	81	660
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	14	19	13	57	48
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0069	0.0094	0.0067	0.029	0.024
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	6.9	9.4	6.7	28.5	24.1
Total Sulphur	%	0.005	MCERTS	< 0.005	0.006	0.017	< 0.005	0.029

U/S = Unsuitable Sample I/S = Insufficient Sample

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 22-79465
Project / Site name: Plots NT02-NT04
Your Order No: 1792

Lab Sample Number				2397690	2397691	2397692	2397693	2397694
Sample Reference				RBH208	WS209	WS203	TP213	TP219
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				13.00-13.08	3.00	2.50	1.20	2.00
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	3.7	9.7	10	9.5	5.6
Total mass of sample received	kg	0.001	NONE	0.5	0.2	0.2	0.2	0.2

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.8	8.4	7.3	8.5	8.7
Total Sulphate as SO4	mg/kg	50	MCERTS	100	290	350	340	270
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	25	150	260	260	170
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.012	0.077	0.13	0.13	0.087
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	12.4	77.4	129	131	87.2
Total Sulphur	%	0.005	MCERTS	< 0.005	0.011	0.013	0.011	0.012

U/S = Unsuitable Sample I/S = Insufficient Sample

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 22-79465
Project / Site name: Plots NT02-NT04
Your Order No: 1792

Lab Sample Number				2397695
Sample Reference				TP215
Sample Number				None Supplied
Depth (m)				2.50
Date Sampled				Deviating
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	11
Total mass of sample received	kg	0.001	NONE	0.2

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.1
Total Sulphate as SO4	mg/kg	50	MCERTS	450
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	290
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.14
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	144
Total Sulphur	%	0.005	MCERTS	0.017

U/S = Unsuitable Sample I/S = Insufficient Sample

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 22-79465
Project / Site name: Plots NT02-NT04

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2397685	RBH202	None Supplied	16.36-16.44	Red clay.
2397686	RBH201	None Supplied	14.32-14.38	Red clay.
2397687	RBH207	None Supplied	6.80-6.89	Red clay with gravel.
2397688	RBH203	None Supplied	15.23-15.30	Red clay.
2397689	RBH210	None Supplied	10.24-10.35	Red clay with gravel.
2397690	RBH208	None Supplied	13.00-13.08	Brown sandy clay.
2397691	WS209	None Supplied	3	Brown clay and sand.
2397692	WS203	None Supplied	2.5	Brown clay and sand.
2397693	TP213	None Supplied	1.2	Brown clay and sand with gravel.
2397694	TP219	None Supplied	2	Brown sandy clay.
2397695	TP215	None Supplied	2.5	Brown clay and sand.

Analytical Report Number : 22-79465
Project / Site name: Plots NT02-NT04

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report

Analytical Report Number : 22-79465
Project / Site name: Plots NT02-NT04

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
RBH201	None Supplied	S	2397686	a	None Supplied	None Supplied	None Supplied
RBH202	None Supplied	S	2397685	a	None Supplied	None Supplied	None Supplied
RBH203	None Supplied	S	2397688	a	None Supplied	None Supplied	None Supplied
RBH207	None Supplied	S	2397687	a	None Supplied	None Supplied	None Supplied
RBH208	None Supplied	S	2397690	a	None Supplied	None Supplied	None Supplied
RBH210	None Supplied	S	2397689	a	None Supplied	None Supplied	None Supplied
TP213	None Supplied	S	2397693	a	None Supplied	None Supplied	None Supplied
TP215	None Supplied	S	2397695	a	None Supplied	None Supplied	None Supplied
TP219	None Supplied	S	2397694	a	None Supplied	None Supplied	None Supplied
WS203	None Supplied	S	2397692	a	None Supplied	None Supplied	None Supplied
WS209	None Supplied	S	2397691	a	None Supplied	None Supplied	None Supplied

Key: **a** - No sampling date **b** - Incorrect container
c - Holding time **d** - Headspace **e** - Temperature

APPENDIX D – GEOTECHNICAL TESTING RESULTS

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

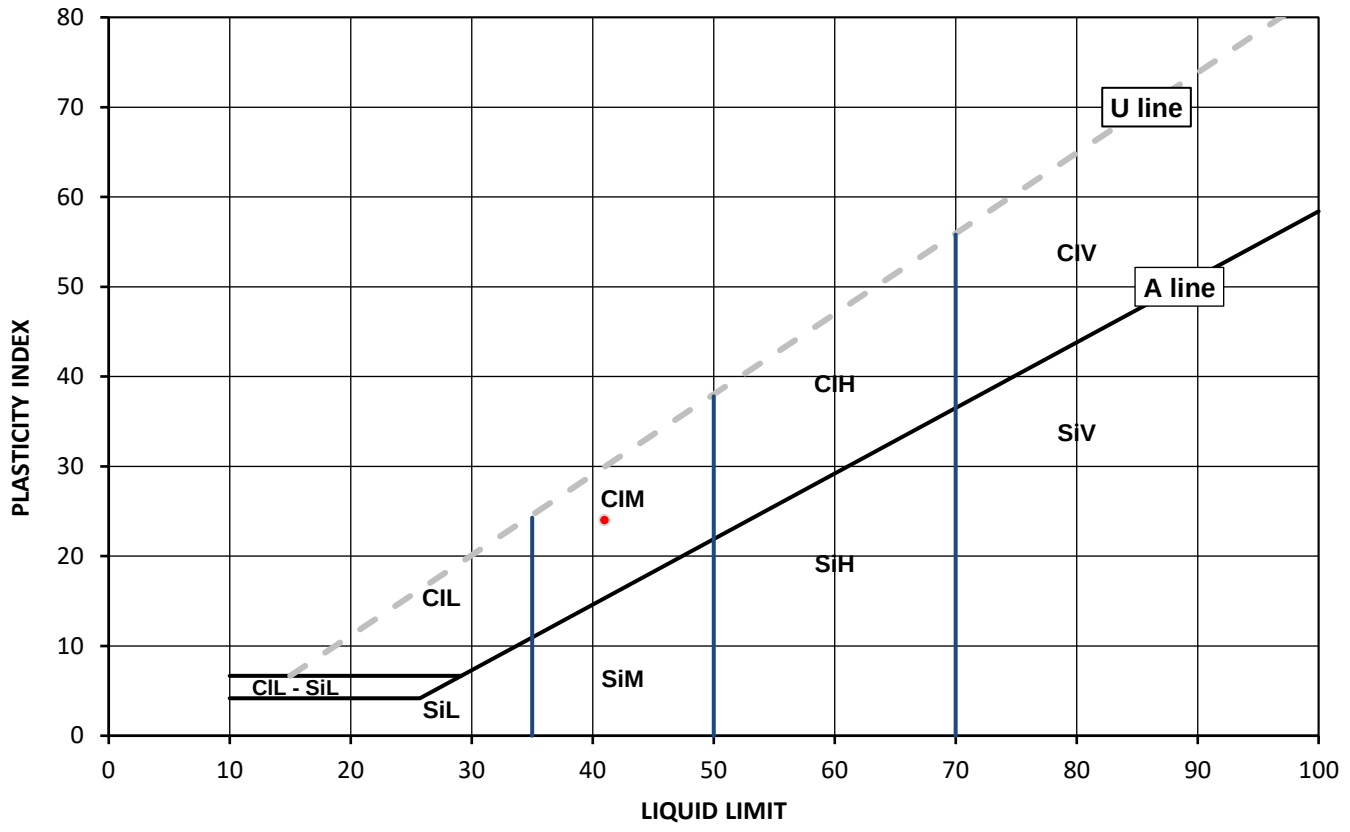
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397661	Depth Top [m]:	3.00
Hole No.:	WS209	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	41	17	24	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 232.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

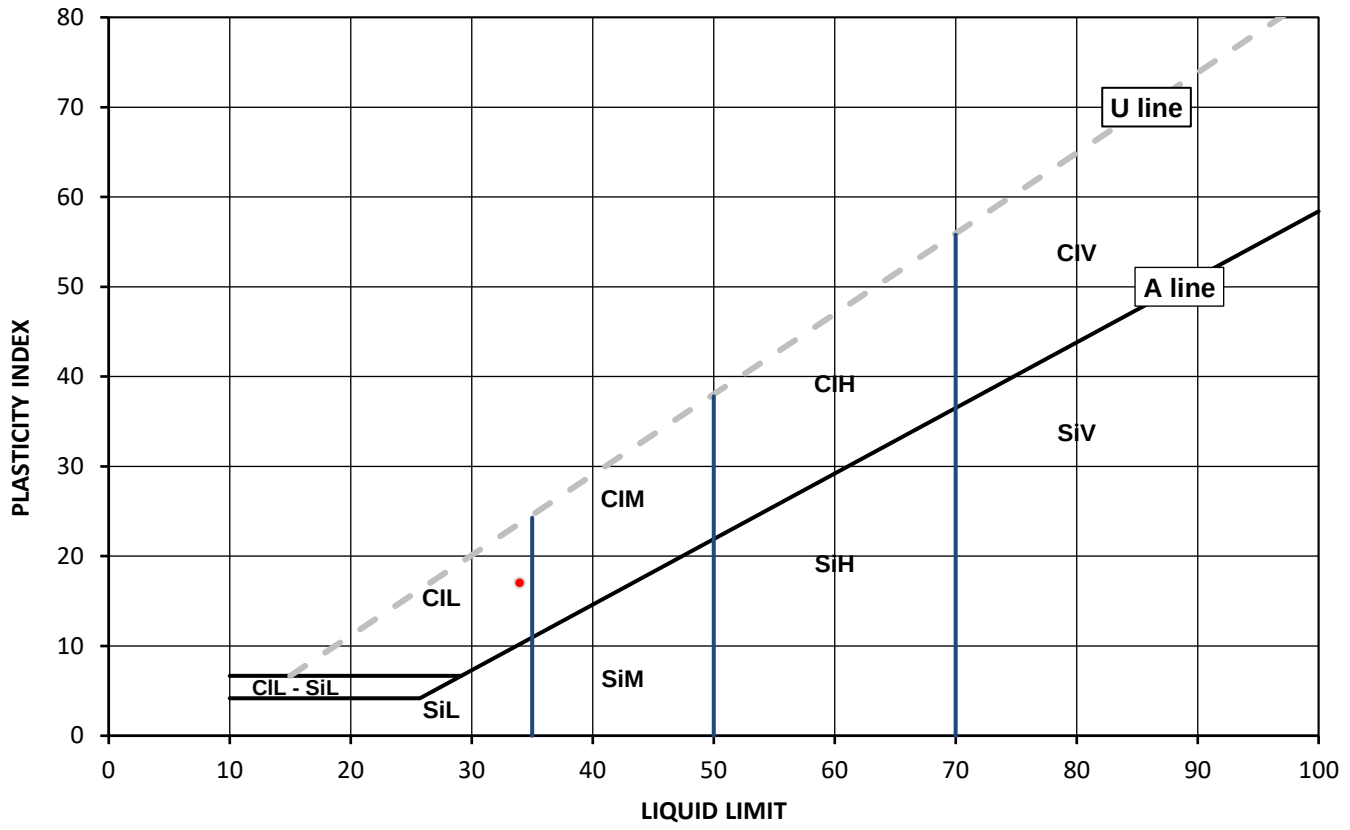
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	31/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397662	Depth Top [m]:	2.50
Hole No.:	WS203	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown very sandy CLAY		
Sample Preparation:	Tested in natural condition		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
15	34	17	17	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 232.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

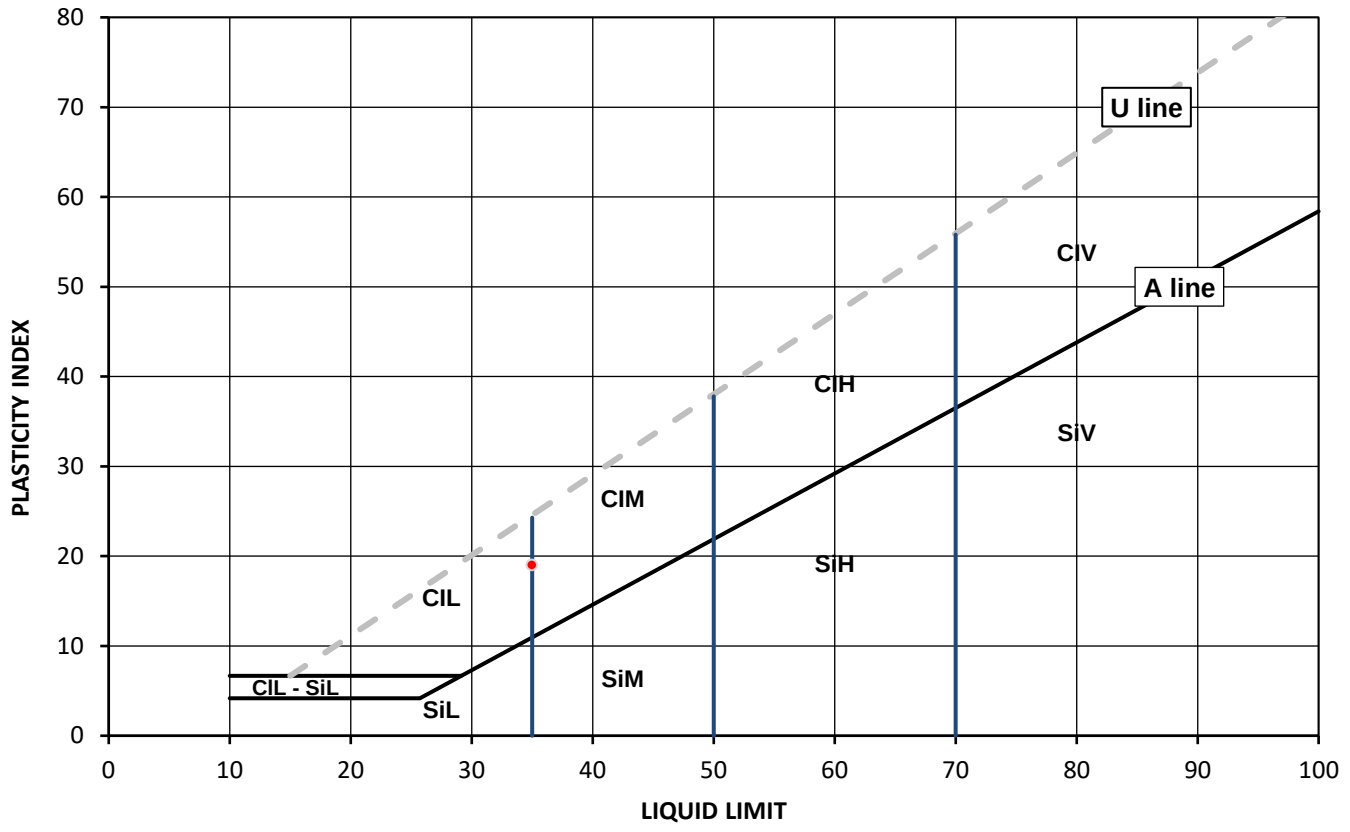
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397663	Depth Top [m]:	1.20
Hole No.:	TP213	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brownish grey slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
18	35	16	19	96



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 232.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

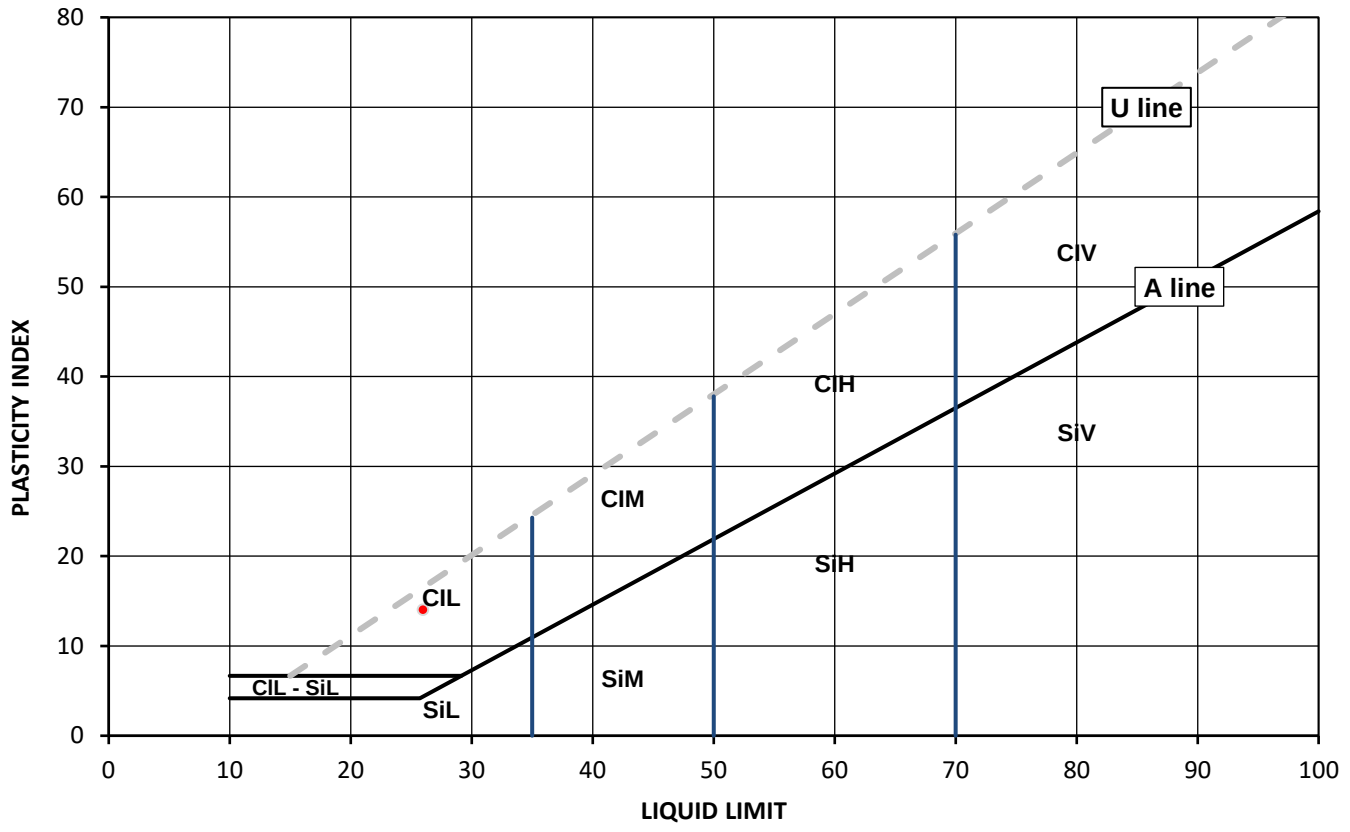
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397664	Depth Top [m]:	2.00
Hole No.:	TP219	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
4.8	26	12	14	97



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 232.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

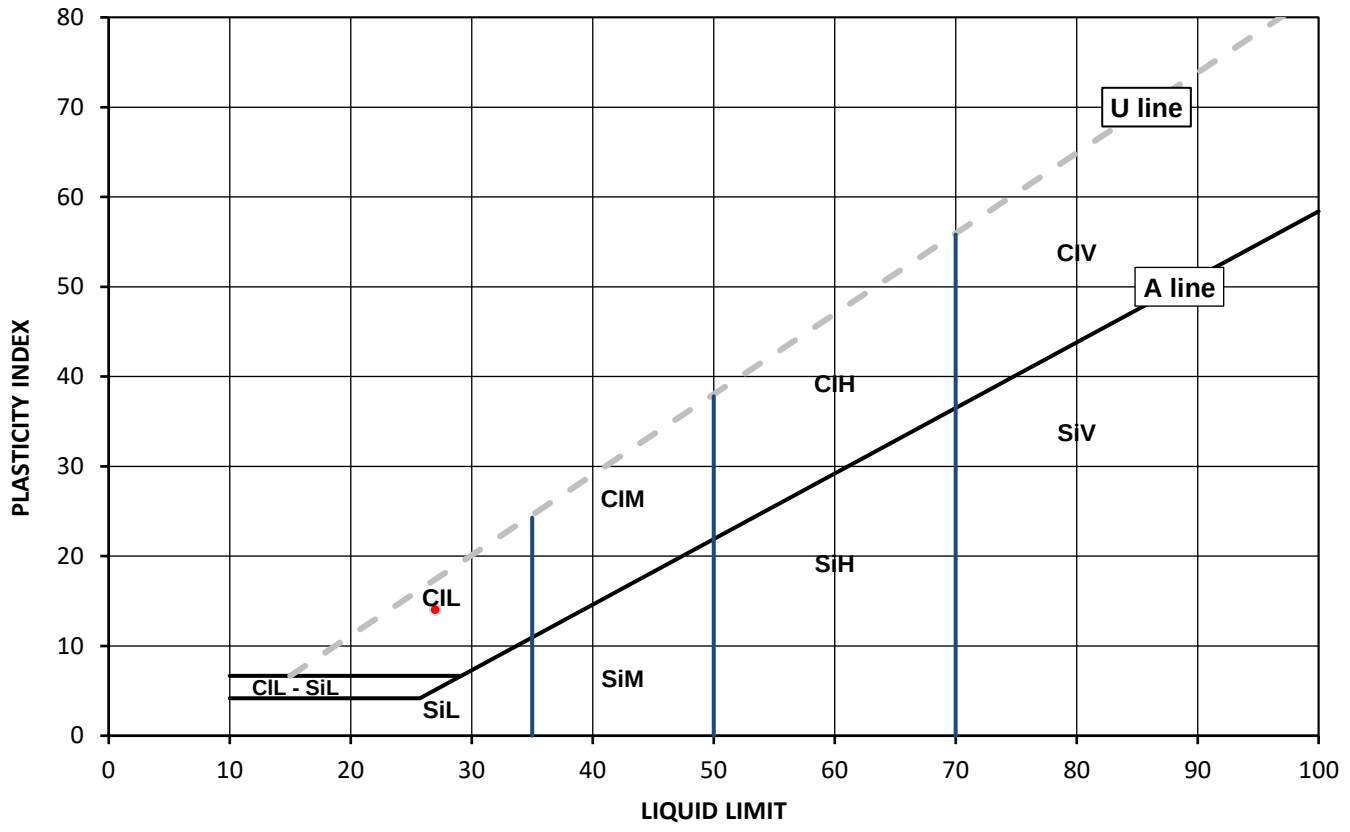
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397665	Depth Top [m]:	2.50
Hole No.:	TP215	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	27	13	14	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 232.12

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 30/08 - 31/08/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-1 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2397663	TP213	Not Given	1.20	Not Given	D	Brownish grey slightly gravelly sandy CLAY	Atterberg 1 Point	18		96	35	16	19						
2397665	TP215	Not Given	2.50	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	16		99	27	13	14						
2397664	TP219	Not Given	2.00	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	4.8		97	26	12	14						
2397662	WS203	Not Given	2.50	Not Given	D	Brown very sandy CLAY	Atterberg 1 Point	15		100	34	17	17						
2397661	WS209	Not Given	3.00	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 1 Point	17		98	41	17	24						

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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Date Reported: 12/09/2022

GF 234.14

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 30/08 - 31/08/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2397663	TP213	Not Given	1.20	Not Given	D	Brownish grey slightly gravelly sandy CLAY		18	Sample was quartered, oven dried at 106.1 °C			
2397665	TP215	Not Given	2.50	Not Given	D	Brown slightly gravelly very sandy CLAY		16	Sample was quartered, oven dried at 106.1 °C			
2397664	TP219	Not Given	2.00	Not Given	D	Brown slightly gravelly very sandy CLAY		4.8	Sample was quartered, oven dried at 106 °C			
2397662	WS203	Not Given	2.50	Not Given	D	Brown very sandy CLAY		15	Sample was quartered, oven dried at 106 °C			
2397661	WS209	Not Given	3.00	Not Given	D	Brown slightly gravelly sandy CLAY		17	Sample was quartered, oven dried at 106.1 °C			

Comments:

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Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 099.16

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397631	RBH201	Not Given	20.18	20.38	C	Reddish brown SILTSTONE	WC = 7.8%	1	D	U	YES	106.8	86.4	85.0	81.0	2.6	83.7	0.37	0.47
2397633	RBH201	Not Given	24.23	24.40	C	Reddish brown SILTSTONE	WC = 5.2%	1	D	U	YES	88.4	86.4	85.0	81.0	2.5	83.7	0.35	0.44
2397623	RBH202	Not Given	14.45	14.53	C	Light brown SILTSTONE	WC = 1.7%	1	A	U	YES	-	89.0	68.0	52.0	6.9	76.8	1.17	1.42
2397624	RBH202	Not Given	15.32	15.42	C	Reddish brown SILTSTONE	WC = 7.3%	1	D	U	YES	57.5	86.0	83.0	79.0	0.2	82.4	0.03	0.04
2397625	RBH202	Not Given	17.64	17.71	C	Light brown SILTSTONE	WC = 4.4%	1	I	U	YES	33.7	86.6	64.0	60.0	0.6	81.3	0.08	0.10
2397626	RBH202	Not Given	20.22	20.35	C	Reddish brown SILTSTONE	WC = 6.6%	1	D	U	YES	118.1	86.1	84.0	81.0	2.4	83.5	0.34	0.43
2397640	RBH203	Not Given	8.69	8.79	C	Reddish brown SILTSTONE	WC = 7.8%	1	D	U	YES	58.0	87.9	82.0	80.0	0.1	83.9	0.01	0.02
2397658	RBH205	Not Given	9.57	9.64	C	Reddish brown SILTSTONE	WC = 7.5%	1	A	U	YES	-	84.8	66.0	42.0	1.5	67.3	0.33	0.38
2397659	RBH205	Not Given	14.64	14.74	C	Reddish brown SILTSTONE	WC = 5.6%	1	D	U	YES	50.7	85.3	86.0	79.0	2.1	82.1	0.30	0.38
2397611	RBH206	Not Given	7.65	7.75	C	Light brown SILTSTONE	WC = 3.7%	1	I	U	YES	65.0	90.4	67.0	64.0	1.1	85.8	0.15	0.19

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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Date Reported: 12/09/2022

GF 134.13

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top m	Depth Base m	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne mm	W mm	Dps mm	Dps' mm	kN	mm	Is MPa	Is(50) MPa
2397612	RBH206	Not Given	8.30	8.42	C	Reddish brown SILTSTONE	WC = 4.4%	1	D	U	YES	62.3	89.9	89.0	84.0	0.4	86.9	0.05	0.07
2397614	RBH206	Not Given	14.24	14.29	C	Reddish brown SILTSTONE	WC = 3.5%	1	A	U	YES	-	83.6	46.0	38.0	3.7	63.6	0.90	1.01
2397615	RBH206	Not Given	15.12	15.36	C	Reddish brown SILTSTONE	WC = 4.4%	1	D	U	YES	123.3	89.8	89.0	63.0	3.7	75.2	0.65	0.78
2397617	RBH206	Not Given	16.96	17.04	C	Reddish brown SILTSTONE	WC = 5.3%	1	A	U	YES	-	87.0	80.0	53.0	3.2	76.6	0.54	0.66
2397618	RBH206	Not Given	20.10	20.15	C	Reddish brown SILTSTONE	WC = 5.9%	1	A	U	YES	-	86.9	50.0	36.0	2.4	63.1	0.59	0.66
2397639	RBH207	Not Given	5.34	5.40	C	Reddish brown SILTSTONE	WC = 4.3%	1	A	U	YES	-	84.5	49.0	45.0	0.4	69.6	0.08	0.10
2397651	RBH208	Not Given	13.85	13.93	C	Grey SILTSTONE	WC = 6.8%	1	D	U	YES	63.9	85.8	86.0	83.0	0.5	84.4	0.07	0.09
2397652	RBH208	Not Given	15.80	15.93	C	Reddish brown SILTSTONE	WC = 6.8%	1	I	U	YES	87.3	86.2	74.0	67.0	1.8	85.7	0.24	0.30
2397653	RBH208	Not Given	16.95	17.10	C	Reddish brown SILTSTONE	WC = 4.7%	1	D	U	YES	78.5	84.6	84.0	80.0	3.6	82.3	0.53	0.67
2397655	RBH208	Not Given	19.10	19.21	C	Reddish brown SILTSTONE	WC = 6.7%	1	D	U	YES	47.5	84.5	83.0	80.0	1.5	82.2	0.22	0.28

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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Date Reported: 12/09/2022

GF 134.13

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397656	RBH208	Not Given	20.22	20.32	C	Reddish brown SILTSTONE	WC = 6.3%	1	D	U	YES	57.1	85.5	84.0	81.0	2.9	83.2	0.42	0.53
2397657	RBH208	Not Given	23.19	23.29	C	Reddish brown SILTSTONE	WC = 5.1%	1	D	U	YES	62.4	83.2	83.8	79.0	0.6	81.1	0.08	0.10
2397610	RBH209	Not Given	17.15	17.20	C	Reddish brown SILTSTONE	WC = 5.4%	1	A	U	YES	-	81.5	52.0	48.0	1.2	70.6	0.24	0.28
2397646	RBH210	Not Given	13.18	13.28	C	Reddish brown SILTSTONE	WC = 4.1%	1	A	U	YES	-	84.7	77.0	61.0	2.6	81.1	0.39	0.48
2397648	RBH210	Not Given	16.58	16.64	C	Reddish brown SILTSTONE	WC = 9.1%	1	A	U	YES	-	85.0	39.0	36.0	0.3	62.4	0.08	0.09
2397649	RBH210	Not Given	20.57	20.62	C	Reddish brown SILTSTONE	WC = 6.1%	1	A	U	YES	-	80.4	43.0	40.0	0.4	64.0	0.09	0.10

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Date Reported: 12/09/2022

GF 134.13

SUMMARY REPORT

DETERMINATION OF UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Tested in Accordance with: ISRM, 2007, p153, part 1

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 07/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Specimen Dimensions (2)				Bulk density (2)	Water Content (1)	Uniaxial Compression (3)			
		Reference	Depth Top m	Depth Base m	Type			Diameter mm	Length mm	H/D	Orientation of sample	Mg/m3	%	Condition	Stress Rate Mpa/s	Mode of failure	UCS Mpa
2397630	RBH201	Not Given	17.88	18.20	C	Light brown to grey SILTSTONE		86.7	240.2	2.8	Vertical	2.28	6.8	as received	0.0339	S + AC	15.9
2397616	RBH206	Not Given	15.75	16.11	C	Brown SILTSTONE		89.2	246.4	2.8	Vertical	2.43	5.7	as received	0.0320	MS + AC	10.4
2397666	RBH206	Not Given	18.59	18.94	C	Light grey SILTSTONE		90.0	249.0	2.8	Vertical	2.18	5.2	as received	0.0315	S + AC	15.0

Note: 1 - ISRM p87 test 1, water content at 105 ± 3 oC, specimen as tested for UCS, 2 - ISRM p86 clause (vii), Caliper method used for determination of bulk volume and derivation of bulk density, 3 - ISRM p153 part 1, determination of Uniaxial Compressive Strength (UCS) of Rock Materials, above notes apply unless annotated otherwise in the remarks. Compaction machine: VJ Tech AUTOCON - VJT 51-3011; Mode of failure legend: S - Single shear, MS - multiple shear, AC - Axial cleavage, F - Fragmented

Comments:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/09/2022

GF 223.14

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

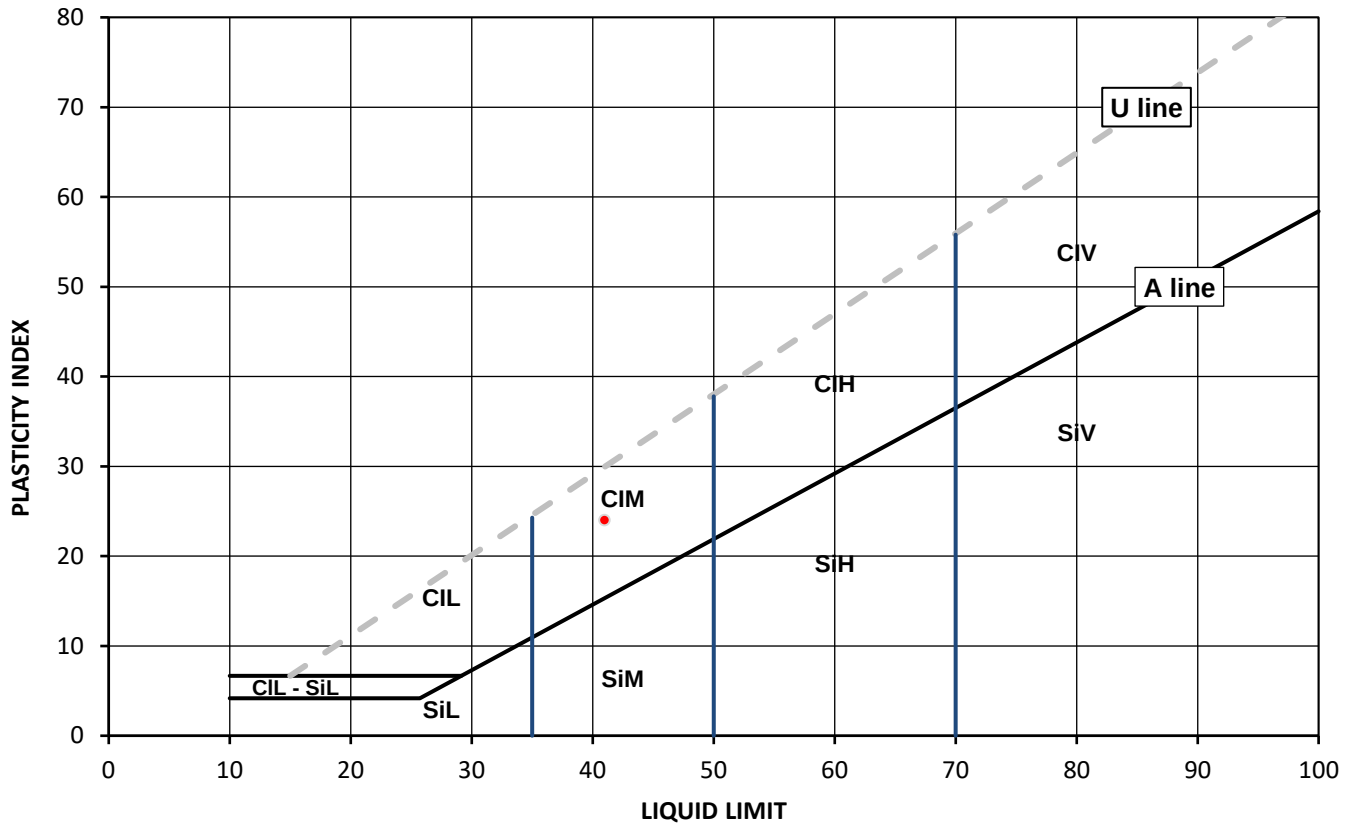
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397661	Depth Top [m]:	3.00
Hole No.:	WS209	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	41	17	24	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 232.12**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

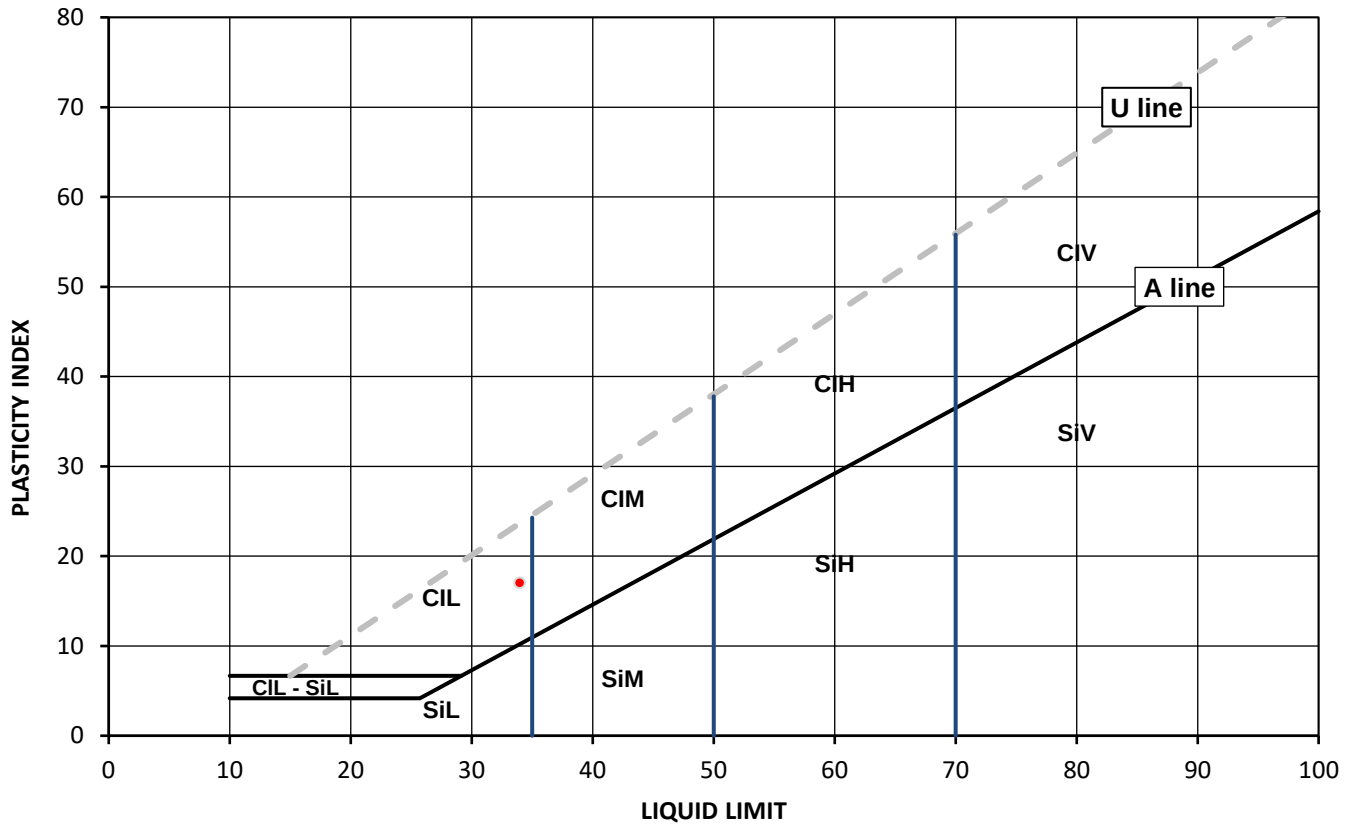
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	31/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397662	Depth Top [m]:	2.50
Hole No.:	WS203	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown very sandy CLAY		
Sample Preparation:	Tested in natural condition		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
15	34	17	17	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 232.12**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

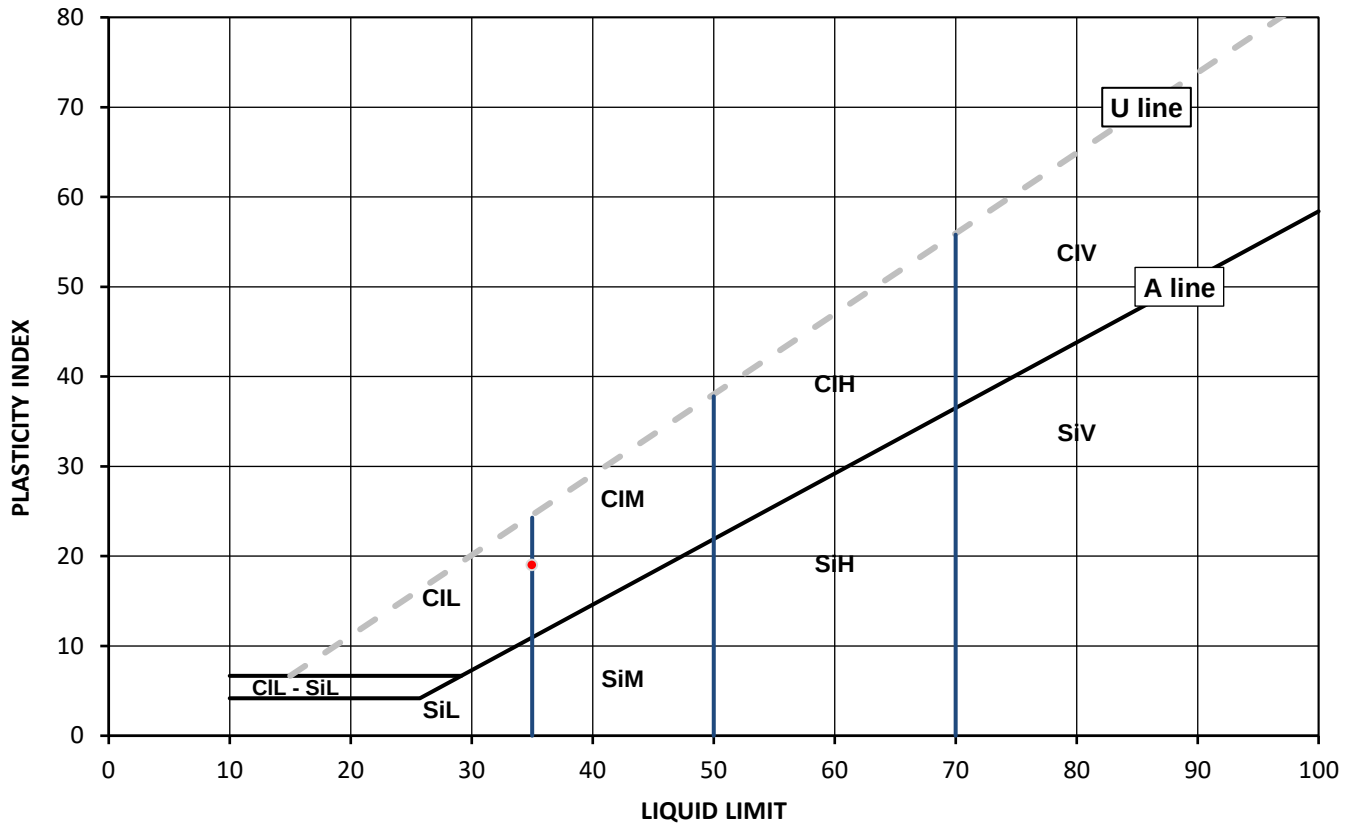
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397663	Depth Top [m]:	1.20
Hole No.:	TP213	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brownish grey slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
18	35	16	19	96



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 232.12**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

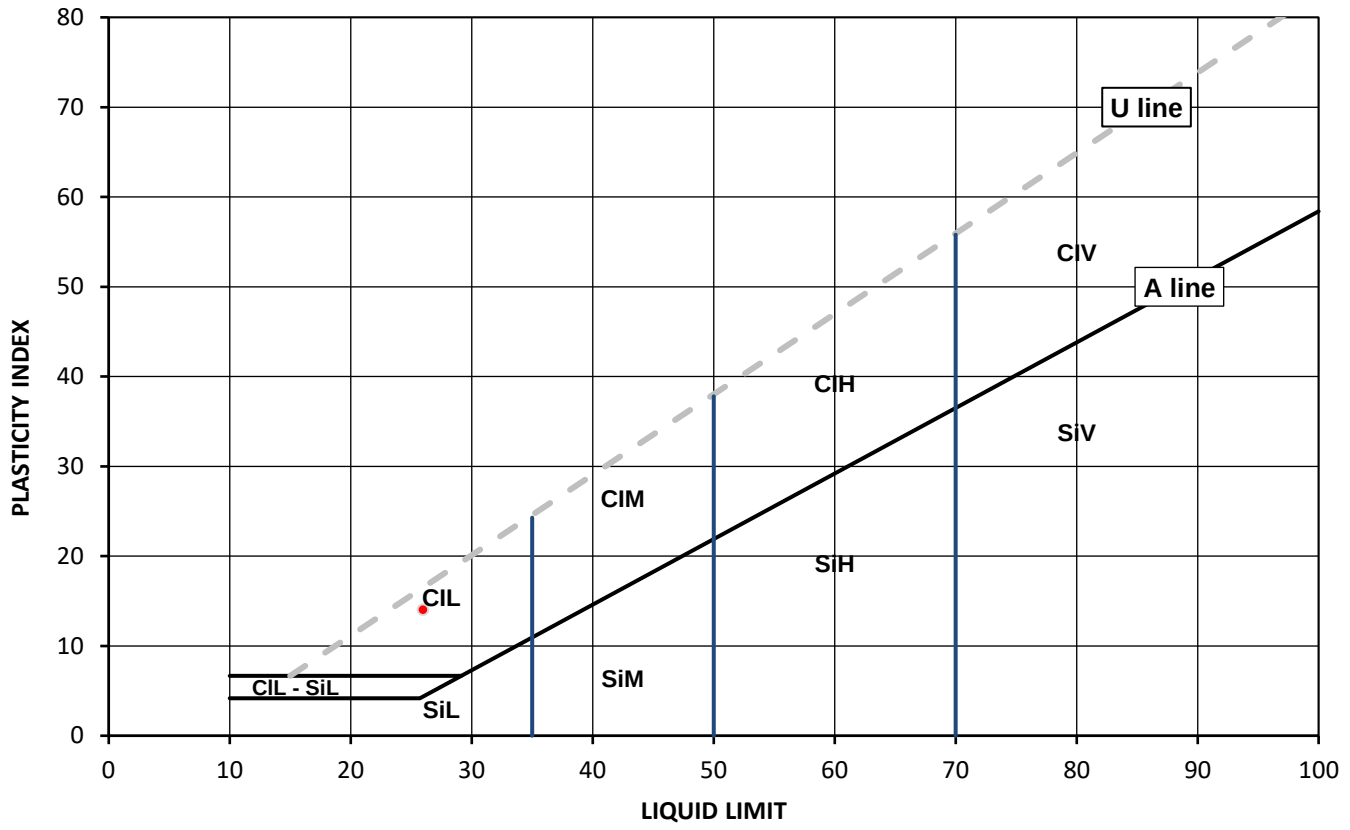
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397664	Depth Top [m]:	2.00
Hole No.:	TP219	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
4.8	26	12	14	97



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 232.12**

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

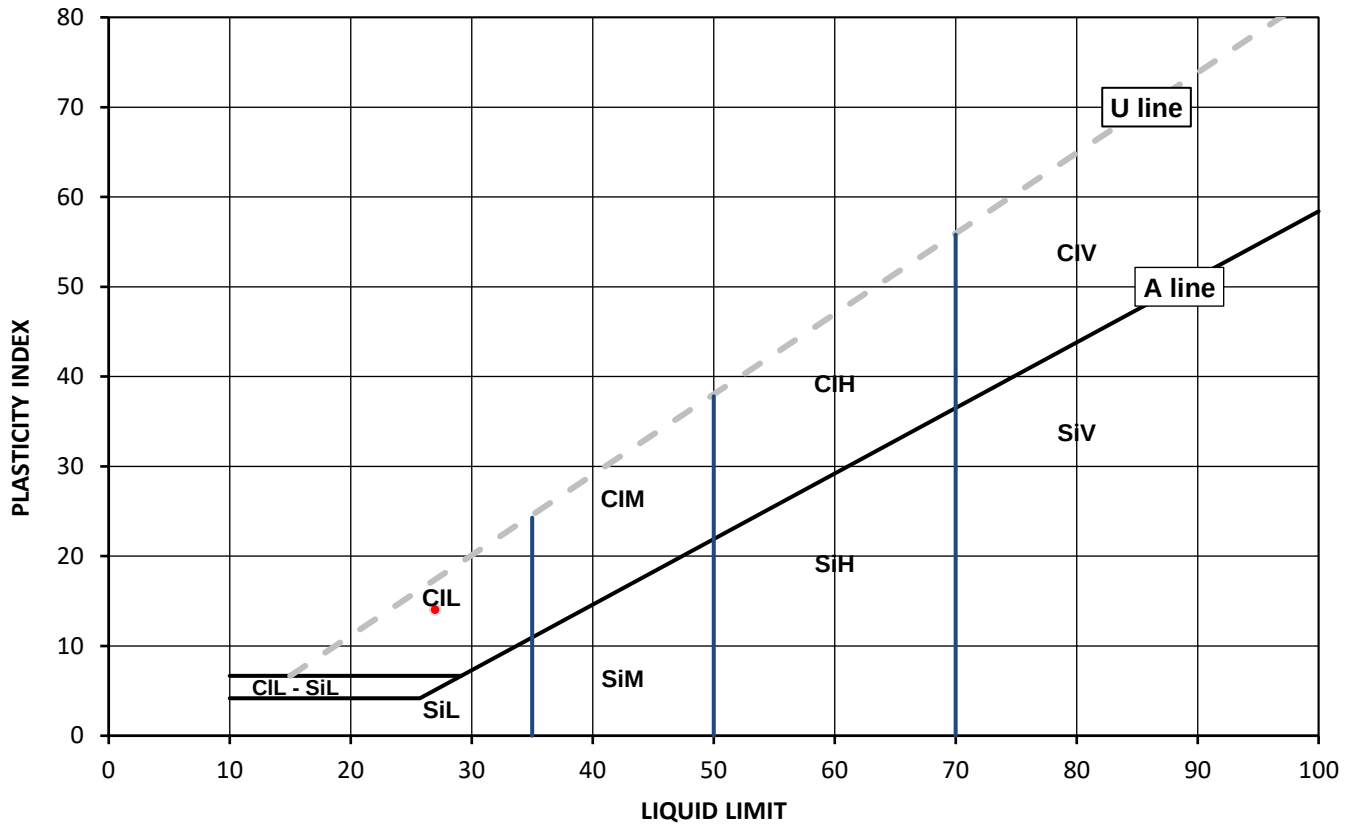
Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	30/08/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397665	Depth Top [m]:	2.50
Hole No.:	TP215	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	27	13	14	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 232.12**

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 30/08 - 31/08/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-1 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2397663	TP213	Not Given	1.20	Not Given	D	Brownish grey slightly gravelly sandy CLAY	Atterberg 1 Point	18		96	35	16	19						
2397665	TP215	Not Given	2.50	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	16		99	27	13	14						
2397664	TP219	Not Given	2.00	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	4.8		97	26	12	14						
2397662	WS203	Not Given	2.50	Not Given	D	Brown very sandy CLAY	Atterberg 1 Point	15		100	34	17	17						
2397661	WS209	Not Given	3.00	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 1 Point	17		98	41	17	24						

Note: # Non accredited; NP - Non plastic

Comments: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

GF 234.14

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 30/08 - 31/08/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2397663	TP213	Not Given	1.20	Not Given	D	Brownish grey slightly gravelly sandy CLAY		18	Sample was quartered, oven dried at 106.1 °C			
2397665	TP215	Not Given	2.50	Not Given	D	Brown slightly gravelly very sandy CLAY		16	Sample was quartered, oven dried at 106.1 °C			
2397664	TP219	Not Given	2.00	Not Given	D	Brown slightly gravelly very sandy CLAY		4.8	Sample was quartered, oven dried at 106 °C			
2397662	WS203	Not Given	2.50	Not Given	D	Brown very sandy CLAY		15	Sample was quartered, oven dried at 106 °C			
2397661	WS209	Not Given	3.00	Not Given	D	Brown slightly gravelly sandy CLAY		17	Sample was quartered, oven dried at 106.1 °C			

Comments: Replaces Analytical Report Number 22-79461, issue no 1;

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

GF 099.16

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397628	RBH201	Not Given	12.30	12.41	C	Reddish brown silty CLAY	WC = 16.2%	1	A	U	YES	-	86.4	49.0	39.0	0.3	65.5	0.06	0.07
2397629	RBH201	Not Given	15.90	16.02	C	Reddish brown silty CLAY	WC = 15.3%	1	A	U	YES	-	84.2	43.0	37.0	0.2	63.0	0.04	0.04
2397631	RBH201	Not Given	20.18	20.38	C	Reddish brown SILTSTONE	WC = 7.8%	1	D	U	YES	106.8	86.4	85.0	81.0	2.6	83.7	0.37	0.47
2397632	RBH201	Not Given	23.06	23.23	C	Reddish brown silty CLAY	WC = 20.5%	1	A	U	YES	-	81.3	51.0	42.0	0.2	65.9	0.05	0.05
2397633	RBH201	Not Given	24.23	24.40	C	Reddish brown SILTSTONE	WC = 5.2%	1	D	U	YES	88.4	86.4	85.0	81.0	2.5	83.7	0.35	0.44
2397620	RBH202	Not Given	11.33	11.39	C	Reddish brown silty CLAY	WC = 16.1%	1	A	U	YES	-	84.2	50.0	37.0	0.2	63.0	0.04	0.04
2397621	RBH202	Not Given	12.59	12.64	C	Reddish brown silty CLAY	WC = 13.1%	1	A	U	YES	-	83.7	45.0	39.0	0.2	64.5	0.04	0.04
2397623	RBH202	Not Given	14.45	14.53	C	Light brown SILTSTONE	WC = 1.7%	1	A	U	YES	-	89.0	68.0	52.0	6.9	76.8	1.17	1.42
2397624	RBH202	Not Given	15.32	15.42	C	Light brown SILTSTONE	WC = 7.3%	1	D	U	YES	57.5	86.0	83.0	79.0	0.2	82.4	0.03	0.04
2397625	RBH202	Not Given	17.64	17.71	C	Light brown SILTSTONE	WC = 4.4%	1	I	U	YES	33.7	86.6	64.0	60.0	0.6	81.3	0.08	0.10

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of PL

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top m	Depth Base m	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne mm	W mm	Dps mm	Dps' mm	kN	mm	Is MPa	Is(50) MPa
2397626	RBH202	Not Given	20.22	20.35	C	Reddish brown SILTSTONE	WC = 6.6%	1	D	U	YES	118.1	86.1	84.0	81.0	2.4	83.5	0.34	0.43
2397640	RBH203	Not Given	8.69	8.79	C	Reddish brown SILTSTONE	WC = 7.8%	1	D	U	YES	58.0	87.9	82.0	80.0	0.1	83.9	0.01	0.02
2397641	RBH203	Not Given	15.95	16.08	C	Reddish brown silty CLAY	WC = 12.4%	1	A	U	YES	-	80.7	39.0	34.0	0.1	59.1	0.03	0.03
2397642	RBH203	Not Given	16.69	16.84	C	Reddish brown silty CLAY	WC = 18.0%	1	I	U	YES	28.4	52.6	30.0	27.0	2.3	42.5	1.27	1.18
2397643	RBH203	Not Given	17.24	17.48	C	Reddish brown silty CLAY	WC = 12.9%	1	I	U	YES	24.9	51.0	28.0	24.0	1.2	39.5	0.74	0.66
2397658	RBH205	Not Given	9.57	9.64	C	Reddish brown SILTSTONE	WC = 7.5%	1	A	U	YES	-	84.8	66.0	42.0	1.5	67.3	0.33	0.38
2397659	RBH205	Not Given	14.64	14.74	C	Reddish brown SILTSTONE	WC = 5.6%	1	D	U	YES	50.7	85.3	86.0	79.0	2.1	82.1	0.30	0.38
2397660	RBH205	Not Given	15.57	15.77	C	Reddish brown SILTSTONE	WC = 9.6%	1	I	U	YES	31.2	65.4	28.0	23.0	2.5	43.8	1.28	1.20
2397611	RBH206	Not Given	7.65	7.75	C	Light brown SILTSTONE	WC = 3.7%	1	I	U	YES	65.0	90.4	67.0	64.0	1.1	85.8	0.15	0.19
2397612	RBH206	Not Given	8.30	8.42	C	Reddish brown SILTSTONE	WC = 4.4%	1	D	U	YES	62.3	89.9	89.0	84.0	0.4	86.9	0.05	0.07

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of PL

Signed:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397614	RBH206	Not Given	14.24	14.29	C	Reddish brown SILTSTONE	WC = 3.5%	1	A	U	YES	-	83.6	46.0	38.0	3.7	63.6	0.90	1.01
2397615	RBH206	Not Given	15.12	15.36	C	Reddish brown SILTSTONE	WC = 4.4%	1	D	U	YES	123.3	89.8	89.0	63.0	3.7	75.2	0.65	0.78
2397617	RBH206	Not Given	16.96	17.04	C	Reddish brown SILTSTONE	WC = 5.3%	1	A	U	YES	-	87.0	80.0	53.0	3.2	76.6	0.54	0.66
2397618	RBH206	Not Given	20.10	20.15	C	Reddish brown SILTSTONE	WC = 5.9%	1	A	U	YES	-	86.9	50.0	36.0	2.4	63.1	0.59	0.66
2397667	RBH206	Not Given	22.50	22.64	C	Reddish brown silty CLAY	WC = 18.7%	1	A	U	YES	-	81.8	42.0	36.0	0.3	61.2	0.07	0.07
2397639	RBH207	Not Given	5.34	5.40	C	Reddish brown SILTSTONE	WC = 4.3%	1	A	U	YES	-	84.5	49.0	45.0	0.4	69.6	0.08	0.10
2397634	RBH207	Not Given	6.50	6.68	C	Reddish brown silty CLAY	WC = 17.4%	1	D	U	YES	52.3	81.2	81.0	73.0	0.1	77.0	0.02	0.02
2397635	RBH207	Not Given	10.74	10.84	C	Reddish brown silty CLAY	WC = 18.8%	1	A	U	YES	-	82.4	49.0	46.0	0.1	69.5	0.02	0.02
2397636	RBH207	Not Given	11.37	11.53	C	Reddish brown silty CLAY	WC = 14.1%	1	I	U	YES	36.0	69.0	42.0	35.0	3.2	55.5	1.02	1.07
2397637	RBH207	Not Given	15.13	15.23	C	Reddish brown silty CLAY	WC = 13.1%	1	A	U	YES	-	80.5	41.0	35.0	0.2	59.9	0.06	0.06

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of PL

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street,
Castlefield, Manchester,
M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397638	RBH207	Not Given	16.59	16.71	C	Reddish brown silty CLAY	WC = 14.2%	1	A	U	YES	-	82.0	47.0	41.0	0.2	65.4	0.04	0.04
2397651	RBH208	Not Given	13.85	13.93	C	Grey SILTSTONE	WC = 6.8%	1	D	U	YES	63.9	85.8	86.0	83.0	0.5	84.4	0.07	0.09
2397652	RBH208	Not Given	15.80	15.93	C	Reddish brown SILTSTONE	WC = 6.8%	1	I	U	YES	87.3	86.2	74.0	67.0	1.8	85.7	0.24	0.30
2397653	RBH208	Not Given	16.95	17.10	C	Reddish brown SILTSTONE	WC = 4.7%	1	D	U	YES	78.5	84.6	84.0	80.0	3.6	82.3	0.53	0.67
2397655	RBH208	Not Given	19.10	19.21	C	Reddish brown SILTSTONE	WC = 6.7%	1	D	U	YES	47.5	84.5	83.0	80.0	1.5	82.2	0.22	0.28
2397656	RBH208	Not Given	20.22	20.32	C	Reddish brown SILTSTONE	WC = 6.3%	1	D	U	YES	57.1	85.5	84.0	81.0	2.9	83.2	0.42	0.53
2397657	RBH208	Not Given	23.19	23.29	C	Reddish brown SILTSTONE	WC = 5.1%	1	D	U	YES	62.4	83.2	83.8	79.0	0.6	81.1	0.08	0.10
2397608	RBH209	Not Given	13.13	13.20	C	Reddish brown silty CLAY	WC = 17.3%	1	A	U	YES	-	80.9	37.0	31.0	0.2	56.5	0.06	0.07
2397607	RBH209	Not Given	13.93	14.07	C	Reddish brown silty CLAY	WC = 17.6%	1	A	U	YES	-	81.6	46.0	39.0	0.5	63.6	0.11	0.12
2397609	RBH209	Not Given	15.43	15.57	C	Reddish brown SILTSTONE	WC = 8.6%	1	I	U	YES	42.3	81.2	45.0	40.0	3.3	64.3	0.79	0.88

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of PL

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street,
Castlefield, Manchester,
M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 08/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
2397610	RBH209	Not Given	17.15	17.20	C	Reddish brown SILTSTONE	WC = 5.4%	1	A	U	YES	-	81.5	52.0	48.0	1.2	70.6	0.24	0.28
2397644	RBH210	Not Given	9.52	9.77	C	Reddish brown silty CLAY	WC = 14.7%	1	I	U	YES	29.8	61.5	31.0	25.0	0.9	44.2	0.46	0.44
2397645	RBH210	Not Given	10.95	11.15	C	Reddish brown silty CLAY	WC = 12.5%	1	A	U	YES	-	82.4	44.0	40.0	0.2	64.8	0.04	0.04
2397646	RBH210	Not Given	13.18	13.28	C	Reddish brown SILTSTONE	WC = 4.1%	1	A	U	YES	-	84.7	77.0	61.0	2.6	81.1	0.39	0.48
2397647	RBH210	Not Given	14.35	14.59	C	Reddish brown silty CLAY	WC = 15.7%	1	A	U	YES	-	83.0	48.0	39.0	0.2	64.2	0.05	0.05
2397648	RBH210	Not Given	16.58	16.64	C	Reddish brown SILTSTONE	WC = 9.1%	1	A	U	YES	-	85.0	39.0	36.0	0.3	62.4	0.08	0.09
2397649	RBH210	Not Given	20.57	20.62	C	Reddish brown SILTSTONE	WC = 6.1%	1	A	U	YES	-	80.4	43.0	40.0	0.4	64.0	0.09	0.10

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of PL

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

GF 134.13

SUMMARY REPORT

DETERMINATION OF UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Tested in Accordance with: ISRM, 2007, p153, part 1

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Client: ROC Consulting Ltd

Client Address: Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ

Contact: Reece McGuinnes

Site Address: Plots NT02-NT04

Client Reference: 4328
Job Number: 22-79461
Date Sampled: Not Given
Date Received: 19/08/2022
Date Tested: 07/09 - 15/09/2022
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Specimen Dimensions (2)				Bulk density (2)	Water Content (1)	Uniaxial Compression (3)			
		Reference	Depth Top m	Depth Base m	Type			Diameter mm	Length mm	H/D	Orientation of sample	Mg/m3	%	Condition	Stress Rate Mpa/s	Mode of failure	UCS Mpa
2397630	RBH201	Not Given	17.88	18.20	C	Light brown to grey SILTSTONE		86.7	240.2	2.8	Vertical	2.28	6.8	as received	0.0339	S + AC	15.9
2397627	RBH202	Not Given	21.56	21.75	C	Brown SILTSTONE	Sample is below recommended length to diameter ratio.	86.4	119.8	1.4	Vertical	2.47	5.2	as received	0.0341	MS + AC	12.4
2397613	RBH206	Not Given	10.87	11.07	C	Brown SILTSTONE	Sample is below recommended length to diameter ratio.	89.7	134.6	1.5	Vertical	2.28	4.7	as received	0.0158	MS + AC	5.73
2397616	RBH206	Not Given	15.75	16.11	C	Brown SILTSTONE		89.2	246.4	2.8	Vertical	2.43	5.7	as received	0.0320	MS + AC	10.4
2397666	RBH206	Not Given	18.59	18.94	C	Light grey SILTSTONE		90.0	249.0	2.8	Vertical	2.18	5.2	as received	0.0315	S + AC	15.0
2397654	RBH208	Not Given	18.00	18.21	C	Brown to grey SILTSTONE	Sample is below recommended length to diameter ratio.	86.3	120.6	1.4	Vertical	2.29	5.7	as received	0.0513	MS + AC	25.5
2397650	RBH210	Not Given	12.28	12.46	C	Brown SILTSTONE	Sample is below recommended length to diameter ratio.	84.9	139.2	1.6	Vertical	2.29	7.8	as received	0.0177	MS + AC	8.11

Note: 1 - ISRM p87 test 1, water content at 105 ± 3 oC, specimen as tested for UCS, 2 - ISRM p86 clause (vii), Caliper method used for determination of bulk volume and derivation of bulk density, 3 - ISRM p153 part 1, determination of Uniaxial Compressive Strength (UCS) of Rock Materials, above notes apply unless annotated otherwise in the remarks. Compaction machine: VJ Tech AUTOCON - VJT 51-3011; Mode of failure legend: S - Single shear, MS - multiple shear, AC - Axial cleavage, F - Fragmented

Comments: Replaces Analytical Report Number 22-79461, issue no 1; Additional results of UCS

Signed:

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for and on behalf of i2 Analytical Ltd

Date Reported: 19/09/2022

GF 223.14

TEST CERTIFICATE

DETERMINATION OF THE UNCONFINED COMPRESSIVE STRENGTH - LOAD FRAME METHOD

Tested in Accordance with: BS 1377-7: 1990: Clause 7.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	15/09/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

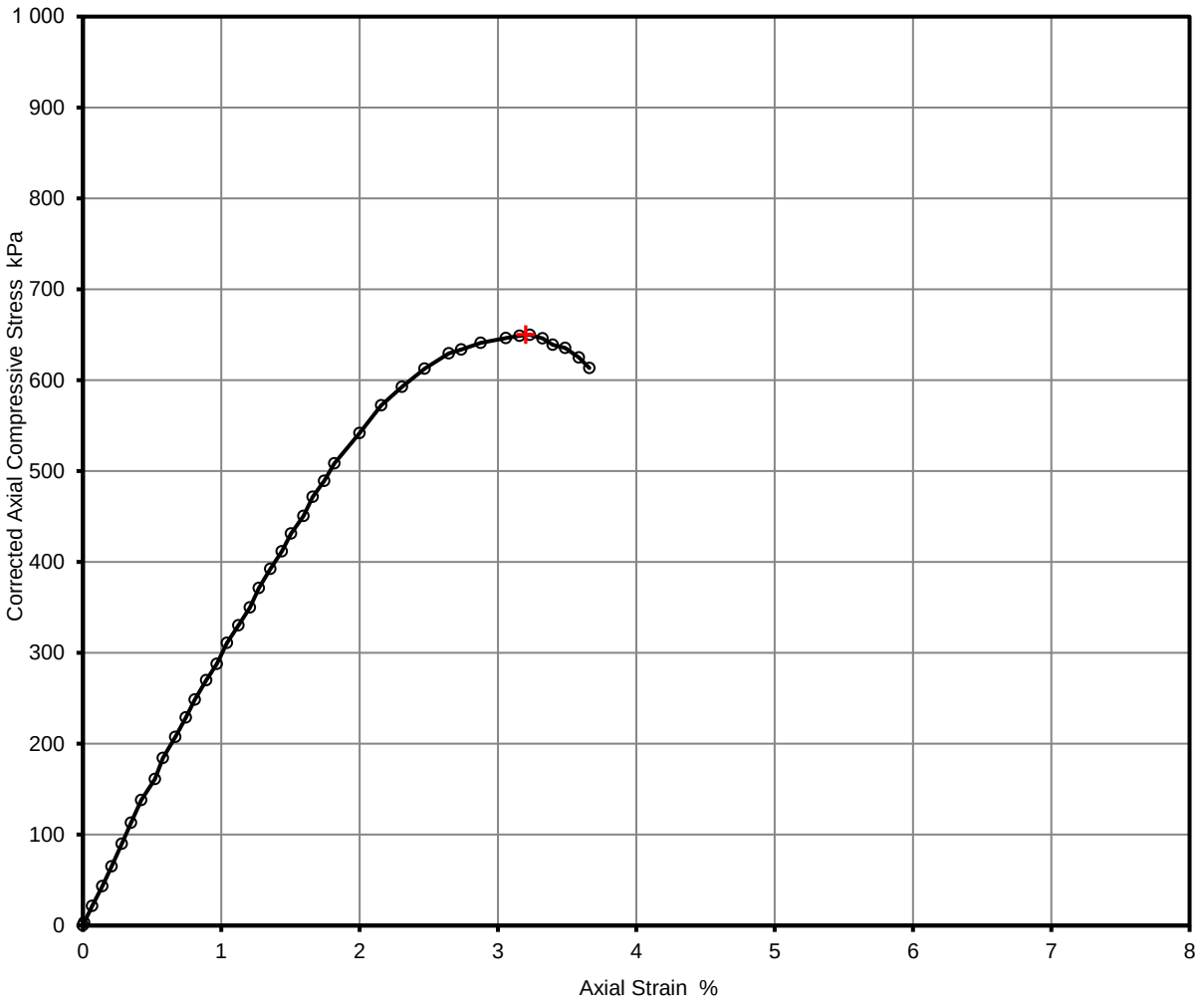
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2397619	Depth Top [m]:	11.14
Hole No.:	RBH202	Depth Base [m]:	11.33
Sample Reference:	Not Given	Sample Type:	C
Sample Description:	Brown slightly silty CLAY		
Sample Preparation:			

Test Number	1		Rate of Strain	1.0	%/min
Length	121.0	mm	Axial Strain at failure	3.2	%
Diameter	87.3	mm	Unconfined Compressive Strength	650	kPa
Bulk Density	2.30	Mg/m3	Mode of Failure	Brittle	
Moisture Content	13.0	%			
Dry Density	2.03	Mg/m3			

Axial Compressive Stress v Axial Strain



Position within sample



Note: Axial compressive stress corrected for area change, and membrane effects (if used)

Remarks: Sample is below recommended length to diameter ratio.
Replaces Analytical Report Number 22-79461, issue no 1; Additional results of UCS

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 243.10**

TEST CERTIFICATE

DETERMINATION OF THE UNCONFINED COMPRESSIVE STRENGTH - LOAD FRAME METHOD

Tested in Accordance with: BS 1377-7: 1990: Clause 7.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Client:	ROC Consulting Ltd	Client Reference:	4328
Client Address:	Commercial Wharf, 6 Commercial Street, Castlefield, Manchester, M15 4PZ	Job Number:	22-79461
		Date Sampled:	Not Given
		Date Received:	19/08/2022
Contact:	Reece McGuinnes	Date Tested:	15/09/2022
Site Address:	Plots NT02-NT04	Sampled By:	Client - RM

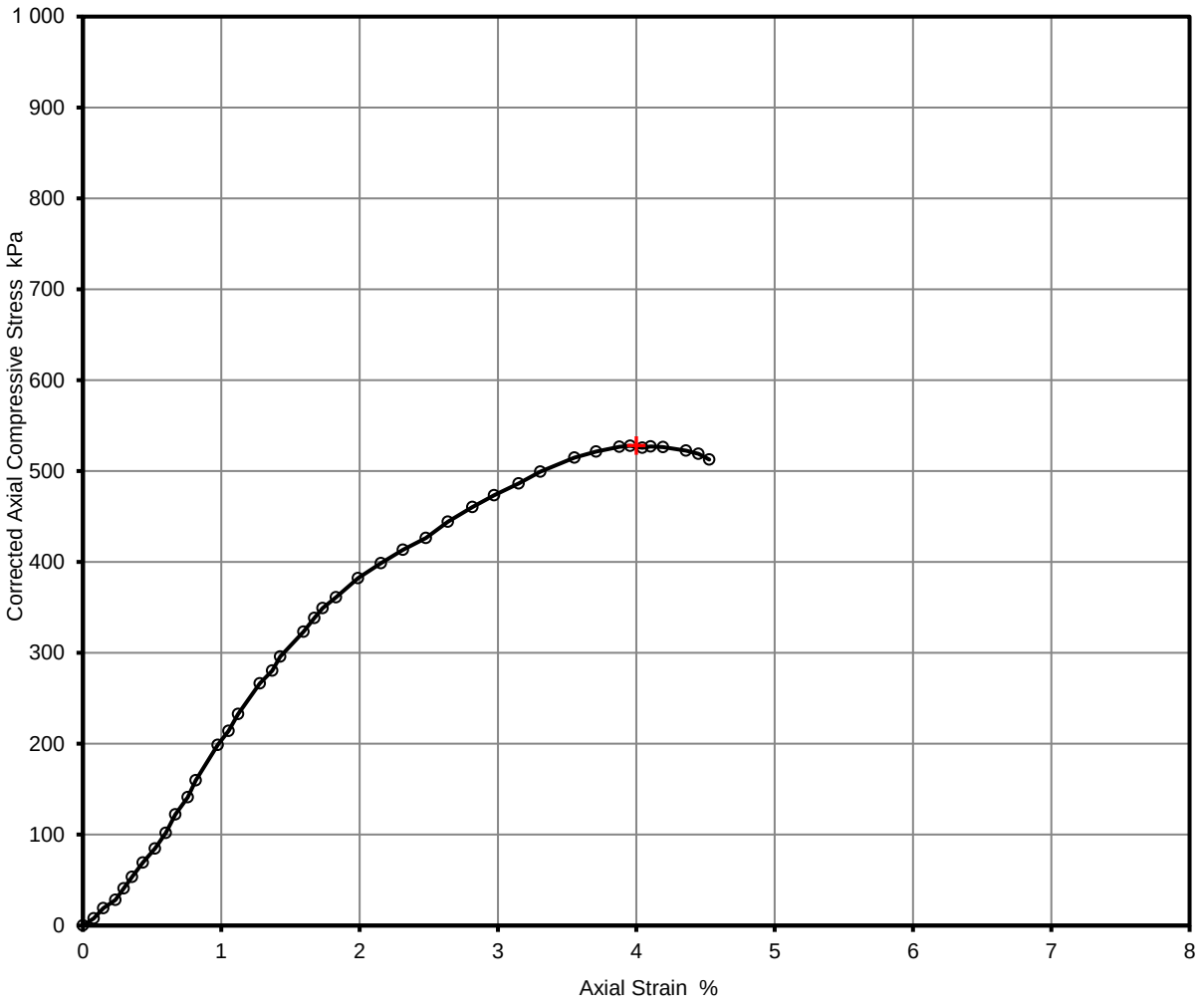
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

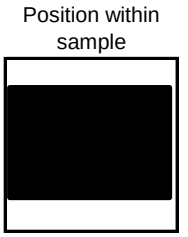
Laboratory Reference:	2397622	Depth Top [m]:	13.26
Hole No.:	RBH202	Depth Base [m]:	13.49
Sample Reference:	Not Given	Sample Type:	C
Sample Description:	Brown slightly silty CLAY		
Sample Preparation:			

Test Number	1		Rate of Strain	1.0	%/min
Length	101.6	mm	Axial Strain at failure	4.0	%
Diameter	89.8	mm	Unconfined Compressive Strength	528	kPa
Bulk Density	2.36	Mg/m3	Mode of Failure	Brittle	
Moisture Content	13.0	%			
Dry Density	2.08	Mg/m3			

Axial Compressive Stress v Axial Strain



Position within sample





Note: Axial compressive stress corrected for area change, and membrane effects (if used)

Remarks: Sample is below recommended length to diameter ratio.
Replaces Analytical Report Number 22-79461, issue no 1; Additional results of UCS

Signed:

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for and on behalf of i2 Analytical Ltd

 Date Reported: 19/09/2022 **GF 243.10**

APPENDIX E – GROUND GAS / WATER MONITORING RESULTS

ROC CONSULTING **Civil, Structural & Environmental Engineers** Commercial Wharf, 6 Commercial St, MCR, M15 4PZ	**Job No:**	4328	**Site:**	Plots NT02-NT04
	Date:	25/08/2022	**Client:**	Far East Consortium
	Engineer:	RM	**Equipment:**	GFM

	2 Days Prior	1 Day Prior	On day of Monitoring
Weather Conditions:	Scattered Cloud	Scattered Cloud	Clear
Barometric Pressure Trend:	Rising	Rising	Steady

Surface Ground Conditions:	Dry

VISIT ONE	**Start**		**Finish**
Time:	0900	**Time:**	1600
Barometric Pressure:	1015	**Barometric Pressure:**	1016
Background Oxygen:	20.9	**Background Oxygen:**	20.7

Monitoring Point	**Gas Concentration**												**Groundwater**			
		Peak						**Steady**								
BH N°	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Depth to Water**	**Depth to Base**	**Head of water**	**Remarks**
WS204	**0**	**0**	**13.4**	**3.2**	**<<<**	**0/0**	**0**	**0**	**13.4**	**3.2**	**<<<**	**0/0**	**Dry**	**1.51**		
LK WS105B	**0**	**0**	**4.6**	**14.4**	**<<<**	**0/0**	**0**	**0**	**4.6**	**14.4**	**<<<**	**0/0**	**Dry**	**2.80**		
WS202	**0**	**0**	**8**	**11.5**	**<<<**	**0/0**	**0**	**0**	**8**	**11.5**	**<<<**	**0**	**Dry**	**1.68**		
WS203	**0**	**0**	**2.9**	**15.5**	**<<<**	**0/0**	**0**	**0**	**2.9**	**15.5**	**<<<**	**0**	**Dry**	**0.66**		

Comments:

RoC CONSULTING **Civil, Structural & Environmental Engineers** Commercial Wharf, 6 Commercial St, MCR, M15 4PZ	**Job No:**	4328	**Site:**	Plots NT02-NT04
	Date:	27/09/2022	**Client:**	Far East Consortium
	Engineer:	RM	**Equipment:**	GFM

	2 Days Prior	1 Day Prior	On day of Monitoring
Weather Conditions:	Overcast	Overcast	Overcast
Barometric Pressure Trend:	Falling	Rising	Falling

Surface Ground Conditions:	Dry

VISIT TWO	**Start**	**Finish**	
Time:	1300	**Time:**	1600.00
Barometric Pressure:	992	**Barometric Pressure:**	992
Background Oxygen:	20.7	**Background Oxygen:**	20.3

Monitoring Point	**Gas Concentration**												**Groundwater**			
		Peak						**Steady**								
BH N°	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Depth to Water**	**Depth to Base**	**Head of water**	**Remarks**
WS209	**0**	**0**	**2.4**	**17.7**	**<<<**	**0/0**	**0**	**0**	**2.4**	**17.7**	**<<<**	**0/0**	**Dry**	**1.55**	**N/A**	
WS208	**0**	**0**	**2.2**	**18**	**<<<**	**0/0**	**0**	**0**	**2.2**	**18**	**<<<**	**0/0**		**0.90**		
WS213	**0**	**0**	**1.9**	**19.1**	**<<<**	**0/0**	**0**	**0**	**1.9**	**19.1**	**<<<**	**0/0**		**0.90**		
WS211	**0**	**0**	**4.4**	**15.1**	**<<<**	**0/0**	**0**	**0**	**4.4**	**15.1**	**<<<**	**0/0**		**1.82**		
LK WS103	**0**	**0**	**8.9**	**3**	**<<<**	**0/0**	**0**	**0**	**8.9**	**3**	**<<<**	**0/0**		**2.96**		
WS204	**0**	**0**	**11.5**	**2.8**	**<<<**	**0/0**	**0**	**0**	**11.5**	**2.8**	**<<<**	**0/0**		**1.51**		
WS202	**0**	**0**	**8.8**	**11.3**	**<<<**	**0/0**	**0**	**0**	**8.8**	**11.3**	**<<<**	**0/0**		**1.68**		
WS203	**0**	**0**	**3.1**	**14.6**	**<<<**	**0/0**	**0**	**0**	**3.1**	**14.6**	**<<<**	**0/0**		**0.66**		
LK WS105B	**0**	**0**	**6.9**	**11.3**	**<<<**	**0/0**	**0**	**0**	**6.9**	**11.3**	**<<<**	**0/0**		**2.80**		
LK WS201	**0**	**0**	**4.8**	**14**	**<<<**	**0/0**	**0**	**0**	**4.8**	**14**	**<<<**	**0/0**		**3.34**		

Comments:

Civil, Structural & Environmental Engineers Commercial Wharf, 6 Commercial St, MCR, M15 4PZ	**Job No:**	4328	**Site:**	Plots NT02-NT04
	Date:	04/10/2022	**Client:**	Far East Consortium
	Engineer:	RM	**Equipment:**	GFM

	2 Days Prior	1 Day Prior	On day of Monitoring
Weather Conditions:	Overcast / Rain	Overcast	Rain
Barometric Pressure Trend:	Rising	Falling	Falling

Surface Ground Conditions:	Wet

VISIT THREE	**Start**	**Finish**	
Time:	1230	**Time:**	1610
Barometric Pressure:	1007	**Barometric Pressure:**	1006
Background Oxygen:	20.7	**Background Oxygen:**	20.5

Monitoring Point	**Gas Concentration**												**Groundwater**			
		Peak						**Steady**								
BH N°	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Depth to Water**	**Depth to Base**	**Head of water**	**Remarks**
WS209	**0**	**0**	**2.2**	**12.8**	**<<<**	**0/0**	**0**	**0**	**2.2**	**12.8**	**<<<**	**0/0**		**1.55**		
WS208	**0**	**0**	**1.9**	**18.5**	**<<<**	**0/0**	**0**	**0**	**1.9**	**18.5**	**<<<**	**0/0**		**0.90**		
WS213	**0**	**0**	**2.1**	**18.6**	**<<<**	**0/0**	**0**	**0**	**2.1**	**18.6**	**<<<**	**0/0**		**0.90**		
WS211	**0**	**0**	**0.7**	**2**	**<<<**	**0/0**	**0**	**0**	**0.7**	**2**	**<<<**	**0/0**		**1.82**		
LK WS103	**0**	**0**	**8.3**	**4.5**	**<<<**	**0/0**	**0**	**0**	**8.3**	**4.5**	**<<<**	**0/0**		**2.96**		
WS204	**0**	**0**	**11.4**	**3.7**	**<<<**	**0/0**	**0**	**0**	**11.4**	**3.7**	**<<<**	**0/0**	**Dry**	**1.51**	**N/A**	
WS202	**0**	**0**	**8**	**11.7**	**<<<**	**0/0**	**0**	**0**	**8**	**11.7**	**<<<**	**0/0**		**1.68**		
WS203	**0**	**0**	**3.3**	**15.1**	**<<<**	**0/0**	**0**	**0**	**3.3**	**15.1**	**<<<**	**0/0**		**0.66**		
LK WS105B	**0**	**0**	**5.8**	**12.6**	**<<<**	**0/0**	**0**	**0**	**5.8**	**12.6**	**<<<**	**0/0**		**2.80**		
LK WS201	**3.3**	**0**	**4.9**	**13.7**	**<<<**	**0/0**	**3.3**	**0**	**4.9**	**13.7**	**<<<**	**0/0**		**3.34**		

Comments:

RoC CONSULTING **Civil, Structural & Environmental Engineers** Commercial Wharf, 6 Commercial St, MCR, M15 4PZ	**Job No:**	4328	**Site:**	Plots NT02-NT04
	Date:	14/10/2022	**Client:**	Far East Consortium
	Engineer:	RM	**Equipment:**	GFM

	2 Days Prior	1 Day Prior	On day of Monitoring
Weather Conditions:	Raining	Cloudy	Raining
Barometric Pressure Trend:	Falling	Falling	Falling
Surface Ground Conditions:	Wet		

VISIT FOUR	**Start**	**Finish**	
Time:	1335	**Time:**	1451
Barometric Pressure:	1002	**Barometric Pressure:**	1000
Background Oxygen:	20.7	**Background Oxygen:**	20.5

Monitoring Point	**Gas Concentration**												**Groundwater**			
		Peak						**Steady**								
BH N°	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Flow Rate (l/h)**	**CH_4 %**	**CO_2 %**	**O_2 %**	**LEL %**	**H2S/CO (ppm)**	**Depth to Water**	**Depth to Base**	**Head of water**	**Remarks**
WS209	**0**	**0**	**1.8**	**17.8**	**<<<**	**0/0**	**0**	**0**	**1.8**	**17.8**	**<<<**	**0/0**		**1.55**		
WS208	**0**	**0**	**1.8**	**17.3**	**<<<**	**0/0**	**0**	**0**	**1.8**	**17.3**	**<<<**	**0/0**		**0.90**		
WS213	**0**	**0**	**2.3**	**17.2**	**<<<**	**0/0**	**0**	**0**	**2.3**	**17.2**	**<<<**	**0/0**		**0.90**		
WS211	**0**	**0**	**1.1**	**19**	**<<<**	**0/0**	**0**	**0**	**1.1**	**19**	**<<<**	**0/0**		**1.82**		
LK WS103	**0**	**0**	**7.5**	**4.1**	**<<<**	**0/0**	**0**	**0**	**7.5**	**4.1**	**<<<**	**0/0**		**2.96**		
WS204	**0**	**0**	**9.8**	**6.4**	**<<<**	**0/0**	**0**	**0**	**9.8**	**6.4**	**<<<**	**0/0**	**Dry**	**1.51**	**N/A**	
WS202	**0**	**0**	**8.2**	**11.3**	**<<<**	**0/0**	**0**	**0**	**8.2**	**11.3**	**<<<**	**0/0**		**1.68**		
WS203	**0**	**0**	**3.3**	**14.7**	**<<<**	**0/0**	**0**	**0**	**3.3**	**14.7**	**<<<**	**0/0**		**0.66**		
LK WS105B														**2.80**		**Could Not Access**
LK WS201	**0**	**0**	**4.6**	**14.9**	**<<<**	**0/0**	**0**	**0**	**4.6**	**14.9**	**<<<**	**0/0**		**3.34**		

Comments:

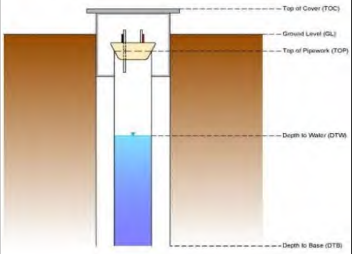
Groundwater Gauging Data Form

Project Information	Project Name:	Plots NT02-04		
	Project Number:	4328		
	Measurement Date:	25/08/2022	Sampled by:	RM
	Weather:	Clear		
	Well Notes - e.g. Condition, access, safety:			

	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	

Measurement datum:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure for definitions.

Measurement Datum:	Ground Level	Offset from **datum** to GL (m):	



Time	BH ID	Offset from **datum** to GL (m)	Product present? (Y/N)	Depth to product from datum (m)	Type of product (LNAPL / DNAPL)	Depth to Water (m)	Depth to Base (m)	Notes
	RBH201					4.83	25.11	
	RBH202					6.30	25.1	
	RBH203					6.88	15.65	
	RBH205					5.74	23.64	
	RBH206					5.75	24.99	
	RBH207					7.80	24.1	
	RBH208					13.84	23.63	
	RBH209					12.56	16.94	
	RBH210					12.62	24.95	
	BH1					4.80	14.42	

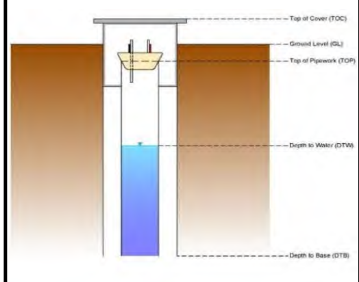
Groundwater Gauging Data Form

Project Information	Project Name:	Plots NT02-04		
	Project Number:	4328		
	Measurement Date:	02/09/2022	Sampled by:	RM
	Weather:	Clear		
	Well Notes - e.g. Condition, access, safety:			

Water Level Meter Used (X that applicable):				
Interface probe		Dip Meter		

Measurement datum:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure for definitions.

Measurement Datum:	Ground Level	Offset from **datum** to GL (m):	



Time	**BH ID**	Offset from **datum** to GL (m)	Product present? (Y/N)	Depth to product from datum (m)	Type of product (LNAPL / DNAPL)	Depth to Water (m)	Depth to Base (m)	Notes
	RBH205					5.60	23.64	
	RBH206					5.75	24.99	

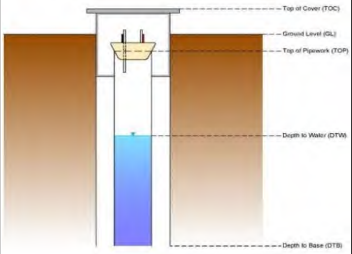
Groundwater Gauging Data Form

Project Information	Project Name:	Plots NT02-04		
	Project Number:	4328		
	Measurement Date:	14/09/2022	Sampled by:	RM
	Weather:	Clear		
	Well Notes - e.g. Condition, access, safety:			

	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	

Measurement datum:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure for definitions.

Measurement Datum:	Ground Level	Offset from **datum** to GL (m):	



Time	BH ID	Offset from **datum** to GL (m)	Product present? (Y/N)	Depth to product from datum (m)	Type of product (LNAPL / DNAPL)	Depth to Water (m)	Depth to Base (m)	Notes
	RBH207					7.92	24.11	
	RBH208					13.70	23.56	
	RBH209					12.32	16.58	
	RBH210					12.52	23.65	

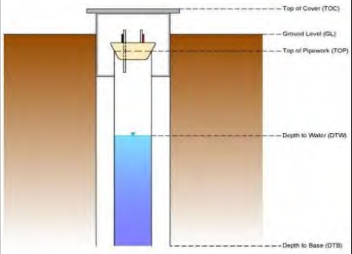
Groundwater Gauging Data Form

Project Information	Project Name:	Plots NT02-04		
	Project Number:	4328		
	Measurement Date:	14/09/2022	Sampled by:	RM
	Weather:	Clear		
	Well Notes - e.g. Condition, access, safety:			

	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	

Measurement datum:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure for definitions.

Measurement Datum:	Ground Level	Offset from **datum** to GL (m):	

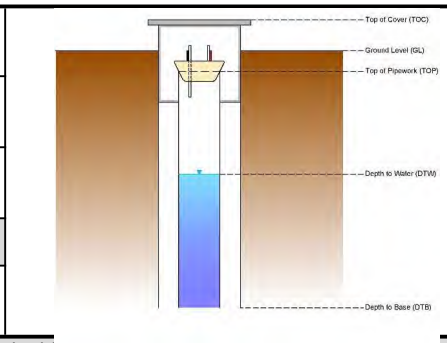


Time	BH ID	Offset from **datum** to GL (m)	Product present? (Y/N)	Depth to product from datum (m)	Type of product (LNAPL / DNAPL)	Depth to Water (m)	Depth to Base (m)	Notes
	RBH201					4.65	24.93	
	RBH202					6.09	24.94	
	RBH203					6.66	15.49	
	RBH205					5.42	23.45	
	RBH207					7.97	24.11	
	RBH208					13.74	23.56	
	RBH209					12.35	16.58	
	RBH210					12.54	23.05	
	RBH1					4.60	13	

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	Dantzic Street		
	Project Number:	4328		
	Sampling Date:	2nd September 2022	Sampled by:	RM
	Weather:	Dry		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	YSI			
	Water Quality Meter Last Calibrated:	2nd September			
	Dissolved oxygen probe last calibrated:	2nd September			
	Water Level Meter Used (X that applicable):				
	Interface probe		Dip Meter	X	

Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

BH ID	RBH205										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP							Offset from **datum** to GL (m):	0		
Start Time:	13:55	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									YSI	<Select Probe
Well Material	HDPE	14:20	13.2	1056	3.78	7.02	-47.7	6.450		165.40	
Initial Water Level (m)	5.600	14:23	13.1	1054	0.77	7.06	-51.8	6.450		161.30	
		14:26	13.0	1055	0.52	7.09	-53.9	6.450		159.20	
LNAPL Present? (Y/N)	N	14:29	12.9	1056	0.39	7.11	-54.8	6.450		158.30	
Initial LNAPL Level (m)		14:52	12.9	1056	0.36	7.11	-55	6.450		158.10	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Peristaltic										
Pump Intake Depth (m)	6.50										
Depth to Base (m)	23.64	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Light brown, some sediment, no odour							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 X P, 2 x V, 2 x Pr							
Initial DNAPL Level (m)		Sample Collection Time		14:20:00 - 14:46							

BH ID	**RBH206**										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	0			
Start Time:	14:55	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									**YSI**	**<Select Probe**
Well Material	HDPE	15:00	15	965	1.51	6.98	-33.6	5.8		178.1	
Initial Water Level (m)	5.75	15:03	14.2	940	0.42	7.14	-44.4	5.8		168	
		15:06	14.2	940	0.32	7.15	-46.1	5.8		166.3	
LNAPL Present? (Y/N)	N	15:09	14.1	938	0.28	7.15	-46	5.8		166.4	
Initial LNAPL Level (m)											
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	Lowflow										
Sampling Method (Give details in Notes section.)	Peristaltic										
Pump Intake Depth (m)	7.00										
Depth to Base (m)	24.99	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.				3 x G, 1 X P, 2 x V, 2 x Pr					
DNAPL Present? (Y/N)	n	Sample Containers Obtained				15:00-15:30					
Initial DNAPL Level (m)		Sample Collection Time									

TPF209 Issue 6 - June 2021

BH ID											
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):				
Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)										**SmarTroll**	**<Select Probe**
Well Material											
Initial Water Level (m)											
LNAPL Present? (Y/N)											
Initial LNAPL Level (m)											
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)											
Sampling Method (Give details in Notes section.)											
Pump Intake Depth (m)											
Depth to Base (m)		Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.									
DNAPL Present? (Y/N)		Sample Containers Obtained									
Initial DNAPL Level (m)		Sample Collection Time									

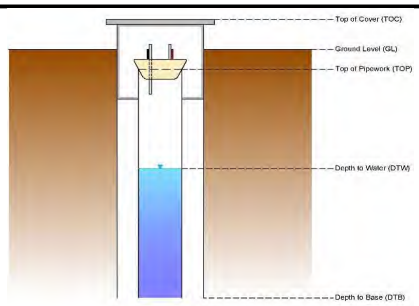
TPF209 Issue 6 - June 2021

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	NT02-4 Dantzic Street		
	Project Number:	4328		
	Sampling Date:	14th September 22	Sampled by:	P.Nicol, J.Evans
	Weather:	Overcast, 20 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	SmartTroll		
	Water Quality Meter Last Calibrated:	14/09/2022		
	Dissolved oxygen probe last calibrated:	14/09/2022		
	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	X



Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

BH ID	RBH207										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	0.08			
Start Time:	10:18	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		10:35	14.9	867.12	4.92	7.72	-146.1	7.920		57.58	
Initial Water Level (m)	7.920	10:38	12.4	846.29	0.79	7.75	-140.3	7.930		65.88	
		10:41	12.4	843.06	0.6	7.75	-139.8	7.930		66.38	
LNAPL Present? (Y/N)	N	10:44	12.0	838.91	0.23	7.75	-139.7	7.930		66.48	
Initial LNAPL Level (m)		10:47	12.0	838.60	0.21	7.75	-139.6	7.930		66.58	
Well Headspace Reading (PID/FID)		10:50	12.0	837.86	0.20	7.75	-139.5	7.930		66.68	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Peristaltic										
Pump Intake Depth (m)	22.000										
Depth to Base (m)	24.110	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Orangey brown colour, no odour, sediment present. Approx 2 litres purged							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 x P, 2 x V, 2 x Pr							
Initial DNAPL Level (m)		Sample Collection Time		10:50:00 - 11:11							

BH ID	RBH208										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.04			
Start Time:	11:17	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		11:35	13.8	976.62	6.39	7.77	-141.1	13.700		63.42	
Initial Water Level (m)	13.700	11:38	12.79	987.22	0.72	7.68	-136.3	13.700		69.05	
		11:41	12.38	983.24	0.33	7.67	-135.2	13.700		70.98	
LNAPL Present? (Y/N)	N	11:44	12.26	982.24	0.24	7.66	-134.9	13.700		71.28	
Initial LNAPL Level (m)		11:47	12.25	983.08	0.23	7.66	-134.8	13.700		71.38	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Bladder										
Pump Intake Depth (m)	21.500										
Depth to Base (m)	23.560	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Orangey brown colour, some sediment, no odour.							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 x P, 2 x V, 2 x Pr							
Initial DNAPL Level (m)		Sample Collection Time		11:46:00 - 12:05							

TPF209 Issue 5 - Apr 2021

BH ID	RBH209										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.25			
Start Time:	12:48	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		13:05	19.8	1242	4.51	7.56	-131.4	12.320		68.05	
Initial Water Level (m)	12.320	13:08	16.6	1231.9	2.70	7.51	-128.4	12.320		73.60	
		13:11	14.4	1252.9	1.04	7.47	-125.3	12.320		79.22	
LNAPL Present? (Y/N)	N	13:14	14.2	1153.8	0.94	7.47	-125.0	12.320		79.52	
Initial LNAPL Level (m)		13:17	13.8	1139.5	0.79	7.47	-124.9	12.320		79.62	
Well Headspace Reading (PID/FID)		13:20	13.7	1134.6	0.75	7.51	-126.9	12.320		77.62	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Bladder										
Pump Intake Depth (m)	15.500										
Depth to Base (m)	16.580	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Orangey brown colour, no odour, lots of sediment.							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 x P, 2 x V, 2 x Pr							
Initial DNAPL Level (m)		Sample Collection Time		13:20:00 - 13:45							

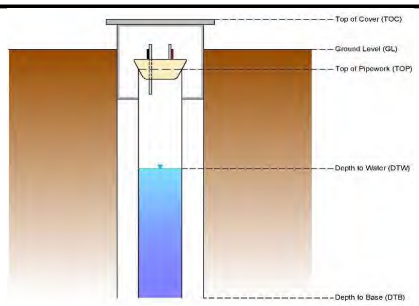
TPF209 Issue 6 - June 2021

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	Dantzic Street		
	Project Number:	4328		
	Sampling Date:	14th September	Sampled by:	P.Nicol, J. Evans
	Weather:	Sunny, 21 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	Smarttroll		
	Water Quality Meter Last Calibrated:	14th September		
	Dissolved oxygen probe last calibrated:	14th September		
	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	X



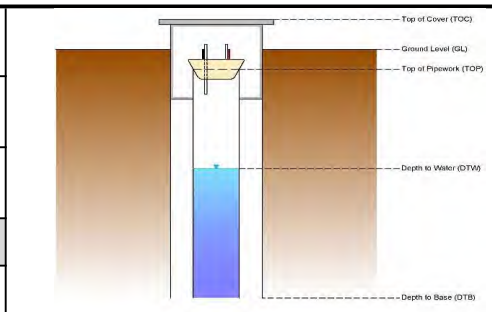
Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

BH ID	RBH210										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.09			
Start Time:	13:55	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		14:03	16.9	955.72	4.01	7.53	-129.1	12.520		72.90	
Initial Water Level (m)	12.520	14:06	14.7	925.15	1.00	7.51	-127.2	12.520		76.48	
		14:09	13.8	920.23	0.77	7.5	-126.5	12.520		78.02	
LNAPL Present? (Y/N)	N	14:12	13.7	916.99	0.68	7.51	-126.8	12.620		77.72	
Initial LNAPL Level (m)		14:15	13.5	913.83	0.59	7.53	-128.1	12.620		77.25	
Well Headspace Reading (PID/FID)		14:18	13.4	913.69	0.58	7.53	-128.2	12.620		77.15	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Bladder										
Pump Intake Depth (m)	22.00										
Depth to Base (m)	23.65	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Light brown, some sediment, no odour							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 X P, 2 x V, 2 x Pr							
Initial DNAPL Level (m)		Sample Collection Time		14:18:00 - 14:35							

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	Dantzic Street		
	Project Number:	4328		
	Sampling Date:	27th September	Sampled by:	AM
	Weather:	Overcast, 12 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	AQURA TROLL 848941			
	Water Quality Meter Last Calibrated:	27/09/2022			
	Dissolved oxygen probe last calibrated:	27/09/2022			
	Water Level Meter Used (X that applicable):				
	Interface probe	X	Dip Meter		

Typical Parameter Stabilisation Criteria for Low-Flow Sampling	Dissolved Oxygen (D.O.)	0.3 mg/l
	Specific Conductivity (Sp.Cond)	3%
	p.H	0.1 unit
	Oxygen Reduction Potential (ORP)	10mV
	* For REDOX correction, see separate guidance	

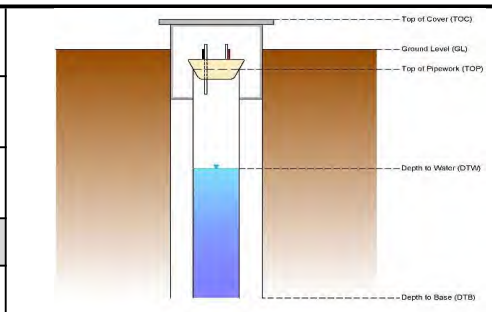
BH ID	RBH1 (Replacement for RBH204)										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.09			
Start Time:	09:40	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									**SmarTroll**	**<Select Probe**
Well Material		09:53	12.5	1668.8	2.2	7.20	-6.2	4.650		602.14	
Initial Water Level (m)	4.600	09:56	12.54	1674.7	0.45	7.23	-41.4	4.700		602.14	
		09:59	12.58	1662.5	0.32	7.26	-55.6	4.700		602.14	
LNAPL Present? (Y/N)	N	10:02	12.57	1647.9	0.24	7.28	-64.3	4.700		602.14	
Initial LNAPL Level (m)		10:05	12.59	1632.9	0.19	7.29	-73.2	4.700		602.14	
Well Headspace Reading (PID/FID)		10:08	12.6	1621.0	0.17	7.30	-77.1	4.700		602.14	
		10:11	12.6	1616.7	0.16	7.30	-70.7	4.700		602.14	
Purge Method (Give details in Notes section)	LowFlow	10:14	12.6	1614.2	0.15	7.30	-81.8	4.700		602.14	
		10:17	12.6	1614.4	0.14	7.30	-85.0	4.700		602.14	
Sampling Method (Give details in Notes section.)	Peristaltic	10:20	12.6	1615.7	0.13	7.30	-85.6	4.700		602.14	
		10:23	12.6	1618.0	0.13	7.30	-85.5	4.700		602.14	
Pump Intake Depth (m)	13.000	10:26	12.6	1620.8	0.13	7.29	-86.0	4.700		602.14	
Depth to Base (m)	14.190	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		Cloudy , on odour , 16s to fill vail							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		6x1l glass 2x500ml plastic 2xY 2xR 4xV							
Initial DNAPL Level (m)		Sample Collection Time		10:26							

BH ID	RBH201										
Measurement Datum Notes:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.14			
Start Time:	11:40	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									**SmarTroll**	**<Select Probe**
Well Material		11:43	13.65	1700.1	1.31	7.23	-10.1	4.700		602.14	
Initial Water Level (m)	4.650	11:46	13.7	1698.8	0.75	7.23	-12.9	4.730		602.14	
		11:49	13.78	1699.3	0.62	7.22	-14.8	4.730		602.14	
LNAPL Present? (Y/N)	N	11:52	13.71	1698.6	0.56	7.22	-15.5	4.730		602.14	
Initial LNAPL Level (m)		11:55	13.74	1699.8	0.51	7.22	-16.4	4.730		602.14	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Peristaltic										
Pump Intake Depth (m)	22.000										
Depth to Base (m)	24.930	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Cloudy , no odour ,28s to fill vail						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			6x1l glass 2x500ml plastic 2xY 2xR 4xV						
Initial DNAPL Level (m)		Sample Collection Time			11:55						

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	Dantzic Street		
	Project Number:	4328		
	Sampling Date:	27th September	Sampled by:	AM
	Weather:	Overcast, 12 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	AQURA TROLL 848941			
	Water Quality Meter Last Calibrated:	27/09/2022			
	Dissolved oxygen probe last calibrated:	27/09/2022			
	Water Level Meter Used (X that applicable):				
	Interface probe	X	Dip Meter		

Typical Parameter Stabilisation Criteria for Low-Flow Sampling	Dissolved Oxygen (D.O.)	0.3 mg/l
	Specific Conductivity (Sp.Cond)	3%
	p.H	0.1 unit
	Oxygen Reduction Potential (ORP)	10mV
	* For REDOX correction, see separate guidance	

BH ID	RBH202										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.2			
Start Time:	13:55	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									**SmarTroll**	**<Select Probe**
Well Material		14:00	15.3	2201.1	4.14	7.08	140.1	6.100		602.14	
Initial Water Level (m)	6.090	14:03	14.1	2188.7	0.6	7.07	128.2	6.100		602.94	
		14:06	13.8	2189.7	0.41	7.07	126.4	6.100		602.94	
LNAPL Present? (Y/N)	N	14:09	13.7	2152.2	0.48	7.09	127.7	6.100		602.94	
Initial LNAPL Level (m)		14:12	13.7	2150.3	0.44	7.09	129.8	6.100		602.94	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)											
Pump Intake Depth (m)	23.000										
Depth to Base (m)	24.940	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Cleare , no odour , 19s to fill vail						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			6 x G, 2 x P, 4 x Pr, 4 x V						
Initial DNAPL Level (m)		Sample Collection Time			14:12						

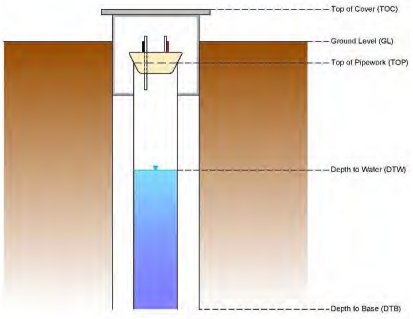
BH ID	RBH203										
Measurement Datum Notes:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.14			
Start Time:	15:22	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									**SmarTroll**	**<Select Probe**
Well Material		15:26	13.87	1125.7	4.57	7.49	117.1	6.670		602.14	
Initial Water Level (m)	6.660	15:29	12.73	1106.5	1.60	7.06	81.5	6.670		602.94	
		15:32	12.54	1114.0	1.41	7.01	88.8	6.670		602.94	
LNAPL Present? (Y/N)	N	15:35	12.48	1110.8	1.32	6.99	88.7	6.670		602.94	
Initial LNAPL Level (m)		15:38	12.48	1109.9	1.32	6.99	87.1	6.670		602.94	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section.)	Peristaltic										
Pump Intake Depth (m)	13.000										
Depth to Base (m)	15.490	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Clear, no odour, 21 seconds for 40 ml vial						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			6 x G, 2 x P, 4 x Pr, 4 x V						
Initial DNAPL Level (m)		Sample Collection Time			15:38						

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	NT02-04 Dantzic Street		
	Project Number:	4328		
	Sampling Date:	27th September 2022	Sampled by:	P.Nicol
	Weather:	Overcast, 12 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	Aquatroll		
	Water Quality Meter Last Calibrated:	27th September 2022		
	Dissolved oxygen probe last calibrated:	27th September 2022		
	Water Level Meter Used (X that applicable):			
	Interface probe		Dip Meter	X



Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

BH ID	RBH208										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.04			
Start Time:	09:50	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		10:26	11.8	945.32	4.06	7.75	-139.6	13.760		66.58	
Initial Water Level (m)	13.740	10:29	11.6	959.67	0.40	7.73	-138.4	13.760		67.78	
		10:32	11.6	955.48	0.33	7.73	-138.5	13.760		67.68	
LNAPL Present? (Y/N)	N	10:35	11.6	953.30	0.35	7.73	-138.7	13.760		67.48	
Initial LNAPL Level (m)		10:38	11.6	950.25	0.29	7.73	-138.8	13.760		67.38	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section)	Bladder										
Pump Intake Depth (m)	21.500										
Depth to Base (m)	23.560	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Clear, small amount of sediment, no odour. Approx 5 litres purged.						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			3 x G, 1 x P, 2 x Pr, 2 x V						
Initial DNAPL Level (m)		Sample Collection Time			10:38:00 - 10:53						

BH ID	RBH209										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.25			
Start Time:	11:11									Corr. REDOX	Notes / Flow

Start Time:	11:11	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		11:29	11.45	1165.9	0.86	7.77	-140.4	12.380		66.60	
Initial Water Level (m)	12.350	11:32	11.32	1153.2	0.62	7.76	-139.2	12.380		67.80	
		11:35	11.31	1169.0	0.70	7.62	-132.1	12.380		74.90	
LNAPL Present? (Y/N)	N	11:38	11.29	1166.0	0.68	7.72	-138.1	12.380		68.90	
Initial LNAPL Level (m)		11:41	11.27	1158.6	0.66	7.76	-140.1	12.380		66.90	
Well Headspace Reading (PID/FID)		11:44	11.3	1156.2	0.66	7.76	-140.4	12.380		66.60	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section)	Bladder										
Pump Intake Depth (m)	15.500										
Depth to Base (m)	16.580	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Light orangey brown colour, no odour, sediment present. Approx 6 litres p						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			3 x G, 1 x P, 2 x Pr, 2 x V						
Initial DNAPL Level (m)		Sample Collection Time			11:44 - 11:58						

TPF209 Issue 5 - Apr 2021

BH ID	RBH210										
Measurement Datum Notes:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):		-0.09		
Start Time:	13:15	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		13:24	12.1	889.63	0.6	7.74	-139.2	12.550		66.98	
Initial Water Level (m)	12.540	13:27	12.17	887.64	0.56	7.75	-139.7	12.550		66.48	
		13:30	12.09	886.45	0.45	7.74	-138.9	12.550		67.28	
LNAPL Present? (Y/N)	N	13:33	12.05	886.31	0.42	7.73	-138.5	12.550		67.68	
Initial LNAPL Level (m)		`13:36	12.03	886.41	0.39	7.73	-138.4	12.550		67.78	
Well Headspace Reading (PID/FID)		13:39	12.0	883.45	0.35	7.73	-139.5	12.550		66.68	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section)	Bladder										
Pump Intake Depth (m)	22.000										
Depth to Base (m)	23.050	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.			Clear, small amount of sediment, no odour. Approx 5 litres purged.						
DNAPL Present? (Y/N)	N	Sample Containers Obtained			3 x G, 1 x P, 2 x Pr, 2 x V						
Initial DNAPL Level (m)		Sample Collection Time			13:39 - 13:54						

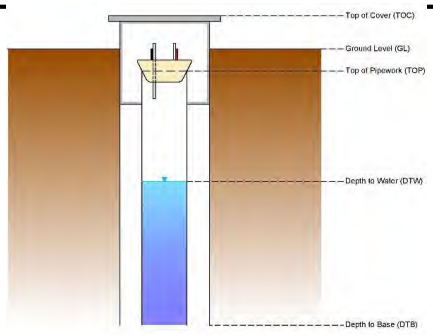
TPF209 Issue 6 - June 2021

Groundwater Sampling Data Form

This form is also available for RSK Mobile Data Capture.

Project Information	Project Name:	NT02-04 Dantzic Street		
	Project Number:	4328		
	Sampling Date:	28th September 2022	Sampled by:	P.Nicol/A.Mowafi
	Weather:	Sunny, 12 C		
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	Aquatroll 359475			
	Water Quality Meter Last Calibrated:	28th September 2022			
	Dissolved oxygen probe last calibrated:	28th September 2022			
	Water Level Meter Used (X that applicable):				
	Interface probe	X	Dip Meter		



Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

BH ID	RBH207										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	0.08			
Start Time:	08:35	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		08:49	10.7	818.4	0.52	7.61	-131.9	7.970		75.10	
Initial Water Level (m)	7.970	08:52	11.1	819.26	0.37	7.70	-136.4	7.970		70.60	
		08:55	11.1	818.62	0.27	7.75	-138.7	7.970		68.30	
LNAPL Present? (Y/N)	N	08:58	11.2	819.94	0.26	7.70	-136.4	7.970		70.60	
Initial LNAPL Level (m)		09:01	11.3	817.48	0.23	7.71	-136.9	7.970		70.10	
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section)											
Pump Intake Depth (m)	22.500										
Depth to Base (m)	24.110	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.								40ml vial = 18 seconds. Cloudy, no odour, some sediment. Approx 2 litres	
DNAPL Present? (Y/N)	N	Sample Containers Obtained								3 x G, 1 x P, 2 x Pr, 2 x V	
Initial DNAPL Level (m)		Sample Collection Time								09:01:00 - 09:23	

TPF209 Issue 5 - Apr 2021

BH ID	RBH205										
Measurement Datum Notes:	***Top Of Cover* (TOC), *Ground Level* (GL), *Top Of Pipework* (TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):	-0.09			
Start Time:	09:46									Corr. REDOX	Notes / Flow

Start Time:	09:46	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		10:01	11.06	834.76	0.63	7.58	-129.6	5.420		77.40	
Initial Water Level (m)	5.420	10:04	12.28	848.22	0.33	7.59	-130.8	5.420		75.38	
		10:07	12.45	868.31	0.24	7.59	-131.1	5.420		75.08	
LNAPL Present? (Y/N)	N	10:10	12.5	877.9	0.2	7.6	-131.7	5.420		73.65	
Initial LNAPL Level (m)		10:13	12.56	891.71	0.16	7.59	-131.5	5.420		73.85	
Well Headspace Reading (PID/FID)		10:16	12.7	905.61	0.15	7.59	-131.2	5.420		74.15	
		10:19	12.7	906.61	0.14	7.59	-131.3	5.420		74.05	
Purge Method (Give details in Notes section)	LowFlow										
Sampling Method (Give details in Notes section)	Peristaltic										
Pump Intake Depth (m)	22.000										
Depth to Base (m)	23.450	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		40ml vial = 16 seconds, light brown, no odour, some sediment. Approx 5 li							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		3 x G, 1 x P, 2 x Pr, 2 x V							
Initial DNAPL Level (m)		Sample Collection Time		10:19:00 - 10:35							

TPF209 Issue 5 - Apr 2021

BH ID	Unknown well inside furthest warehouse (RM advised) - **PURGE**										
Measurement Datum Notes:	***Top Of Cover*** **(TOC),** ***Ground Level*** **(GL),** ***Top Of Pipework*** **(TOP).** If 'Ground Level', the offset from datum to GL will be 0m. **Record a positive offset if the datum is higher than GL or a negative offset if the datum is below GL.** See figure above for definitions.										
Measurement Datum:	TOP						Offset from **datum** to GL (m):		0		
Start Time:	11:00	Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Turbidity (NTU)	Corr. REDOX (mV)	Notes / Flow (ml/min)
Well Diameter (mm)	50									SmarTroll	<Select Probe
Well Material		11:15	12.58	795.62	1.58	7.59	-138.9			66.45	
Initial Water Level (m)	6.710	11:30	12.23	798.65	1.49	7.59	-138.5			67.68	
LNAPL Present? (Y/N)	N										
Initial LNAPL Level (m)											
Well Headspace Reading (PID/FID)											
Purge Method (Give details in Notes section)	Other										
Sampling Method (Give details in Notes section)											
Pump Intake Depth (m)											
Depth to Base (m)	18.570	Sampling Notes (e.g. oil/colour/odour), reasons if not monitored, include purge / sampling method if "Other" selected.		72 litres developed by bailer							
DNAPL Present? (Y/N)	N	Sample Containers Obtained		None							
Initial DNAPL Level (m)		Sample Collection Time									

TPF209 Issue 6 - June 2021











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