Piling Risk Assessment

Plot 10b, First Street

For

House of Social 1 Ltd



CIVIL | STRUCTURAL | GEOTECHNICAL | GEO-ENVIRONMENTAL ENGINEERING SERVICES

GENERAL NOTES

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1 INTRODUCTION

1.1 Commissioning

ROC Consulting was commissioned by House of Social 1 Ltd to carry out a Piling Risk Assessment for the Land at Plot 10b, First Street, Manchester to facilitate the development of a 15 storey residential apartment block in accordance with Tim Groom architect's drawing (ref: 1172-TGA-XX-ZZ-DR-A-10029 P02) and Planit Landscape Architects drawing (ref: PL1471.3-PLA-ZZ-00-DR-L-001) provided within Appendix B.

The project was carried out to an agreed brief as set out in the proposal email dated 6th June 2023.

The proposed layout and foundation and piling design drawings and details for Plot 10b are included in Appendix B. This report is designed to satisfy Environment Agency (EA) requirements to assess the risk of pilling associated with the construction.

1.2 Objectives

The objective of the work is:

- to assess risks of piling works, with particular respect to underlying principal aquifer and to determine an appropriate method of piling in accordance with EA guidance.

1.3 Scope of works

The scope of this assessment was designed generally to meet the requirements of the EA and reference has been made to the EA's guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (2001) and Piling in Layered Ground: risks to groundwater and archaeology – Science Report SC020074/SR (2006) & Summary Document SC020074/TS (2006).

This Piling and Hydrogeological Risk Assessment has been prepared in accordance with current legislation: the Water Act 2003 and The Environmental Permitting (England and Wales) Regulations 2010 and Groundwater Daughter Directives with particular reference to the protection of Controlled Waters. This document also acknowledges the responsibilities of the National Planning Policy Framework (NPPF).

The scope of works for the assessment has included the following:

Risk Assessment:

- Brief summary of site investigation to date
- Description of site geology, hydrogeology, and soil contamination identified at the site
- Description of the piling solution proposed for the development
- Risk assessment for the proposed piling solution in accordance with Environment Agency document 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention – National Groundwater & Contaminated Land Centre report NC/99/73'

- Specific reference to the impact to the local groundwater regime
- Recommendations for piling methods/controls to minimise impacts to sensitive aquifers

1.4 Existing reports

The following reports detailing previous works at the site were made available for review:

- Ground Investigation Report, completed by TerraConsult dated January 2020 (ref:4302R001-3);
- Geotechnical and Contaminated Land Interpretative Report completed by Ramboll dated February 2020 (ref: 1620002943-GCLIR-03)
- Phase 1 Desktop Study completed by RoC Consulting dated September 2022 (ref: 4513-ROC- ZZ-XX-RP-ES-P1-101)
- Phase 2 Site Investigation completed by ROC Consulting dated December 2022 (ref: 4513-ROC- ZZ-XX-RP-ES-P2SI01)
- Ground Gas Addendum completed by ROC Consulting dated January 2023 (ref: LR/NA/4513/rp-200123)

Pertinent information from these reports has been brought together to form the basis of this report and is presented herein.

1.5 Limitations

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.

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.

Ground conditions can change rapidly, especially in areas of made ground, however, it is assumed that the ground conditions that have been observed during previous investigations 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.

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.

This report should be considered in the light of any changes in legislation, statutory requirement or industry practices that may have occurred subsequent to the date of issue.

The comments given in this report and the opinions expressed are based on the ground conditions encountered during all available stages of intrusive site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by investigations and therefore could not be taken into account.

This report is subject to the limitations that may be described through this document.

2 SITE DETAILS

2.1 Site location

Site location details are presented in Table 1 and a site location plan is presented within Appendix A.

Table 1 Site location details

Site name	Plot 10b
Full site address and Post code	First Street, Manchester, M1 5GG
National Grid reference (centre of site)	383808, 397305

2.2 Site description

The Site boundary and current site layout are shown in the figures within Appendix A. The Site covers an area of c. 0.3 hectares and is located adjacent southwest of River Street and north of Hulme Street, Manchester. The site is currently a vacant open area with several stockpiles of demolition waste and pile arisings from the neighbouring site. The surface of the site consists of a concrete slab or asphalt with the remainder of the site covered by compacted hardcore. in the north of the site and asphalt. The site has most recently been used by site contractors as a temporary car park for neighbouring developments.

2.3 Surrounding land uses

The Site is located in Manchester, within a mixed residential and commercial setting. Immediate surrounding land uses are described in Table 2.

Table 2 Surrounding land uses

North	Large commercial and residential buildings
East	Residential apartments (formerly Macintosh & Co limited rubber works)
South	Further construction sites and the A57 (running east to west)
West	Live construction site defined as plot 9a & b and Plot 10a

2.4 Development plans

The proposed layout of the site, at the time of preparing this report, is shown in **Appendix B**.

The proposed development at the site consists of a medium rise (15 storeys) purpose built student accommodation (PBSA) scheme. Limited soft landscaping areas will be present in the south and east of the site.

Foundations for the development are proposed to consist of piles (likely 450mm diameter) advanced using Continuous Flight Auger (CFA) piling techniques. It is currently proposed that piles will be advanced to depths between 15 and 20m and will socket approximately 7m into the underlying Chester Sandstone.

The proposed pile layout drawing is presented in Appendix B.

Ground levels across the site will remain similar to existing levels except for within the southern end of the proposed building where ground levels are higher than the rest of the site and a reduced level dig is proposed to provide a common ground floor level for the building.

2.5 Site History

According to the earliest historical records, the site was occupied by open land up until the mid-1800s when residential housing was constructed on the site. The housing was removed during the mid1900s when it was replaced with a steel truss building associated with the Dunlop Rubber Works. An electrical substation was noted in the east and a dust extraction plant in the northern portion of the site. In the early 2000s the rubber works was removed, the site was used as a carpark, compound and storage yard with electrical and telecom substations in the south of the site and a garage in the north. Recently the site was utilised for earthwork stockpiles.

Gaythorne gas works was historically present to the north of the site, it was demolished in the 21st century and has been undergoing remediation since. The rubber works building to the east of the site was converted into residential apartments. A tank was located adjacent to the west of the site and a coal yard 50m south of the site. An electrical substation was demolished adjacent to the north of the site. Historically a timber yard and print works were located within 250m of the site boundary.

The site slopes northwest and a drainage channel is present north of the site. The northern, eastern and southern boundaries are marked by a concrete base and metal sheet fencing.

3 GROUND CONDITIONS

3.1 Published geology

Published records (British Geological Survey, 2023) for the area and available historical borehole logs indicate the geology of the site to be characterised by the succession recorded in Table 3. There are three publicly available BGS historical boreholes located on or within 250m of the site, a selection of which are discussed below and presented in **Appendix D**.

Table 3 Site geology

Strata	Description	Estimated thickness	Permeability
Made Ground	Demolition fill sand with high gravel and brick cobble content. Cohesive sandy gravelly clay deposits were found beneath the granular. Anthropogenic inclusions were concrete, metal, clinker, ceramic and coal.	3.80 – 5.50m bgl	Low to high
Glaciofluvial Sheet deposits	Gravelly sand becoming sand and gravel with depth	2.70m bgl	Moderate to high
Devensian Till Deposits	Sandy gravelly clay deposits with beds of gravel within the clay.	3.50m bgl	Low
Chester Formation	Reddish brown sandstone.	>16.50m bgl	Moderate to high
Relevant information sources: BGS Geoindex ☒ BGS borehole logs ☒ Previous SI reports ☒			

SJ89NW1229 (132m NEE) – Made ground deposits recorded from surface to 4.50m bgl, comprising tarmac over concrete over black ash and cinders to 0.90m bgl. This was underlain by a black clayey sandy ash with occasional gravel to 1.50m bgl. A soft to firm brown very sandy clay was present beneath to 4.50m bgl. Natural strata comprising a very soft dark brown/black slightly sandy clay was present beneath the made ground to a depth of 5.60m bgl. A brown silty very sandy gravel with a slight petroleum odour was noted from 5.60m to 6.90m bgl. Bedrock comprising a dark grey sandstone with a slight hydrocarbon odour underlain superficial deposits to borehole termination at 8.00m bgl. Groundwater was struck at 5.70m bgl and rising to 5.19m bgl after 20 minutes.

3.2 Ground conditions encountered

The ground conditions encountered at the site during the site investigation (Phase 2 site investigation, ROC, Plot 10B First Street 4513-ROC-ZZ-XX-RP-ES-P2SI01, 22/12/2022) are presented in this section.

The full results of the intrusive investigations, together with full descriptions of the strata encountered, list of samples taken, groundwater observations, in-situ testing, details of monitoring well installations, all chemical and geotechnical laboratory test certificates are included in the relevant reports, as referenced in Section 1.4.

Table 4 General succession of strata (ROC, Phase 2 site investigation, 2022)

Stratum	Positions Encountered	Depth to top of stratum (m bgl)	Proven thickness (m bgl)
Made ground	RBH101, RBH102, TP101 – TP107, WS101A, WS101B, WS102, WS104 – WS106	Ground Level	2.50 – 5.50
Glaciofluvial Sheet deposits	RBH101, WS102	2.50 - 3.80	1.50 - 2.70
Devensian Till Deposits	RBH102, WS105	2.70 - 5.50	2.20 - 3.50m
Chester Formation	RBH101, RBH102	6.50 – 9.00	>16.50m

3.2.1 Made Ground

Made ground was encountered in all positions and generally comprised granular demolition sand and gravel with brick cobbles over cohesive clay, occasionally with asphalt at surface. The types of made ground present were logged as follows:

- Dark brown very gravelly sand with a low to high cobble content of bricks.
- Dark brown or brown clayey very gravelly sand.
- Brown clayey gravelly sand.
- Yellowish brown or black gravelly sand.
- Dark brown, grey, black, brown, reddish brown or yellowish brown sandy gravel.
- Dark brown sandy clayey gravel.
- Dark brown sandy gravelly clay.
- Soft brown slightly gravelly clay.
- Soft brown slightly sandy slightly gravelly clay.

Gravel and anthropogenic inclusions include brick, concrete, sandstone, limestone, clinker, coal, concrete slab, rebar, asphalt, stone lintels, glass, metal, slag, timber, masonry boulders.

3.2.2 Glaciofluvial Sheet Deposits

These deposits were only encountered in RBH101 and WS102 beneath made ground deposits between 2.50m and 3.80m bgl, ranging in proven thickness from 1.50m to 2.70m bgl.

Typically, the deposits comprised a brown or light brown with rare black mottling clayey slightly gravelly or gravelly sand over a brown sand and gravel of sandstone and quartzite.

3.2.3 Devensian Till Deposits

These deposits were only encountered in RBH102 and WS105 beneath made ground deposits between 2.70m to 5.50m bgl, ranging in proven thickness from 2.20m to 3.50m bgl.

The deposits varied between the two locations. Position WS105 identified deposits comprising a firm to stiff becoming stiff with depth dark brown slightly sandy slightly gravelly clay where gravel is sandstone. Whereas position RBH102 encountered deposits comprising a greyish brown slightly silty slightly sandy gravelly clay, underlain by grey gravel followed by a brown very sandy gravelly clay and reddish brown slightly clayey sand.

3.2.4 Chester Sandstone

The bedrock deposits were only encountered in the two rotary boreholes (RBH101 and RBH102) beneath superficial deposits at 9.00m and 6.50m bgl respectively. The proven thickness was greater than 16.50m.

The deposits comprised an extremely weak becoming very weak and weak with depth reddish brown sandstone with localised orangish brown staining.

3.2.5 Groundwater

Groundwater was encountered at the following depths during the previous site investigation shown on Table 5.

Table 5 Depth to Groundwater

Borehole Position	Water strike depth (m bgl)	Resting water levels (m bgl)	Resting water levels (m AOD)	Strata
WS102	3.00	2.90 - 3.00	27.95 – 28.05	Glaciofluvial Sheet Deposits
RBH101	N/A	4.94 – 4.98	25.91 – 25.95	
RBH102	N/A	6.38 – 6.59	26.22 – 26.43	Devensian Till Deposits

4 HYDROLOGY AND HYDROGEOLOGY

4.1 Hydrology

4.1.1 Surface watercourses

Local topography slopes towards the northwest in the direction of the River Medlock (culverted in this location) some 100m to the north of the site.

4.1.2 Site drainage

A temporary drainage channel is present in the north of the site serving on site welfare cabins running underneath the hardstanding toward the north.

4.2 Hydrogeology

4.2.1 Aquifer designation

The site is underlain by a secondary A aquifer relating to the superficial deposits and a principal aquifer relating to the Chester Sandstone bedrock.

4.2.2 Groundwater abstraction and Source Protection Zones (SPZ)

The site is not located in close proximity to any sensitive groundwater abstraction points (e.g. for a potable water supply well). The nearest licensed groundwater abstraction point is located approximately 175m northwest, relating to the now demolished rubber works. There are four active water abstractions at the site or within 500m of the site boundary relating to borehole abstraction wells 384m to the southeast operated by Manchester Metropolitan University for use in heating networks.

The site is located within a Zone III Environment Agency SPZ associated with an abstraction located 1.34km south of the site.

The purpose of SPZs is to provide additional protection to safeguard drinking water quality through constraining the proximity of an activity that may impact upon a drinking water abstraction.

- Zone 3 (total catchment)
    - Total area needed to support the abstraction from the protected groundwater source

4.2.3 Groundwater regime

Limited perched groundwater within the Glaciofluvial Deposits was recorded during the ROC investigation. This is anticipated to have percolated from ground level and be held perched by the low permeability clay strata of the Devensian Till.

No groundwater strikes occurred within the deeper boreholes at bedrock level, however, groundwater was found within RBH101 and RBH102 between 4.94m and 6.59m bgl during monitoring visits. It is considered this represents groundwater within the principal aquifer. This appears to confirm what was encountered on nearby BGS logs where groundwater was struck at 5.70m bgl. It is not possible to infer a groundwater flow direction between the two boreholes, though the gradient between the two boreholes indicates that

flow is likely to be either south to north or east to west. Regional groundwater flow as indicated on Figure 3.8 within the Baseline Report Series 8, 'The Permo-Triassic Sandstones of Manchester and East Cheshire' appear to be in an east to west direction with groundwater contours indicated to be somewhere between 20 and 30m AOD consistent with that recorded during the site investigation.

Therefore, it is considered that there are likely to be two separate groundwaters beneath the site. Perched water associated with the made ground and Glaciofluvial deposits along with a deeper water table associated with the Chester Sandstone principal aquifer. There appears to be a low permeability layer of Devensian Till clay acting as an aquiclude across a portion of the site, shown in RBC102.

5 CONTAMINATION STATUS

5.1 Introduction

Chemical analysis of the site soils was undertaken during the previous intrusive investigation (ROC 2022). Results of the investigation pertaining to contamination are included below.

5.2 Observations

Olfactory evidence of contamination from a site visit was noted in the form of a hydrocarbon odour within a stockpile of material originating from Plot 9a which was placed in the eastern portion of the site in the vicinity of TP105.

During the site investigation no visual evidence of contamination was noted. Olfactory evidence of contamination was noted within the made ground encountered at WS104. However, a stockpile of material from construction works on Plot 9a was located next to WS104 and was noted to be giving off a hydrocarbon odour.

5.3 Chemical analysis

RoC Consulting submitted a total of 15 soil and 2 water samples for testing. The analysis tested against are synonymous with the past industrial activities onsite and are detailed below in Table 6.

Table 6 Summary of Soil Chemical Analysis Tested

Determinands (Soil)	No. of Tests
Toxic and phytotoxic metals and metalloids	13
Total & Speciated Polycyclic Aromatic Hydrocarbons (PAH),	13
Other inorganic substances (e.g. Sulphate, Cyanide etc)	13
Asbestos ID	13
Semi-Volatile Organic Compounds (SVOC's)	8
Volatile Organic Carbon (VOC's)	8
Leachate Analysis (Heavy Metals, PAH, PCB and TPH etc)	2
Speciated Phenols	13
Water Soluble Sulphate & pH	13
Polychlorinated Biphenyls (PCB) EC7	4
Total Petroleum Hydrocarbons Criteria Working Group (TPHCWG - UKWIR)	2
Waste Assessment Criteria (WAC E)	2
Determinands (Water)	**No. of Tests**
Toxic and phytotoxic metals and metalloids	2

Total & Speciated Polycyclic Aromatic Hydrocarbons (PAH),	2
Other inorganic substances (e.g. Sulphate, Cyanide etc)	2
SVOC's	2
VOC's	2
Speciated Phenols	2
Water Soluble Sulphate & pH	2

The laboratory results were screened against generic residential without home grown produce screening criteria.

The results of the chemical analysis undertaken on soil samples found with elevated values are presented in Table 7 below.

Table 7 Summary of Soil Chemical Analysis (ROC, 2022)

BH ID	Depth	Determinant/s		Exceedance/ elevated value (mg/kg)
TP101	0.30	Asbestos*	Chrysotile	0.014%
		PAHs	Benzo(b)fluoranthene	4.32
			Dibenzo(ah)anthracene	0.46
		SVOCs*	2-Methylnapthalene	0.384
			Bis(2ethylhexyl)phthalate	1.33
			Carbazole	0.427
			Dibenzofuran	0.547
			Dibutlyphthalate	0.279
			Perylene	1.18
TP102	0.40	Metals	Lead	473
		Asbestos*	Chrysotile	<0.001%
		SVOCS*	Bis(2ethylhexyl)phthalate	1.28
			Dibutlyphthalate	0.326
			Perylene	0.321
TP103	0.80	PAHs	Dibenzo(ah)anthracene	0.32
	2.00	Metals	Lead	373
		Asbestos*	Chrysotile	<0.001%
TP105	1.00	Metals	Lead	514
		Asbestos*	Chrysotile	0.107%
		TPH	Aromatic C21-35	2920
		PAHs	Benzo(a)anthracene	15
			Benzo(a)pyrene	9.67
			Benzo(b)fluoranthene	9.22
			Dibenzo(ah)anthracene	0.96

BH ID	Depth	Determinant/s		Exceedance/ elevated value (mg/kg)
		SVOCs*	2-Methylnapthalene Carbazole Dibenzofuran Perylene	14 21.1 27.4 30.5
TP107	1.00	Metals	Arsenic	42
		Asbestos*	Chrysotile	<0.001%
WS101A	0.80	SVOCs*	n-Dibutylphthalate Perylene	0.304 0.266
WS102	0.30	PAHs	Benzo(a)pyrene Benzo(b)fluoranthene Dibenzo(ah)anthracene	8.24 7.93 1.01
WS104	0.50	Asbestos*	Chrysotile	0.006%
	1.30	PAHs	Benzo(b)fluoranthene Dibenzo(ah)anthracene	4.14 0.41
WS106	0.40	Asbestos*	Chrysotile	<0.001%
*Elevated concentrations of contaminants with no established GACs				

The results identify exceedances of human health criteria within shallow made ground relating to arsenic, lead, Aromatic C21-35, benzo(b)flouranthene, benzo(a)pyrene, benzo(a)anthracene and dibenzo(a,h)anthracene. Further elevated levels of SVOCs are reported within made ground, however no GAC is available for comparison.

Asbestos chrysotile fibres were identified within seven localities, three of which recording quantification values above trace levels (0.001%). Visible pieces of asbestos containing materials have not been identified during the site investigation. However, test results indicate that asbestos in the site soils may comprise a meaningful risk to human health.

5.4 Gas analysis

The results of the gas monitoring undertaken during the site investigation (ROC, 2022) are presented in Table 8.

Table 8 Gas Monitoring Results

Gas	Minimum	Maximum
Methane (% v/v)	0.00	0.00
Carbon Dioxide (% v/v)	0.00	2.2
Oxygen (% v/v)	11.10	21
Flow (l/hr)	-16.40	1.3
Carbon Monoxide (ppm)	0.00	0.00
Hydrogen sulphide (ppm)	0.00	76

Gas	Minimum	Maximum
Barometric Pressure	983	1025

Full characterisation carried out as part of the previous investigations has indicated a low gas risk with a Gas Screening Value (GSV) of 0.00286l/hr which gave the site a classification of Characteristic Situation 1.

5.5 Controlled Waters

The site is underlain by a Principal Aquifer and is located within an Environment Agency Zone source protection Zone III (Total Catchment) associated with an abstraction located approximately 1.34km from the site.

Made ground is present across the site, most of which is permeable sands and gravels becoming less permeable with depth due to the presence of concrete slabs and more cohesive made ground deposits. No groundwater was encountered within made ground. Devensian Till appears to be present in the southern portion of the site and Glaciofluvial deposits in the north. No groundwater was encountered within the Devensian Till, however groundwater was encountered within the Glaciofluvial deposits at 3.00m bgl. Subsequent monitoring visits have revealed a groundwater table at depths between 4.94m and 6.59m bgl within the Principal Aquifer that is likely flowing in a westerly direction.

5.5.1 Sampling and Testing

Chemical testing of groundwater samples obtained from the Principal Aquifer at RBH101 and RBH102 has been undertaken and screened against Drinking Water Standards criteria. The only exceedance reported was for Sulphate in RBH101. The previous site investigation noted that such concentrations are not uncommon within local groundwater.

Leachate testing was undertaken within made ground deposits to determine the likelihood of vertical migration of contaminants into the Principal Aquifer. Two leachate tests were undertaken at WS104 and TP101 with exceedances of Drinking Water Standards screening criteria shown below in Table 9.

Table 9 Summary of Groundwater and Soil Leachate Contamination

BH ID	Depth	Determinant/s (leachable)		Exceedance (µg/l)
TP101	0.30	PAHs	Benzo(a)pyrene	0.02
WS104	1.30	Metals	Arsenic	26
			Lead	368
		PAHs	Benzo(a)pyrene	0.08
RBH101	6.00	Sulphate		527,000

The ROC report notes that given the lack of any evidence of these contaminants being present at harmful levels within the Principal Aquifer it is deemed unlikely that any vertical leaching migration of contaminants from site soils into the underlying Principal Aquifer is occurring.

The results of the testing show exceedance of sulphate testing in RBH101 which is considered insignificant, while exceedances of PAHs and arsenic in leachate testing undertaken within made ground deposits suggests PAHs are leachable. This has however not been borne out within chemical testing of groundwater from the Principal Aquifer.

The results from the previous site investigation have indicated that groundwater within the Principal Aquifer has not been impacted by contaminants present within shallower soils on site. It is however possible that the Glaciofluvial deposits present on site may have been impacted by leachable contaminants within the made ground. However, no testing was conducted on this stratum.

6 CONCEPTUAL SITE MODEL

In the UK land contamination is assessed using a risk-based approach taking account of the magnitude (severity of the hazard) and likelihood (probability) of occurrence. A 'receptor' is something that could be adversely affected by contamination (e.g. people, an ecological system, property or a water body). A 'pathway' is a route or means by which a receptor is or could be exposed to or affected by a contaminant. A 'contaminant source' is a hazard but it can only pose a risk to a receptor where a pathway is present. The relationship between sources, pathways and receptors are referred to as a conceptual site model. A risk can only be realised where a contaminant source, pathway and receptor are all in place, referred to as a 'pollutant or contaminant linkage'.

In line with LCRM (Environment Agency, 2021a) and BS 10175: 2011 + A2 2017 (BSI, 2017), ROC has used information in the preceding sections to identify hazards (sources of contaminants), receptors that may be impacted and plausible linking pathways. Where all three are present this is termed a potentially complete contaminant linkage and a qualitative risk estimation is made.

6.1 Potential soil, soil vapour, ground gas and groundwater linkages

6.1.1 Potential sources of contamination

Potential sources of soil and groundwater contamination identified from current activities and the history of the site and surrounding area are presented in Table 10. Ground gas sources are addressed in the next section.

Table 10 Potential sources of soil and groundwater contamination

Potential sources	Contaminants of concern
On-site	
Current Ground Conditions, including Made Ground with asbestos.	Unknown fill material but potentially including brick, ash and clinker and containing toxic and phytotoxic metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), asbestos
Off-site	
Tank of unknown contents.	Petroleum hydrocarbons (petrol/diesel)

6.1.2 Potential sources of ground gas

Potential ground gas sources identified for the site and surrounding are shown in **Table 11**

Table 11 Potential ground gas sources

Potential sources	Indicative ground gas generation potential (CIEH, 2008)	Additional information
On-site		
Current Ground Conditions, including Made Ground	Moderate to low	Previous investigation classified the site as CS1 and therefore the risk is considered to be low.

6.1.3 Sensitive receptors and linking exposure/ migration pathways

Sensitive receptors identified at or in the vicinity of the site that could be affected by the potential sources identified above comprise:

- Current and Future site users – residential users [oral, dermal and inhalation exposure with impacted soil, soil vapour and dust/fibres, inhalation of vapours from groundwater]
- Construction workers [oral, dermal and inhalation exposure with impacted soil, soil vapour and dust/fibres]
- Future buildings and services [direct contact with contaminated soils or groundwater and chemical attack]
- Groundwater in Principal Aquifer/ source protection zone within Chester Sandstone bedrock deposits [leaching from soils/ percolation to aquifer/ lateral migration of dissolved phase etc.]

Potential linking pathways are show in brackets for each item above.

Potentially complete contaminant linkages with a potential risk of moderate to low or higher identified comprise:

- Current ground conditions including made ground and asbestos in soils affecting current and future site users, and ecological receptors via dermal contact, ingestion, or inhalation.
- Current ground conditions including made ground affecting current and future site users, and future services via migration and accumulation.

The previous investigation has shown there to be elevated levels of contaminants in soils including metals, PAHs, TPHs, asbestos, and SVOCs which includes leachates. These have the ability to migrate along preferential pathways that may be created through piling activities. The investigation shows that groundwater associated with the Principal Aquifer does not currently contain the contaminants that have been identified within the made ground deposits onsite. This has somewhat been attributed to a low permeability Glacial Till clay deposits above the deeper aquifer which appear to be inhibiting the potential pathway.

7 PILING RISK ASSESSMENT

7.1 Proposed piling methodology

The purpose of the Piling Risk Assessment is to ensure that the proposed piling method will not have an adverse impact by creating new pathways for the migration of contamination, considering the protection both of water resources and human health.

It is understood that the non-displacement pile method is proposed for the development, in the form of continuous flight auger (CFA) piles that will be cast in-situ.

The EA's guidance document *Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention* (2001) states CFA piles to be the most preferrable piling methodology for sites underlain by aquifers on the basis that they are likely to pose the least risk of groundwater pollution. This is because they reduce the possibility of transporting contaminated soil from the upper layers into the aquifer and because they do not provide an easy contamination path for groundwater to reach lower strata.

The current design indicates that piles will be advanced to a depth of between 15 and 20m and will be socketed approximately 7m into the underlying sandstone. Development and pile layout drawings are presented in Appendix B.

7.2 EA pollution scenarios

The EA's *Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention* (2001) guidance considers six pollution scenarios. The advantages and disadvantages associated with the proposed CFA piling method proposed for the site have been considered in relation to the six pollution scenarios and the results of the assessment are summarised in Table 12 overleaf.

Table 12 Piling risk assessment results

Generic Pollution Scenario (EA, 2001)	Site Characteristics	Risk Resulting from Use of CFA Piles	Risk
Scenario 1 Creation of preferential pathways through low permeability layers to allow potential contamination of the aquifer	The cohesive layers of the Devensian Deposits will inhibit vertical contaminant migration and as such are considered to provide some protection to deep groundwater resources in the underling sandstone aquifer.	Displacement of soil around the pile is minimised by the technique. Concrete will be cast in-situ directly against soils as the auger is slowly withdrawn so there is no open bore at any time. Waterflow down the auger during drilling is minimised by the upward movement of soil at all times and the advance of rising concrete. Contaminated soils will be brought to the surface and the flow pathway from any contaminants present within the made ground into the underlying Principal Aquifer present within the Chester Sandstone will be sealed.	**Very Low**
Scenario 2 Creation of preferential pathways through a low permeability surface layer, allowing upwards migration of ground gas or contaminant vapours to the surface	The monitoring and chemical testing confirm that the generation of ground gases and vapours on the site is negligible.	Concrete will be cast directly against soils limiting the potential for ground gas or vapour migration pathways.	**Negligible** – Low concentrations of ground gas and volatile organic compounds (VOCs) were recorded during monitoring.

Generic Pollution Scenario (EA, 2001)	Site Characteristics	Risk Resulting from Use of CFA Piles	Risk
Scenario 3 Direct contact of site workers and others with contaminated soil arisings that have been brought to the surface	The made ground contains slightly elevated concentrations of asbestos, heavy metals, PAHs and SVOCs.	All contamination identified is below commercial GACs, however it should be noted that these are not directly applicable to construction workers and the risk can be further reduced by adhering to standard construction site health and safety precautions and PPE along with the contractor undertaking a watching brief for asbestos containing materials within the pile arisings.	**Low**
Scenario 4 Direct contact of the piles with contaminated soil or leachate causing degradation of materials	Based on the concrete classification presented within the ROC Phase 2 Site Investigation report of DS1, AC-1s may be assumed for the site. No other contaminants were detected that would degrade materials within soils.	Adequate concrete mix design in accordance with the concrete classification is required.	**Low**
Scenario 5 The pushing of solid contaminants down into an aquifer during pile driving	Contaminants have been identified within the shallow soils however the majority are unlikely to be significantly mobile in groundwater. Driving any shallow contaminated made ground into the deep aquifer should be avoided.	Not applicable – all arising are brought to the surface when CFA piling is utilised.	**N/A**
Scenario 6 Contamination of groundwater by wet concrete, cement paste or grout	Natural groundwater flow within the Principal Aquifer is anticipated to be to the west.	Grout/cement only remains mobile until hardened. The volume of concrete added will be monitored during piling and the viscosity will be managed to limit loss. Any impact to groundwater, if any will be highly localised around individual piles and would therefore not impact the water abstraction located at the centre of the SPZ located 1.34km south of the site.	**Very Low**

7.3 Justification of selected methodology

The use of shallow foundations is not an option for the site, due to the anticipated loadings of the proposed building, the depth of made ground and the variability in ground conditions as such the development requires a pile solution.

The hazard assessment has identified that a low environmental risk exists for the CFA piling technique being considered for the proposed development, and that this technique would not adversely impact the underlying Principal Aquifer.

It is therefore considered that CFA pilling techniques represent an applicable methodology for the scheme and would not present any significant risks to the environment of controlled waters for the reasons outlined in site specific hazard identification and assessment above.

REFERENCES

Previous SI reports

TerraConsult (2020), Ground Investigation Report, (ref:4302R001-3), January 2020

Ramboll (2020), Geotechnical and Contaminated Land Interpretative Report, (ref: 1620002943-GCLIR-03), February 2020

ROC Consulting (2022), Phase 1 Desktop Study, (ref: 4513-ROC- ZZ-XX-RP-ES-P1-101), September 2022

ROC Consulting (2022), Phase 2 Site Investigation (ref: 4513-ROC- ZZ-XX-RP-ES-P2SI01), December 2022

ROC Consulting (2023), Ground Gas Addendum (ref: LR/NA/4513/rp-200123), January 2023

Standards and guidance

AGS (2022), UK Specification for Ground Investigation (UKSGI), third edition, 2022.

Baker, K., Hayward, H., Potter, L., Bradley, D. and McLeod, C. (2009), CIRIA Report C682. The VOCs Handbook. Investigating, assessing and managing risks from inhalation of VOCs at land affected by contamination.

Boyle, R. A. and Witherington, P. J. (2007), 'Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present', National House-Building Council and RSK Group.

BRE (2015). Radon – Guidance on protective measures for new buildings, Chris Scivyer, BRE Report BRE 211. BRE Group, 2015.

British Standards Institution (BSI) (1990), 'BS 1377:1990. Methods of test for soils for civil engineering purposes'.

British Standards Institution (BSI) (2020), 'BS 5930:2015+A1:2020. Code of practice for ground investigations'.

British Standard Institution (BSI) (2019), 'BS 8485:2015+A1:2019. Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'.

British Standards Institution (BSI) (2017), 'BS 10175:2011 + A2:2017. Investigation of potentially contaminated sites: Code of practice'.

British Standards Institution (BSI) (2013), BS8576:2013. Guidance on investigations for ground gas – permanent gases and volatile organic compounds (VOCs).

Building Research Establishment (2005), BRE Special Digest 1: Concrete in aggressive ground.

Card G, Wilson S, Mortimer S, (2012). A Pragmatic Approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17. CL:AIRE, London, UK. ISSN 2047- 6450 (Online).

Chartered Institute of Environmental Health (CIEH), (2008), The Local Authority Guide to Ground Gas. Wilson, Card and Haines, September 2008.

CIRIA (2014). Good practice on the testing and verification of protection systems for buildings against hazardous ground gases.

CL:AIRE (2021), Good practice for risk assessment for coal mine gas emissions. CL:AIRE, November 2021.

The Contaminated Land Regulations (England) 2006, **https://www.legislation.gov.uk/** .

The Contaminated Land (England) (Amendment) Regulations 2012, **https://www.legislation.gov.uk/**

Defra (2012), Part IIA of the Environmental Protection Act 1990, Contaminated Land Statutory Guidance, April 2012.

Environment Agency (2021a), Land contamination risk management, **https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm**, April 2021.

Environment Agency (2021b), 'Technical Guidance WM3. Guidance on the classification of and assessment of waste, 1st Edition, v.1.2, October 2021.

Environment Agency (2001), 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention' Rep NC/99/73

Environment Agency (2006), 'Piling in Layered Ground: risks to groundwater and archaeology', Science Report SC020074/SR (2006) & Summary Document SC020074/TS

National House Building Council (NHBC) (2016), Technical Extra, April 2016.

Norbury, D. (2010), Soil and Rock Description in Engineering Practice.

Part IIA of the Environmental Protection Act (Contaminated Land Regulations (England)) 2002.

Rudland, D. J., Lancefield, R. M. and Mayell, P. N. (2001), CIRIA C552. Contaminated Land Risk Assessment: A Guide to Good Practice.

SoBRA (2022), Guidance on Assessing Risk to Controlled Waters from UK Land Contamination Under Conditions of Future Climate Change, Version 1.0, August 2022.

Stone, K., Murray, A., Cooke, S., Foran, J., Gooderham, L., (2009) CIRIA C681, Unexploded Ordnance (UXO). A guide or the construction industry.

Transport and Road Research Laboratory, (1970), 'TRRL Road Note 29 (Appendix 1). Road pavement design'.

Transport and Road Research Laboratory (1984), 'TRRL Report LR1132 (Table C1)'.

UK Health Security Agency & British Geological Survey (2022), UK Radon Affected Area Map. Accessed from: **www.ukradon.org/information/maps**.

UK Water Industry Research, (2010), UKWIR Report 10/WM/03/21. Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites.

APPENDICES

Appendix A
RELEVANT ROC REPORT FIGURES

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NOTES

ES101 DRAWING KEY

- ROC WS101 — ROC WINDOW SAMPLE BOREHOLE LOCATION
- ROC BH101 — ROC ROTARY BOREHOLE LOCATION
- ROC WS101 — ROC WINDOW SAMPLE BOREHOLE LOCATION (MONITORING WELL)
- ROC BH101 — ROC ROTARY BOREHOLE LOCATION (MONITORING WELL)
- ROC TP101 — ROC TRIAL PIT LOCATION
- ROC XXXXX — ROC INCOMPLETE BOREHOLE
- APPROX SITE BOUNDARY

STORM WATER SEWERS
FOUL WATER SEWERS
WATER MAIN
GAS MAIN
ELECTRIC CABLES
CABLE DUCTING
BT (UNDERGROUND)
CABLE TV
CLOSED CIRCUIT TV
UNIDENTIFIED FEATURE
UNIDENTIFIED PIPE
UNIDENTIFIED CABLE
UNPROVEN FEATURE
END OF TRACE
LATERAL CONNECTIONS
EXTENT OF SURVEY BY SURVEY OPERATIONS LTD.
EXTENT OF SURVEY BY SURVEY SERVICES LTD.(FEB 22)
BURIED FEATURE FOUND USING RADAR
CONNECTIVITY BETWEEN CHAMBERS FROM CCTV REPORT
BURIED FEATURE FOUND USING RADAR

UNIDENTIFIED – A buried feature or utility that has been located, but we are unable to state what it is.
UNPROVEN – The assumed location of a reported feature or utility, usually taken from records, but not found during the utility trace (due to various conditions).
CAUTION – Electric pot ended cables, even when they are live, are unable to be detected or traced.

DRAWING NOTES

1) EXPLORATORY HOLE LOCATIONS SHOWN AT APPROXIMATE EXTENTS.

2) BELOW GROUND UTILITY LOCATIONS AND EXTENTS TAKEN FROM SURVEY OPERATIONS DWG 22B291/001 AND STATUTORY UTILITY PLAN AND SHOULD BE CONSIDERED AS APPROXIMATE.

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REV.	DATE	DETAILS	DRN.	CHK.
02	23.11.2022	UPDATED WITH AS DUG LOCATIONS	RM	LR
01	03.11.2022	FIRST ISSUE	RM	LR

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APPRVD.	DATE	EMAIL FOR DRAWINGS
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CLIENT
HOUSE OF SOCIAL ONE LTD

PROJECT TITLE
PLOT 10B FIRST STREET MANCHESTER

DRAWING TITLE
EXPLORATORY HOLE LOCATION PLAN EXISTING SITE

DRAWING No.	REV.
4513-ROC-ZZ-XX-DR-ES-ES101	02

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NOTES

ES102 DRAWING KEY

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- ROC BH101 — ROC ROTARY BOREHOLE LOCATION
- ROC TP101 — ROC TRIAL PIT LOCATION
- ROC XXXXX — ROC INCOMPLETE BOREHOLE
- APPROX SITE BOUNDARY

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2) PROPOSED DEVELOPMENT ARRANGEMENT TAKEN FROM TIM GROOM ARCHITECTS DRAWING: 1172-TGA-XX-ZZ-DR-A-10029 P02 AND MAY BE SUBJECT TO AMENDMENT OR REVIEW.

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01	03.11.2022	FIRST ISSUE	RM	LR

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PLOT 10B FIRST STREET MANCHESTER

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EXPLORATORY HOLE LOCATION PLAN PROPOSED SITE

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Appendix B
DEVELOPMENT AND PILE LAYOUT DRAWINGS

JAMES GRIGOR SQUARE

RIVER STREET

MEANWHILE LAWN
Species rich wildflower lawn to be installed on plot 10A

Ramp access to cycle store and bin stores

Tree in planter to be delivered as part of plot 10A development.

Final access to servicing yard to be delivered as part of Plot 10A development. Tempporary access required for plot 10B.

FUTURE PLOT 9B DEVELOPMENT

FIRST STREET

HULME STREET

WILMOTT STREET

LOADING ONLY

Kitchen 1
Kitchen 2
Kitchen 3
Kitchen 4
Kitchen 5
Food Hall
Staircore 2
Lift 01
Store
Staircore 1
Acc WC
Stair Lobby 04
Lift 05
BoH Lobby
Dry Storage
Cold Store
Pot Wash + Prep
Store
Store
Corridor
Refuse Store
Refuse Drop
Sludge/ Bin Store
Gym
Comms
Acc WC
Corridor
Staff Office
Cycle Store
Entrance Lobby
Lift 04
Lift 03
Lift 02
Delivery Store
Stair Lobby 03
Staircore 3
Parcels
Laundry
M Store
LV Switch
Sub St.
Commercial Sprinkler + Domestic Water

KEY

Application Boundary

HARDWORKS

YORKSTONE FLAG PAVING - FOOTPATH
- Sandstone paving to match specification of existing First Street surfacing

YORKSTONE FLAG PAVING - ENTRANCE
- Sandstone paving with different finishing or arrangement to footpath paving to highlight entrances

LINEAR CONCRETE BLOCK
- Option to use permeable system

LOOSE GRAVEL STRIPE
- 400mm wide loose gravel stripe to edge of rain garden

INSITU CONCRETE SURFACING

EXISTING TARMAC TO BE RESURFACED

GRANITE SETTS

ROAD KERB - UPSTAND
- Granite upstand kerb; W: 300mm, H: 60mm

ROAD KERB - FLUSH
- Granite flush kerb; W: 300mm

PLANTER EDGE - RETAINING WALL
- Granite planter edges acting as retaining wall; Height various

PLANTER EDGE
- Upstand granite planter edges

PROPOSED BRICK WALL
- To ramps and stairs at servicing yard

METAL HAND RAILS TO STAIR

GRANITE STEPPS

GRANITE BLISTER HAZARD PAVING

GRANITE CORDUROY HAZARD PAVING

TEMPORARY TIMBER RAILING
-To be removed before the construction of Plot 10A

LOADING BAY MARKING
- Shown indicative only. Details to be coordinated with highway engineers.

SOFTWORKS

SEMI-MATURE TREE - Proposed

SHRUB/PERENNIAL PLANTING

RAIN GARDEB PLANTING
- Planting with capacity to thrive in long periods under water and dry spells.

HEDGE
- Instant, trough grown, 1.2m high, 1m troughs

TEMPORARY MEANWHILE USE LAWN
- Species rich wildflower lwan to be installed to future Plot 10A
- To be removed before the construction of Plot 10A

TEMPORARY WIND MITIGATION TREES
- Meanwhile trees planting for wind mitigation.
- To be relocated/removed before the construction of Plot 10A

FURNITURE

EXISTING HYDRANT

PROPOSED FIXED BOLLARD
Bo1

PROPOSED FIXED BOLLARD
Bo2
- Automatic telescopic bollards

TREE PLANTER
- 3m x 2m
- To Hulme Street site entrance

BIERKELLER TABLE SET

TIMBER BENCH

WAY FINDING TOTEM
- Design to be developed in next stage

RAISED PLANTER
- Mobile planter to outdoor dinning ar along Wilmott Street

PARASOL UMRELLA
- 3m x 3m

CYCLE STAND

LITTER & RECYCLING BINS

LIGHTING

BUILDING MOUNTED LIGHTING
- Locations shown indicative only. Exact location to be coodinate with architects in next stage.

PLANTING UPLIGHTER - In soft

EXISTING LAMP POST TO BE RELOCATED

Revision	Date	Description	Drawn	Apprvd.
S4-P08	30-02-23	Removed 1no. parasol	YH	RM
S4-P07	28-03-23	Amends following building layout changes	YH	RM
S4-P06	28-02-23	RLB updated	YH	RM
S4-P05	03-02-23	Layout amendments	YH	RM
S3-P04	02-02-23	Layout amendments	YH	RM
S3-P03	01-02-23	Layout amendments	YH	RM
S1-P02	16-12-22	Layout amendments	YH	RM
S1-P01	17-11-22	First issue	RM	RM

Client Select Property Group

Project First Street Plot 10b

Drg Title General Arrangement

Created on	Created by	Approved by
17-11-2022	VE	RM

Scale	Size	Workstage
1:200	A1	Planning

Drg No.
PL1471.3-PLA-ZZ-00-DR-L-001

Suitability	Revision
S4	P08

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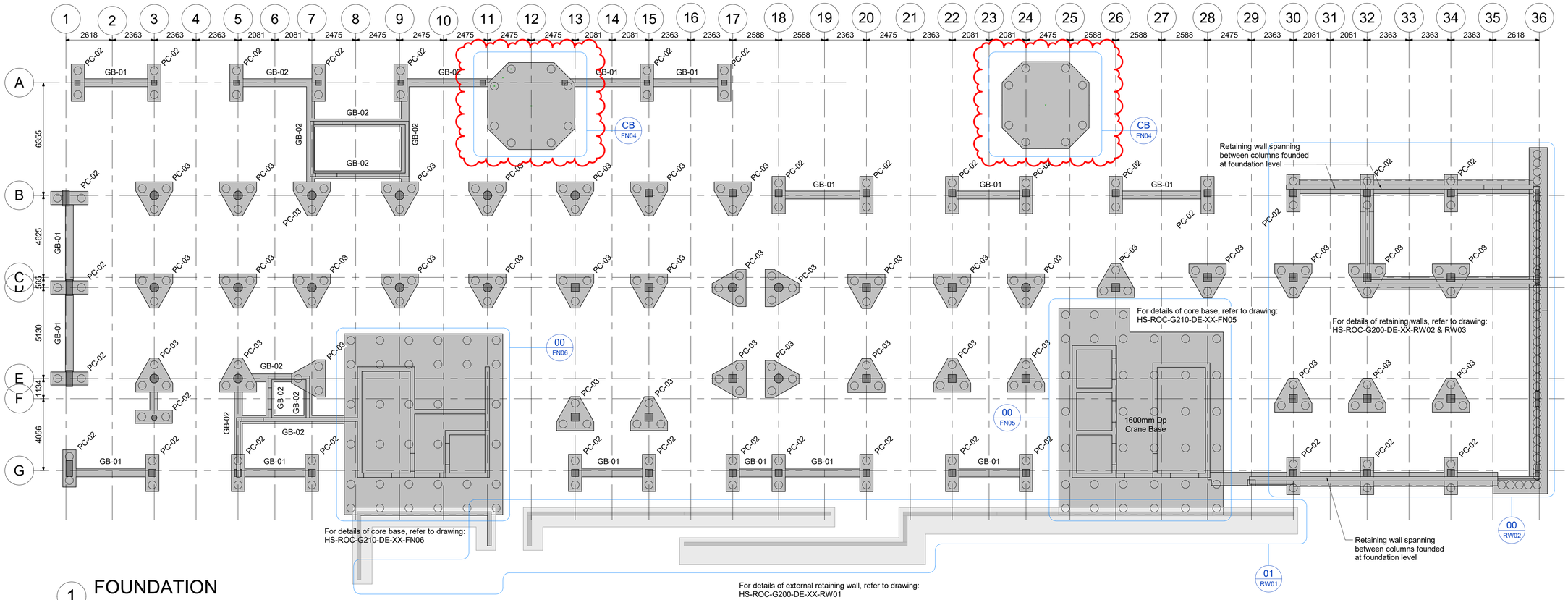
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NOTES:
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3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

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1 FOUNDATION
1 : 125

NOTES:
- All Piles to be 450mm Dia
- Min spacing of piles to be 1350 U.N.O
- Mid edge distance of piles 150mm
- All ground beam sizes:
  GB-01 450wd x 450dp
  GB-02 450wd x 750dp
- All foundation concrete to be grade C32/40

For details of typical foundations refer to Drawing:
HS-ROC-G210-DE-XX-FN04

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WORK IN PROGRESS

The information on this drawing is an optimised solution based upon external information as of 28.04.23 . It may be subject to change through external influences such as client brief and scope changes, services BWIC, sub-contractor requirements etc. Therefore a suitable contingent approach must be applied where the information is used for strategic decision making, procurement or construction in advance of final design requirements from other designers and sub-contractors.

NOTES

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2. Do not scale from the drawings or the computer digital date. Only figured dimensions are to be used.
3. It is the responsibility of the lead consultant (architect) to check the setting out provided on these drawings and the co-ordination of the frame with the envelope & other elements of the building.
4. All dimensions are in millimetres unless noted otherwise.
5. All levels are in metres above Ordnance Datum unless noted otherwise.
6. This drawing is to be read in conjunction with General Notes Drawing. NT-01

REV	DATE	DETAILS	DRN	CHK
P06	26.05.2023	CRANE BASES ADDED	EGP	JAS
P05	10.05.23	STAGE 4 FOR COMMENT	EGP	JAS
P04	05.05.23	INFORMATION ISSUE	EGP	JAS
P03	05.04.2023	STAGE 3	EGP	JAS
P02	25.01.2023	STAGE 2	EGP	JAS
P01	18.11.2022	PRELIMINARY	SJB	JAS

DRAWING STATUS: PRELIMINARY
SUITABILITY CODE: S0
RIBA STAGE: STAGE 4

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CLIENT: VITA GROUP

PROJECT TITLE: HOUSE OF SOCIAL FIRST STREET

DRAWING TITLE: FOUNDATION G.A

DRAWING No.: HS-ROC-G210-PL-XX-FN01
REV.: P06

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Appendix C
SUMMARY OF LEGISLATION AND POLICY RELATING TO LAND CONTAMINATION

Part IIA of the Environmental Protection Act 1990

Part IIA of the Environmental Protection Act 1990 (Part IIA) and its associated Contaminated Land Regulations 2000 (SI 2000/227), which came into force in England on 1 April 2000, formed the basis for the current regulatory framework and the statutory regime for the identification and remediation of contaminated land. Part IIA of the EPA 1990 defines contaminated land as 'any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused'. Controlled waters are considered to include all groundwater, inland waters and estuaries.

In August 2006, the Contaminated Land (England) Regulations 2006 (SI 2006/1380) were implemented, which extended the statutory regime to include Part IIA of the EPA as originally introduced on 1 April 2000, together with changes intended chiefly to address land that is contaminated by virtue of radioactivity. These have been replaced subsequently by the Contaminated Land (England) (Amendment) Regulations 2012, which now exclude land that is contaminated by virtue of radioactivity.

The intention of Part IIA is to deal with contaminated land issues that are considered to cause significant harm on land that is not undergoing development (see **Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance, April 2012). This document replaces Annex III of** Defra Circular 01/2006, published in September 2006 (the remainder of this document is now obsolete).

Planning Policy

Land contamination is often addressed via the planning process during redevelopment of sites. This approach was documented in Planning Policy Statement: Planning and Pollution Control PPS23, which states that it remains the responsibility of the landowner and developer to identify land affected by contamination and carry out sufficient remediation to render the land suitable for use. PPS23 was withdrawn early in 2012 and has been replaced by much reduced guidance within the National Planning Policy Framework (NPPF), reference ISBN: 978-1-5286-1033-9, July 2021. For sites in Wales, reference should be made to Planning Policy Wales (Welsh Government. Edition 11, February 2021).

The new framework has limited guidance on contaminated land, as follows:

Chapter 11. Making effective use of land

117 Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.

118. Planning policies and decisions should:

c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land.

Chapter 15. Conserving and enhancing the natural environment

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Ground conditions and pollution

178. Planning policies and decisions should ensure that:

a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and

c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.

179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

Water Resources Act (WRA)

The Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 updated the Water Resources Act 1991, which introduced the offence of causing or knowingly permitting pollution of controlled waters. The Act provides the Environment Agency with powers to implement remediation necessary to protect controlled waters and recover all reasonable costs of doing so.

Water Framework Directive (WFD)

The Water Framework Directive 2000/60/EC is designed to:

- enhance the status and prevent further deterioration of aquatic ecosystems and associated wetlands that depend on the aquatic ecosystems
- promote the sustainable use of water
- reduce pollution of water, especially by ‘priority’ and ‘priority hazardous’ substances
- ensure progressive reduction of groundwater pollution.

The WFD requires a management plan for each river basin be developed every six years.

Groundwater Directive (GWD)

The 1980 Groundwater Directive 80/68/EEC and the 2006 Groundwater Daughter Directive 2006/118/EC of the WFD are the main European legislation in place to protect groundwater. The 1980 Directive is due to be repealed in December 2013. The European legislation has been transposed into national legislation by regulations and directions to the Environment Agency.

Priority Substances Directive (PSD)

The Priority Substances Directive 2008/105/EC is a 'Daughter' Directive of the WFD, which sets out a priority list of substances posing a threat to or via the aquatic environment. The PSD establishes environmental quality standards for priority substances, which have been set at concentrations that are safe for the aquatic environment and for human health. In addition, there is a further aim of reducing (or eliminating) pollution of surface water (rivers, lakes, estuaries and coastal waters) by pollutants on the list. The WFD requires that countries establish a list of dangerous substances that are being discharged and EQS for them. In England and Wales, this list is provided in the River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010. In order to achieve the objectives of the WFD, classification schemes are used to describe where the water environment is of good quality and where it may require improvement.

Environmental Permitting Regulations (EPR)

The Environmental Permitting (England and Wales) Regulations 2016 (as amended) provide a single regulatory framework that streamlines and integrates waste management licensing, pollution prevention and control, water discharge consenting, groundwater authorisations, and radioactive substances regulation. Schedule 22, paragraph 6 of EPR 2016 states: 'the regulator must, in exercising its relevant functions, take all necessary measures - (a) to prevent the input of any hazardous substance to groundwater; and (b) to limit the input of non-hazardous pollutants to groundwater so as to ensure that such inputs do not cause pollution of groundwater.'

Notes:

1. *The above information is provided for background but does not constitute site-specific advice*
2. *The above summary applies to England only. Variations exist within other countries of the United Kingdom*

Appendix D
BGS BOREHOLES AND GROUND INVESTIGATION INFORMATION

British Geological Survey

BGS ID: 1043423 : BGS Reference: SJ89NW1229
EPSG: 27700 : 383820,397400

SJ89NW 8382 9740 1229

STRATA SURVEYS LIMITED

Location **Lower Medlock UCSO's C/1 Site 0285**

Client: **BeWT** Project Ref.: **9-00-00-910**

Borehole No. **BH503**

Job No.: **9069/63**

Equipment and methods **Light cable percussion**

Start Date:	End Date:	Final Depth:	Casing Diameter	Casing Depth
15/02/1998	15/02/1998	4.00m	150mm	3.20m

FIELD RECORDS	Samples / Tests: Casing (Water) Depth (m)	Depth (m) from	Depth (m) to	SAMPLE Type & No	SPT (N) {Cu}	Description	Strata: Depth & Thickness m	Reduced Level (m)	Legend
						MADE GROUND (100mm of tarmac over concrete)	(0.40)		
		0.50		D 1			0.40	30.15	
						MADE GROUND (dark grey and black ash and cinder)	(0.60)		
							1.00	29.55	
[u30]		1.20	1.60	U 1		MADE GROUND (soft brown very sandy clay with some to much fine to coarse gravel and cinder fragments)			
		1.70		D 2					
[u20]		2.20	2.65	U 2	{32}		(3.00)		
		2.70		D 3					
[u30]		3.20	3.65	U 3	{34}				
		3.70		D 4					
-{15/02/1998}-						*Brick - probably sewer* **Borehole Completed**	4.00	26.55	

Remarks 1) Service pit dug 0.60m x 0.70m x 1.2m
2) No water encountered
3) Borehole abandoned due to possible sewer.

Logged by LW

Drilled by GB

Ground level **30.55mAD**

Co-ordinates:

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1043423 : BGS Reference: SJ89NW1229
EPSG: 27700 : 383820,397400

SJ89NW 1229

STRATA SURVEYS LIMITED

Job No.: **9069/63**

Location **Lower Medlock UCSO's C/1 Site 0285**

Client: **BeWT** Project Ref.: **9-00-00-910**

Borehole No. **BH503A**

Equipment and methods **Light Cable Percussion**

Start Date:	End Date:	Final Depth:	Diameter	Casing Depth
05/04/1998	05/04/1998	8.00m	150mm	7.40m

FIELD RECORDS	Samples / Tests: Casing (Water) Depth (m)	Depth (m) from	to	SAMPLE Type & No	SPT (N) (Cu)	Description	Strata: Depth & Thickness m	Reduced Level (m)	Legend
						MADE GROUND (100mm of tarmac over concrete)	(0.35)		
		0.50	0.60	D 1		MADE GROUND (Black ash & cinders)	0.35	30.05	
							(0.55)		
						MADE GROUND (Black clayey sandy ash with occasional fine to medium gravel)	0.90	29.50	
[u30]		1.20	1.65	U 1			(0.60)		
		1.70	1.80	D 2		MADE GROUND (Soft to firm dark brown very sandy clay with a little fine to medium gravel)	1.50	28.90	
[u20]		2.20	2.65	U 2	{20}				
		2.70	2.80	D 3					
							(3.00)		
[u25]		3.20	3.65	U 3	{49}				
		3.70	3.80	D 4					
[u30]		4.20	4.65	U 4	{49}				
		4.70	4.80	D 5			4.50	25.90	
		4.75	4.75	W 2		Very soft mottled dark brown/black slightly sandy CLAY with a little fine gravel and occasional sand bands			
T1 5.19 [u60]		5.20	5.65	U 5			(1.10)		
M1 5.70		5.70	5.70	W 1			5.60	24.80	
2, 4 -4 ,5 ,4 ,4	5.20 {5.19}	6.00	6.50	B 1	(17)	Medium dense brown silty very sandy fine to coarse GRAVEL with a slight petroleum odour			
		6.00	6.45	S 1			(1.30)		
25, 40mm -50 /35mm	7.00 {5.60}	7.00	7.08	S 2			6.90	23.50	
		7.50	7.60	D 6		Dark grey highly weathered fine to medium grained SANDSTONE with a slight petroleum odour	(1.10)		
25, 30mm -{05/04/1998}- -50 /20mm	7.40	8.00	8.05	S 3		**Borehole Completed**	8.00	22.40	

Remarks
1) Service pit dug 0.70m x 0.60m x 1.20m.
2) Groundwater struck at 5.70m rising to 5.19m after 20 mins.
3) Petroleum odour noted below 5.60m.
4) Piezometer installed with tip at 7.50m.
5) Water level 5.95m before and 6.82m after installation.

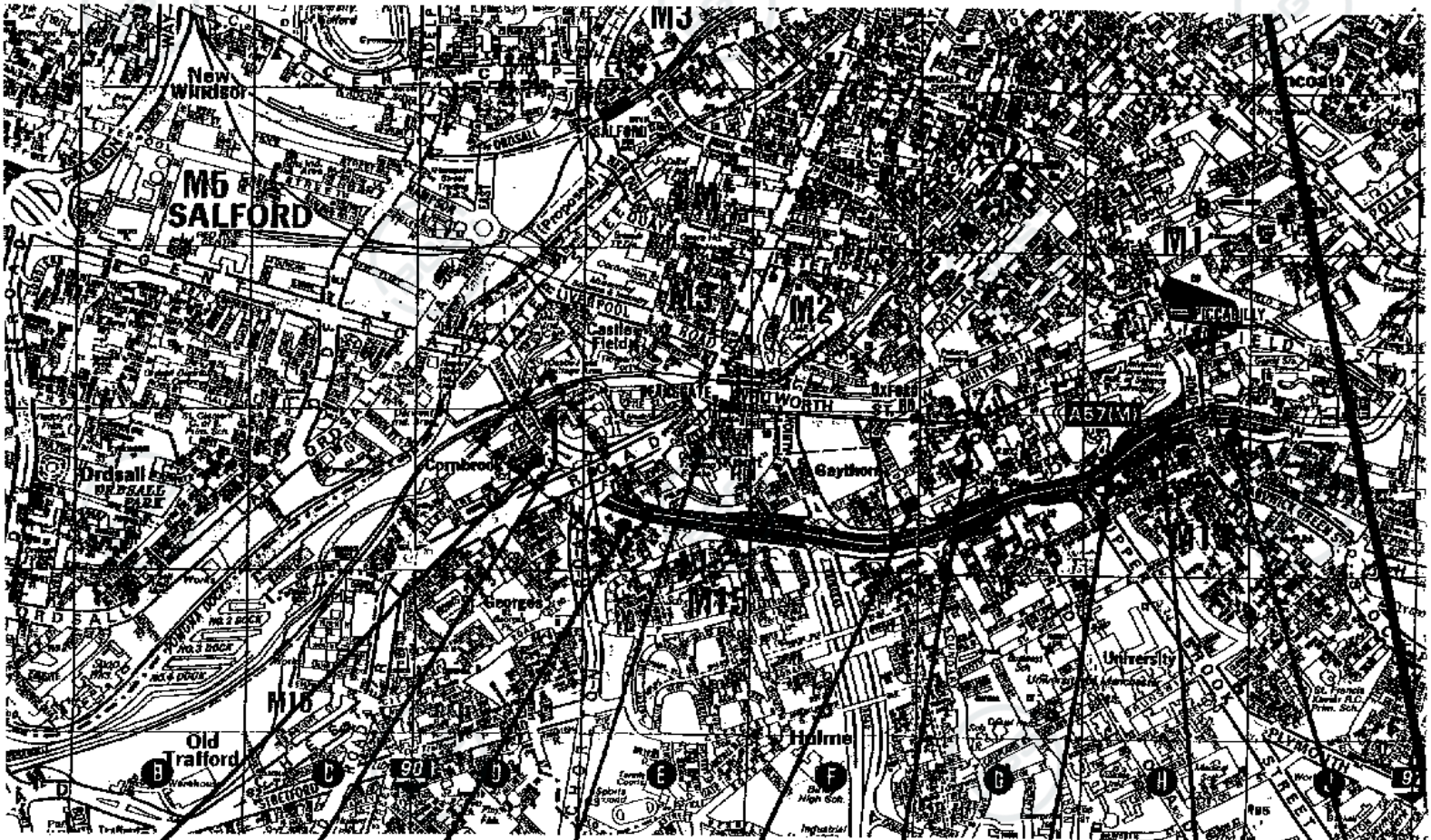
Logged by **G.L** Drilled by **G.B**

Ground level **30.40mAD**

Co-ordinates:

SSL_cable.pvr 09/96 Rev 1

Contact BGS: ngdc@bgs.ac.uk



NO SI

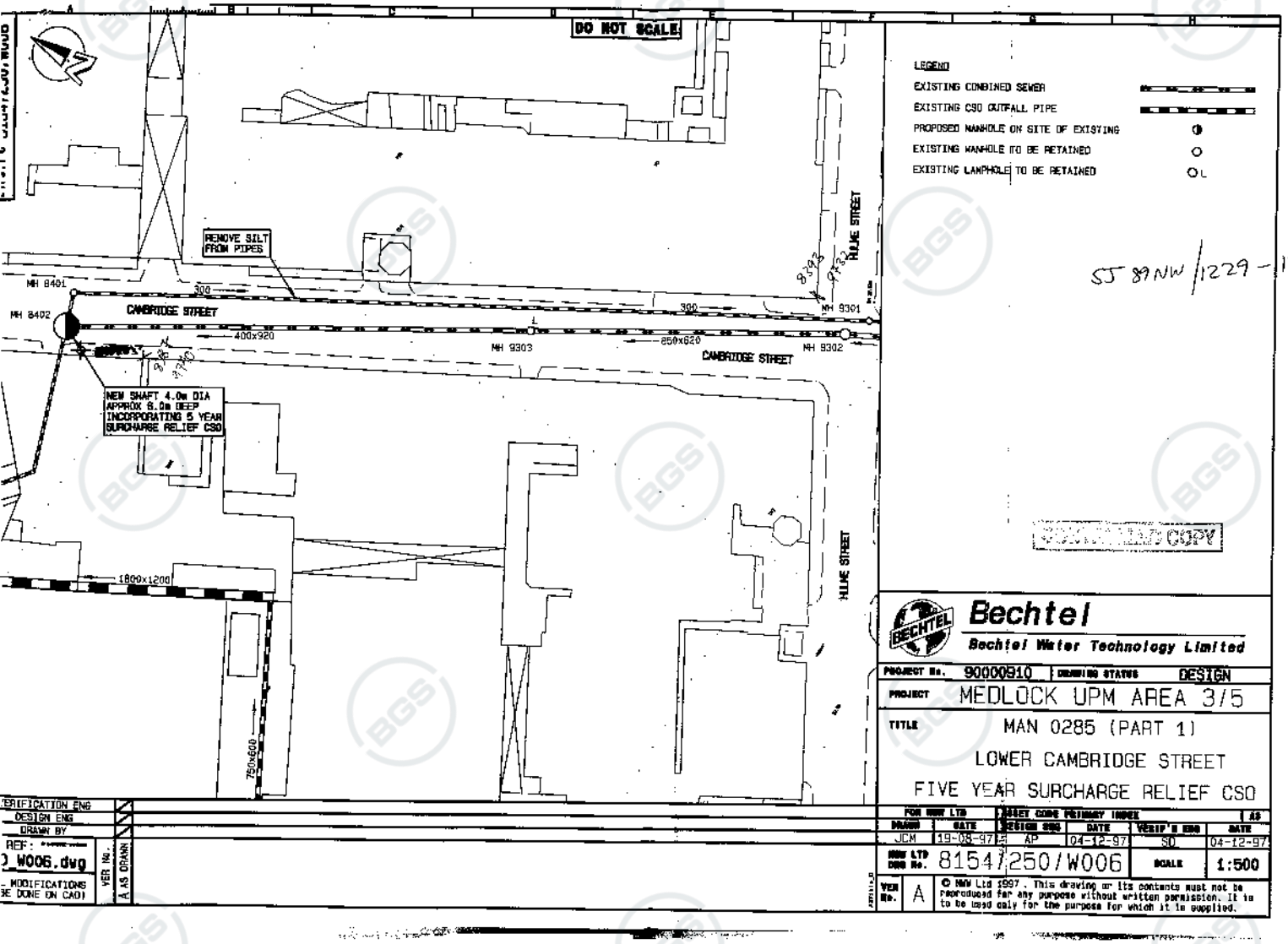
CONTRACT NO. 1 SITE INVESTIGATION

NO SI

SJ89NW/1229-1230

British Geological Survey

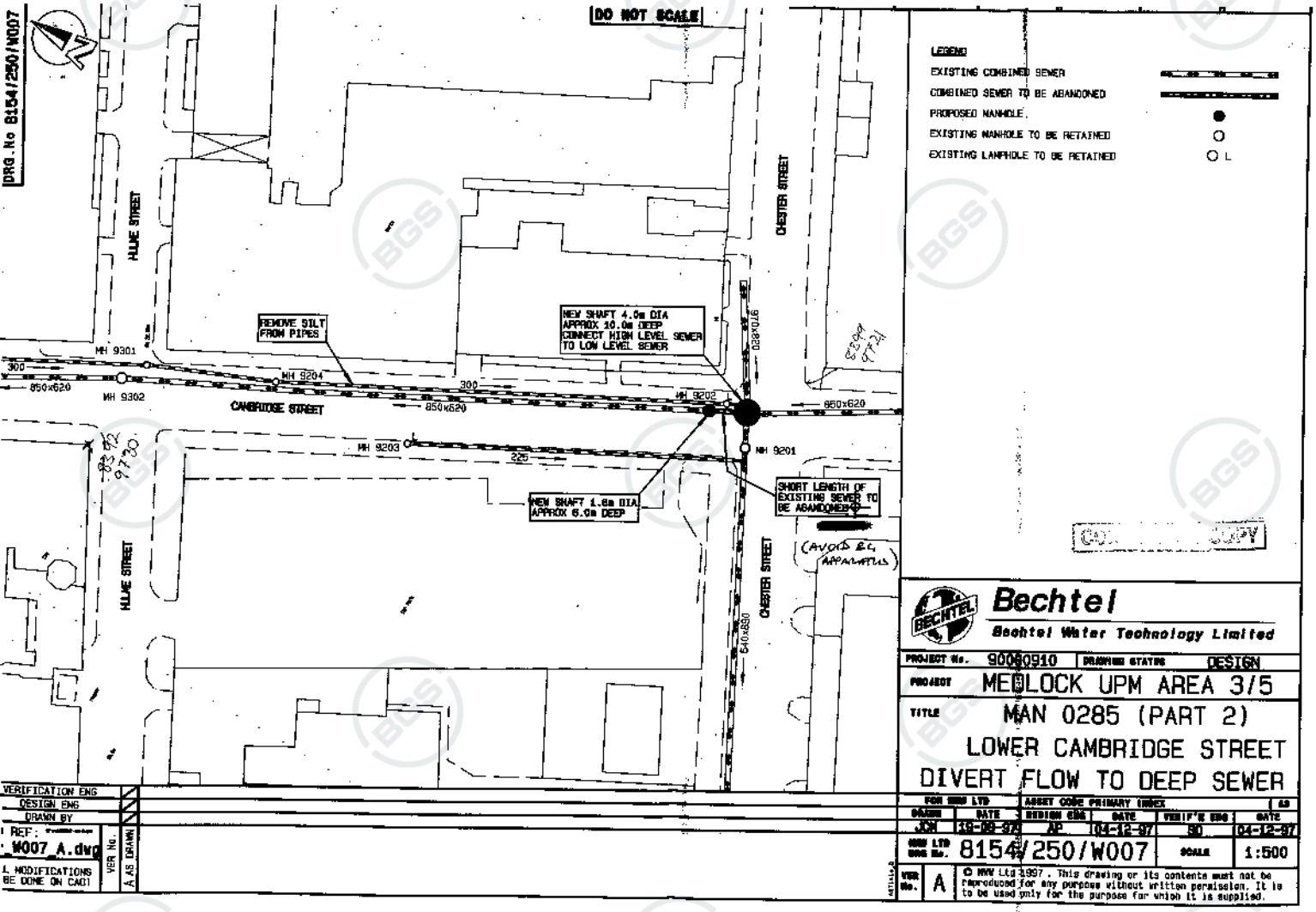
BGS ID: 1043423 : BGS Reference: SJ89NW1229
EPSG: 27700 : 383820,397400



Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 1043423 : BGS Reference: SJ89NW1229
EPSG: 27700 : 383820,397400



Contact BGS: ngdc@bgs.ac.uk

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 07/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383804.64 N397326.70
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS101A	WS	30.68m 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				
								Dark brown gravelly fine to coarse SAND. Gravel is fine to coarse subangular to angular of brick, concrete, sandstone and ceramic. (MADE GROUND)
					0.50	30.18		Reddish brown fine to medium SAND (MADE GROUND)
					0.70	29.98		*...at 0.60mbgl telecommunications duct presumed abandoned*
								Dark brown gravelly fine to coarse SAND. Gravel is fine to coarse subangular to angular of brick, concrete, sandstone and ceramic (MADE GROUND)
		1.20	SPT	N=50 (3,3/50 for 243mm)				
					1.50	29.18		Concrete slab (MADE GROUND)
					1.60	29.08		End of Borehole at 1.600m

1
2
3
4
5

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
								0.00	1.60	90	

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 1.60mbgl due to concrete obstruction. Excavator used to attempt to break out obstruction and encountered abandoned telecommunications duct at 0.60mbgl 4. On completion, borehole backfilled with arisings.

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 07/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383803.46 N397325.90
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS101B	WS	30.68m 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				
								Dark brown gravelly fine to coarse SAND. Gravel is fine to coarse of concrete, brick, sandstone and ceramic (MADE GROUND)
					0.50	30.18		Reddish brown fine to medium SAND (MADE GROUND)
G					0.70	29.98		Dark brown gravelly fine to coarse SAND. Gravel is fine to coarse of concrete, brick, sandstone and ceramic (MADE GROUND)
					1.50	29.18		Concrete slab (MADE GROUND)
					1.80	28.88		End of Borehole at 1.800m

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
								0.00	1.80	90	

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 1.80mbgl due to encountering concrete obstruction 4. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 1.00m depth on completion. Response zone 0.50m to 1.00m depth.

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383780.86 N397313.38
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS102	WS	30.95m 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					Dark brown very gravelly fine to coarse SAND. Gravel is fine to coarse sub angular to angular of brick and concrete (MADE GROUND)
					0.80	30.15		Grey concrete slab. (MADE GROUND)
					1.00	29.95		Medium dense dark brown very gravelly fine to coarse SAND. Gravel is fine to coarse sub angular to angular of brick, limestone and concrete (MADE GROUND)
					2.50	28.45		Light brown with rare black spotting slightly clayey slightly gravelly SAND. Gravel is fine to medium sub rounded of sandstone and siltstone. (GLACIOFLUVIAL DEPOSITS)
G		3.00 3.00	ES SPT	N=16 (2,2/3,3,5,5)				*...at 3.00mbgl becoming wet*
								... at 3.50 to 4.00mbgl containing fine to coarse subrounded to rounded gravel of sandstone and siltstone
					4.00	26.95		End of Borehole at 4.000m

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
								0.00	4.00	90	

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 3.00m depth on completion. Response zone 1.00m to 3.00m depth.

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 07/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383818.71 N397293.10
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS104	WS	31.02m 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				
								Brown Very gravelly fine to coarse SAND. Gravel is fine to coarse subangular to angular of brick, concrete, coal and clinker (MADE GROUND)
		0.50	ES					
		0.60	ES		0.60	30.42		*...at 0.50 to 0.60mbgl possible brick floor*
								Soft brown slightly gravelly CLAY. Gravel is fine to coarse subangular to angular of brick, concrete, coal and clinker (MADE GROUND)
					0.85	30.17		Brown clayey gravelly fine to coarse SAND. Gravel is fine to coarse subangular to angular of brick, concrete, coal and clinker (MADE GROUND)
		1.20	SPT	50 (2,2/50 for 155mm)	1.20	29.82		Dark brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to angular of brick and concrete slight tarry odour (MADE GROUND)
		1.30	ES					
					1.50	29.52		Concrete slab. (MADE GROUND)
					1.60	29.42		Dark brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to angular of brick and concrete (MADE GROUND)
					2.00	29.02		End of Borehole at 2.000m

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
								0.00	2.00	90	

Remarks

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

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 07/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383833.25 N397267.90
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS105	WS	32.70m 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				
					0.15	32.55		Black sandy fine to medium subangular to angular GRAVEL of brick, concrete and limestone (MADE GROUND)
		0.60	ES					Very dense reddish brown sandy fine to coarse subangular to angular GRAVEL of brick and concrete (MADE GROUND)
		1.20	SPT	N=49 (13,11/10,11,10,18)				
					1.65	31.05		Soft brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub angular of brick and sandstone (MADE GROUND)
		2.00	SPT	N=3 (2,3/1,1,0,1)				
					2.70	30.00		Firm to stiff dark brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium rounded of sandstone (DEVENSIAN TILL)
G		3.00	SPT	N=2 (1,1/0,1,1,0)				
		3.80	D					
		4.00	SPT	N=20 (2,3/4,4,5,7)				*...at 4.00 to 5.00mbgl becoming stiff*
					5.00	27.70		End of Borehole at 5.000m

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
								0.00	5.00	90	

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 3.00m depth on completion. Response zone 1.00m to 3.00m depth.

Percussion Drilling Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 11/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383812.33 N397258.05
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Competitor 150

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS106	WS	32.58m 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					Brown sandy fine to coarse subangular to angular brick and concrete GRAVEL. High whole and half brick cobble content (MADE GROUND)
					1.40	31.18		End of Borehole at 1.400m

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
								0.00	1.40	90	

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 1.40mbgl due to encountering concrete obstruction 4. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 1.40m depth on completion. Response zone 0.5m to 1.4m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383789.73 N397321.20
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH101	RC	30.89m 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
											Dark brown very gravelly fine to coarse SAND with low cobble content of whole and half bricks. Gravel is fine to coarse subangular to angular of brick (MADE GROUND)
								1.30	29.59		Dark brown clayey very gravelly fine to coarse SAND. Gravel is fine to coarse sub angular to angular of brick and concrete (MADE GROUND)
								2.00	28.89		Dark brown sandy gravelly CLAY. Gravel is fine to coarse sub angular to angular of brick and concrete (MADE GROUND)
								3.80	27.09		Brown clayey gravelly fine to coarse SAND. Gravel is fine to coarse subrounded to rounded of quartz and sandstone (GLACIOFLUVIAL SHEET DEPOSITS)
								5.50	25.39		Brown fine to coarse sub rounded to rounded SAND and GRAVEL of sandstone and quartzite (GLACIOFLUVIAL SHEET DEPOSITS)
		6.50 - 7.00		38	26	0	(18)	6.50	24.39		Extremely weak reddish brown with localised orangish brown staining fine to coarse grained SANDSTONE. Joints horizontal closely spaced planar smooth [FI = 2.86] (CHESTER FORMATION)
		7.00 - 8.00		0	0	0					*...from 6.50 to 6.54mbgl recovered as sand*
		8.00 - 9.50		43	34	16	(50)				*...from 9.80 to 9.85mbgl recovered as sand*

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 (%)
								0.00	23.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. A 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20.00m depth on completion. Response zone 10.00m to 20.00m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383789.73 N397321.20
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH101	RC	30.89m 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
		9.50 - 11.00		95	74	47		10.10 10.45	20.79 20.44		Extremely weak reddish brown with localised orangish brown staining fine to coarse grained SANDSTONE. Joints horizontal closely spaced planar smooth [FI = 2.86] (CHESTER FORMATION) *...from 10.02 to 10.12mbgl recovered as sand*
		11.00 - 12.50		73	63	17					Extremely weak reddish brown with localised orange staining fine to coarse grained SANDSTONE. Joints are very close to closely spaced 45 degrees to horizontal planar rough [FI = 17.14] (CHESTER FORMATION) *...from 10.10 to 10.45mbgl joints are very closely to closely spaced dipping horizontal to 45 degrees planar smooth*
		12.50 - 14.00		100	96	60					Very weak locally extremely weak reddish brown with localised orangish brown staining fine to coarse grained SANDSTONE. Joints are close to mediumly spaced horizontal to 20 degrees planar smooth [FI = 7.52] (CHESTER FORMATION) *...from 11.35 to 11.54mbgl area of near vertical fractures in core with orangish brown staining* *...from 11.58 to 11.74mbgl near vertical fracture through core with with orangish brown to black iron oxide staining* *...from 11.78 to 11.94mbgl recovered as sand* *...from 12.82 to 12.83mbgl mudstone band* *...from 13.09 to 13.42mbgl joints are medium spaced horizontal planar smooth* *...from 14.00mbgl becoming very weak* *...from 15.00mbgl becoming slightly conglomeratic with fine to medium mudstone and quartzite clasts* *...from 15.35 to 15.45mbgl interbedded with mudstone*
		14.00 - 15.50		100	97	72					
		15.50 - 17.00		100	100	93					
		17.00 - 18.50		100	89	66					*...from 17.80 to 17.86mbgl recovered as sand*
		18.50 - 20.00		34	34	23					

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 (%)
								0.00	23.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. A 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20.00m depth on completion. Response zone 10.00m to 20.00m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383789.73 N397321.20
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH101	RC	30.89m 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
		20.00 - 21.50		100	91	77		20.29	10.60		Very weak locally extremely weak reddish brown with localised orangish brown staining fine to coarse grained SANDSTONE. Joints are close to mediumly spaced horizontal to 20 degrees planar smooth [FI = 7.52] (CHESTER FORMATION) *...from 20.20 to 20.28mbgl recovered as gravelly sand*
		21.50 - 23.00		81	71	17		21.59	9.30		Weak reddish brown fine to medium grained SANDSTONE. Joints are mediumly spaced horizontal to 20 degrees planar smooth [FI = 4.6] (CHESTER FORMATION) *...from 20.82 to 20.84mbgl sand infill*
								22.27	8.62		Extremely weak to very weak reddish brown fine to medium grained SANDSTONE. Joints are very close to closely spaced horizontal undulating rough [FI = 26.47] (CHESTER FORMATION) *...from 21.82 to 21.89mbgl destructured mudstone*
								23.00	7.89		Very weak reddish brown fine to medium grained SANDSTONE. Joints are closely spaced horizontal planar smooth [FI = 6.85] (CHESTER FORMATION) *...from 22.33 to 22.71mbgl black staining at joints* End of Borehole at 23.000m

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 (%)
								0.00	23.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. A 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20.00m depth on completion. Response zone 10.00m to 20.00m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 10/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383822.86 N397262.13
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH102	RC	32.81m 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
								1.50	31.31		Dark brown very gravelly fine to coarse SAND Gravel is fine to coarse sub angular to angular of brick and concrete high cobble content of whole and half bricks, concrete and sandstone flags (MADE GROUND)
								5.50	27.31		Dark brown sandy gravelly CLAY. Gravel is fine to coarse sub angular to angular of brick (MADE GROUND)
		7.50 - 8.00		100				7.60 7.70	25.21 25.11		Grayish brown slightly silty slightly sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of various lithologies (DEVENSIAN TILL) Grey medium to coarse subangular to rounded GRAVEL of various lithologies (DEVENSIAN TILL)
		8.00 - 9.00		40				8.30	24.51		Brown very sandy gravelly CLAY. Gravel is fine to coarse subrounded to well Rounded of various lithologies (DEVENSIAN TILL) Reddish brown slightly clayey SAND (DEVENSIAN TILL)
		9.00 - 10.50		75	74	55		9.00 9.85	23.81 22.96		Extremely weak reddish brown fine to coarse grained SANDSTONE. Joints are mediumly spaced horizontal planar smooth [FI = 5.88](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 (%)
								0.00	25.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20m depth on completion. Response zone 10m to 20m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 10/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383822.86 N397262.13
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH102	RC	32.81m 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
											Extremely weak to very weak reddish brown fine to coarse grained SANDSTONE. Joints are very close to closely spaced horizontal planar rough [FI = 9.14] (CHESTER FORMATION)
		10.50 - 12.00		88	70	27					*...from 9.94 to 9.95mbgl clay infill*
		12.00 - 13.50		93	71	34					*...from 13.07 to 13.09 sand infill*
		13.50 - 15.00		64	64	35					
		15.00 - 16.50		83	83	51		15.32	17.49		Very weak to weak reddish brown fine to coarse SANDSTONE. Joints are close to mediumly spaced horizontal [FI = 5.97] (CHESTER FORMATION)
		16.50 - 18.00		95	88	67					*...at 15.50mbgl becoming weak*
											...from17.14 to 17.22mbgl vertical fracture
								18.00	14.81		Reddish brown SANDSTONE (CHESTER FORMATION)
								20.00	12.81		

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 (%)
								0.00	25.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20m depth on completion. Response zone 10m to 20m depth.

Rotary Core Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 10/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383822.86 N397262.13
Project No. : 4513	Crew Name: M.E, M,.G	Drilling Equipment: Beretta T44

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
RBH102	RC	32.81m 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
		20.00 - 21.50		92	90	73					Very weak to weak reddish brown fine to medium grained SANDSTONE. Joints are close to mediumly spaced horizontal to 20 degrees planar smooth [FI = 6.44] (CHESTER FORMAITON)
		21.50 - 23.00		77	72	63					*...from 21.16 to 22.00mbgl becoming conglomeratic with fine to medium class of quartz and mudstone*
		23.00 - 24.50		100	95	64					*...from 24.03 to 24.31mbgl vertical fracture*
								24.50	8.31		End of Borehole at 24.500m

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 (%)
								0.00	25.00	90	0						

Remarks

1. Location CAT scanned before breaking ground. 2. Due to the drilling method water strikes were not recorded 3. 50mm diameter gas/groundwater monitoring well complete with Flush protective cover installed to 20m depth on completion. Response zone 10m to 20m depth.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383788.10 N397305.26
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP101	TP	30.94m 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				
		0.00 - 0.30	ES		0.05	30.89		Asphalt (MADE GROUND)
					0.20	30.74		Yellowish brown gravelly medium to coarse SAND. Gravel is fine to medium subangular to angular of limestone (MADE GROUND)
					0.50	30.44		Dark brown sandy GRAVEL. Gravel is fine to coarse subangular to angular of brick high whole and half brick cobble content (MADE GROUND)
					0.70	30.24		Yellowish brown sandy fine to coarse subangular to angular limestone GRAVEL (MADE GROUND)
					0.90	30.04		Grey sandy fine to medium GRAVEL of sandstone (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
3.20	0.60			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 0.90mbgl due to strong electrical signal on CAT 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383801.10 N397304.87
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP102	TP	31.01m 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		0.05	30.96		Asphalt (MADE GROUND) Brown sandy fine to coarse subrounded to angular brick, concrete clinker and coal GRAVEL. Occasional concrete boulders and whole and half brick cobbles. Frequent metal fragments and pipe work (MADE GROUND)
					0.60	30.41		Concrete slab (MADE GROUND)
					0.80	30.21		*...at 0.70 to 0.80mbgl half inch diameter vertical rebar* End of Borehole at 0.800m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.80	0.60			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated due to concrete obstruction at 0.80mbgl 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383811.64 N397298.89
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP103	TP	31.07m 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	31.02		Asphalt (MADE GROUND)
					0.15	30.92		Black gravelly SAND. Gravel is fine to medium brick clinker asphalt. (MADE GROUND)
					0.30	30.77		Yellowish brown sandy GRAVEL. Gravel is fine to medium subangular to angular of sandstone. (MADE GROUND)
								Dark brown sandy GRAVEL. Gravel is fine to coarse of brick and concrete. High whole and half brick cobble content and occasional concrete cobbles and boulders (MADE GROUND)
		0.80	ES					*...intact masonry walls north and south face with archway in northern face at 0.70 to 2.50mbgl*
								...large chunks of masonry wall at 0.90mbgl
								...cast iron pipe in southern face at 1.10mbgl.
		2.00	ES					
					2.50	28.57		End of Borehole at 2.500m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.50	0.80			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 2.50mbgl due to concrete obstruction 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383810.46 N397281.25
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP104	TP	31.22m 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				
					0.10	31.12		Black sandy fine to medium subangular to angular GRAVEL of brick, sandstone coal and clinker (MADE GROUND)
		1.00	ES					Brown sandy fine to coarse subangular to angular GRAVEL of brick and concrete. High whole and half brick cobble content various anthropogenic inclusions including metal, glass and stone lintels. (MADE GROUND)
					2.40	28.82		End of Borehole at 2.400m

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	0.80			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 2.40mbgl due to hydraulic malfunction on excavator 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383821.81 N397290.11
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP105	TP	31.37m 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					Brown very sandy fine to coarse subangular to angular brick and concrete GRAVEL. High whole and half brick cobble content and occasional timber and brick and masonry boulders. Rare black slag gravel. (MADE GROUND)
								...from 0.40 to 1.80mbgl masonry wall in western face of pit and corner of masonry wall in south eastern face of pit
					1.80	29.57		End of Borehole at 1.800m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.70	0.80			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 1.80mbgl due to encountered concrete obstruction 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383811.23 N397269.30
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP106	TP	31.80m 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	B		1.10	30.70		Brown sandy fine to coarse sub angular to angular GRAVEL of brick and concrete (MADE GROUND) *... at 1.00mbgl two metal joists* End of Borehole at 1.100m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.40	0.70			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 1.10mbgl due to encountering concrete obstruction 4. Trial pit backfilled with arisings in reverse order upon completion.

Trial Pit Log

Project Name: Plot 10b, First Street	Client: House of Social One	Date: 08/11/2022
Location: Manchester	Contractor: MT Geotechnical	Co-ords: E383829.69 N397270.26
Project No. : 4513	Crew Name:	Equipment: 8 Tonne Excavator

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP107	TP	32.40m 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				
		1.00 1.00	D ES					Reddish brown sandy fine to coarse sub angular to angular GRAVEL of brick and concrete. (MADE GROUND)
								...at 1.70mbgl concrete slab in the northern half of trial pit masonry and wall in southern face at 1.70mbgl.
					2.20	30.20		End of Borehole at 2.200m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.20	0.70			1. Trial pit backfilled with arisings in reverse order upon completion.			

Remarks

1. Location CAT scanned before breaking ground 2. Groundwater was not observed 3. Terminated at 2.20mbgl due to concrete obstruction in northern portion of pit limiting mobility of excavating arm for further excavation 4. Trial pit backfilled with arisings in reverse order upon completion.

Appendix E
RELEVANT CHEMICAL DATA FROM ROC PHASE 2 INVESTIGATION

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

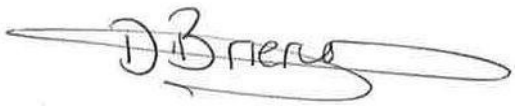
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/11222
Issue Number: 1 **Date:** 25 November, 2022

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

Project Manager: Linden Richardson/Reece McGuinness
Project Name: Plot 10b, First Street
Project Ref: 4513
Order No: 1814
Date Samples Received: 11/11/22
Date Instructions Received: 15/11/22
Date Analysis Completed: 25/11/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
% 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#]	10.64	9.37	9.40	8.82	8.70	10.65	10.29	pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$[M#]	65	85	53	45	61	34	32	mg/l	10	A-T-026s
Cyanide (total)$_A$[M#]	<1	<1	<1	<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$_D$[#]	0.0211	0.0140	0.0163	0.0257	0.2019	0.0087	0.0152	N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5	20	9	29	7	13	5	mg/kg	5	A-T-024s
Arsenic$_D$[M#]	4	9	3	7	10	42	7	mg/kg	1	A-T-024s
Barium$_D$	303	454	220	1140	372	487	216	mg/kg	1	A-T-024s
Beryllium$_D$	0.9	<0.5	<0.5	1.0	1.2	0.6	0.7	mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	2.5	2.9	1.7	<1.0	<1.0	2.2	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$[M#]	5.8	2.3	1.0	1.9	2.8	7.5	1.3	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	26	34	17	66	156	85	41	mg/kg	1	A-T-024s
Chromium$_D$[M#]	21	17	16	19	16	95	18	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	21	17	16	19	16	95	18	mg/kg	1	Calc
Lead$_D$[M#]	83	473	121	373	514	229	171	mg/kg	1	A-T-024s
Mercury$_D$	1.91	2.07	2.46	2.06	8.11	0.86	0.75	mg/kg	0.17	A-T-024s
Molybdenum$_D$[M#]	<1	<1	<1	2	3	2	<1	mg/kg	1	A-T-024s
Nickel$_D$[M#]	15	14	12	22	24	75	16	mg/kg	1	A-T-024s
Selenium$_D$[M#]	<1	6	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	25	18	20	27	29	118	21	mg/kg	1	A-T-024s
Zinc$_D$[M#]	148	411	138	518	367	433	196	mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (3 no)$_A$	*	-	-	-	-	-	-			A-T-001
pH (leachable)$_A$[#]	9.93	-	-	-	-	-	-	pH	0.01	A-T-031w
Sulphate (leachable)$_A$[#]	65.50	-	-	-	-	-	-	mg/l	1	A-T-026w
DOC (leachable)$_A$[#]	4.3	-	-	-	-	-	-	mg/l	2	A-T-032w
Antimony (leachable)$_A$	16	-	-	-	-	-	-	µg/l	1	A-T-025w
Arsenic (leachable)$_A$	7	-	-	-	-	-	-	µg/l	1	A-T-025w
Boron (leachable)$_A$	67	-	-	-	-	-	-	µg/l	10	A-T-025w
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

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
Copper (leachable)$_A$	8	-	-	-	-	-	-	µg/l	4	A-T-025w
Chromium (leachable)$_A$	12	-	-	-	-	-	-	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)$_A$	6	-	-	-	-	-	-	µg/l	1	A-T-025w
Mercury (leachable)$_A$	<0.1	-	-	-	-	-	-	µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	3	-	-	-	-	-	-	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)$_A$	50	-	-	-	-	-	-	µg/l	1	A-T-025w
Zinc (leachable)$_A$	42	-	-	-	-	-	-	µg/l	2	A-T-025w
Carbon Disulphide (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	<1	-	-	-	-	-	-	µg/l	1	A-T-006w
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

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	Chrysotile	Chrysotile	NAD	Chrysotile & Amosite	Chrysotile	Amosite	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	Loose Fibres	Loose Fibres	-	Loose Fibres	Loose Fibres	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
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing)$_{D}$	0.014	<0.001	-	<0.001	0.107	<0.001	-	% w/w	0.001	A-T-054

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.89	0.06	0.34	0.11	4.00	0.02	0.14	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.20	0.05	0.17	0.10	0.97	0.02	0.08	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	1.67	0.13	0.64	0.38	7.33	0.08	0.33	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	4.72	0.68	2.66	2.02	15	0.47	1.12	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	4.30	0.68	2.39	1.96	9.67	0.57	0.97	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	4.32	0.74	2.38	2.02	9.22	0.62	1.00	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	2.00	0.48	1.35	1.37	3.69	0.42	0.53	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	1.45	0.25	0.75	0.66	3.23	0.18	0.31	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	4.58	0.76	2.66	2.04	13.3	0.54	1.19	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.46	0.09	0.32	0.27	0.96	0.08	0.12	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	11.1	1.21	5.01	3.48	33	0.83	2.46	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.82	0.05	0.28	0.08	3.41	0.02	0.13	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	2.22	0.47	1.41	1.39	4.44	0.43	0.53	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.43	<0.03	0.10	0.03	1.54	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	5.54	0.53	2.65	1.29	27.4	0.29	1.59	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	10.6	1.27	4.89	3.54	30.3	0.89	2.43	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	55.3	7.45	28	20.7	167	5.46	12.9	mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	0.33	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	0.03	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	0.07	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	0.04	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	0.03	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	<0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	<0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	0.05	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	0.16	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	0.19	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	<0.02	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	0.29	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	0.34	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	0.15	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	1.70	-	-	-	-	-	-	µg/l	0.02	A-T-019w
Phenols (speciated HPLC)										
Phenol$_A$	<0.2	<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	<0.2	mg/kg	0.2	A-T-050s
Xylenols$_A$	<0.2	<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	<0.2	mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
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: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
Speciated PCB-EC7										
PCB BZ $28_A^{M\#}$	-	-	<0.003	-	<0.003	-	-	mg/kg	0.003	A-T-004s
PCB BZ $52_A^{M\#}$	-	-	<0.002	-	<0.002	-	-	mg/kg	0.002	A-T-004s
PCB BZ $101_A^{M\#}$	-	-	<0.004	-	<0.004	-	-	mg/kg	0.004	A-T-004s
PCB BZ $118_A^{M\#}$	-	-	<0.007	-	<0.007	-	-	mg/kg	0.007	A-T-004s
PCB BZ $138_A^{M\#}$	-	-	<0.006	-	<0.006	-	-	mg/kg	0.006	A-T-004s
PCB BZ $153_A^{M\#}$	-	-	<0.004	-	<0.004	-	-	mg/kg	0.004	A-T-004s
PCB BZ $180_A^{M\#}$	-	-	<0.004	-	<0.004	-	-	mg/kg	0.004	A-T-004s
Total Speciated PCB-EC7$_A^{M\#}$	-	-	<0.007	-	<0.007	-	-	mg/kg	0.003	A-T-004s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Dibenzofuran$_A$	547	<100	-	-	27400	-	<100	µg/kg	100	A-T-052s
Carbazole$_A$	427	<100	-	-	21100	-	<100	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	1330	1280	-	-	<50000	-	<500	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	384	<100	-	-	14000	-	<100	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
n-Dioctylphthalate$_A$	<500	<500	-	-	<50000	-	<500	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	279	326	-	-	<10000	-	304	µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	-	-	<10000	-	<100	µg/kg	100	A-T-052s
Perylene$_A$	1180	321	-	-	30500	-	266	µg/kg	100	A-T-052s

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
VOC										
Dichlorodifluoromethane$_A$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Chloromethane$_A$	<10	<10	-	-	<10	-	<10	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Bromomethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Chloroethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Trichlorofluoromethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1-Dichloroethene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Carbon Disulphide$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Dichloromethane$_A$	<5	<5	-	-	<5	-	<5	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1-Dichloroethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
2,2-Dichloropropane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Bromochloromethane$_A^\#$	<5	<5	-	-	<5	-	<5	µg/kg	5	A-T-006s
Chloroform$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1-Dichloropropene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Carbon Tetrachloride$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2-Dichloroethane$_A^\#$	<2	<2	-	-	<2	-	<2	µg/kg	2	A-T-006s
Benzene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Trichloroethene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2-Dichloropropane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Dibromomethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Bromodichloromethane$_A^\#$	<10	<10	-	-	<10	-	<10	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Toluene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,3-Dichloropropane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Tetrachloroethene$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Dibromochloromethane$_A^\#$	<3	<3	-	-	<3	-	<3	µg/kg	3	A-T-006s
1,2-Dibromoethane$_A^\#$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
Chlorobenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2	-	-	<2	-	<2	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2	-	-	<2	-	<2	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3	-	-	<3	-	<3	µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	<1	-	-	<1	-	<1	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3	-	-	<3	-	<3	µg/kg	3	A-T-006s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
TPH CWG (UKWIR) with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01	<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	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<10	-	<10	-	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	1	<1	<10	-	<10	-	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	10	2	<10	-	14	-	1	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	43	9	<10	-	18	-	2	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	223	118	664	-	94	-	25	mg/kg	1	A-T-055s
Aro >C5-C7$_A^{\#}$	<0.01	<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	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	2	2	<10	-	<10	-	1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	3	1	<10	-	44	-	1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	24	5	20	-	401	-	11	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	87	19	59	-	1320	-	27	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	212	64	339	-	2920	-	88	mg/kg	1	A-T-055s
BTEX - Benzene$_A^{\#}$	<0.01	<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	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<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	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<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	-	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	2	-	-	-	-	-	-	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)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	<20	-	-	-	-	-	-	µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	<20	-	-	-	-	-	-	µg/l	10	Calc-As Recd
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)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	<10	-	-	-	-	-	-	µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	<20	-	-	-	-	-	-	µg/l	20	Calc-As Recd
TPH (Ali & Aro >C5-C44) (leachable)$_A$	<20	-	-	-	-	-	-	µg/l	20	Calc-As Recd
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)$_A$	<20	-	-	-	-	-	-	µg/l	20	A-T-055w

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP101	TP102	TP103	TP103	TP105	TP107	WS101			
Depth to Top	0.30	0.40	0.80	2.00	1.00	1.00	0.80			
Depth To Bottom										
Date Sampled	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	08-Nov-22	07-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AE	4AE	4A	4AB	4AB	4AE			
TPH UKCWG with Clean Up										
Ali >C35-C44$_A$	152	205	536	-	117	-	13	mg/kg	1	A-T-055s
Total Aliphatics$_A$	429	335	1200	-	243	-	41	mg/kg	1	Calc-As Recd
Aro >C35-C44$_A$	73	97	451	-	101	-	8	mg/kg	1	A-T-055s
Total Aromatics$_A$	401	189	868	-	4790	-	137	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44)$_A$	830	524	2070	-	5030	-	178	mg/kg	1	Calc-As Recd

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
% 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$_D^{M\#}$	9.71	9.67	9.89	9.22	9.43	11.08	11.59	pH	0.01	A-T-031s
Electrical conductivity @ 20degC$_D$	-	-	-	-	-	624	1000	µs/cm	10	A-T-037s
Sulphate BRE (water sol 2:1)$_D^{M\#}$	248	32	18	40	24	-	-	mg/l	10	A-T-026s
Cyanide (total)$_A^{M\#}$	1	<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	-	-	mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D^{\#}$	0.0294	0.0211	0.0709	0.0495	0.0275	-	-	N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5	<5	<5	<5	<5	-	-	mg/kg	5	A-T-024s
Arsenic$_D^{M\#}$	6	5	12	11	5	-	-	mg/kg	1	A-T-024s
Barium$_D$	157	368	199	164	401	-	-	mg/kg	1	A-T-024s
Beryllium$_D$	0.7	<0.5	1.3	1.6	0.6	-	-	mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	2.0	<1.0	2.0	1.5	<1.0	-	-	mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	1.4	0.9	2.7	2.5	1.3	-	-	mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	33	23	72	107	23	-	-	mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	19	12	19	20	17	-	-	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1	-	-	mg/kg	1	A-T-040s
Chromium (trivalent)	19	12	19	20	17	-	-	mg/kg	1	Calc
Lead$_D^{M\#}$	92	163	157	229	204	-	-	mg/kg	1	A-T-024s
Mercury$_D$	1.88	1.24	0.91	0.44	1.37	-	-	mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1	4	2	<1	-	-	mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	18	11	29	32	13	-	-	mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1	<1	<1	<1	-	-	mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	22	27	36	36	26	-	-	mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	101	252	276	138	293	-	-	mg/kg	5	A-T-024s
Redox Potential (water soluble)$_D$	-	-	-	-	-	-27	-29	mV		Probe
TAME$_A$	-	-	-	-	-	<0.1	<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)$_A^{\#}$	-	-	8.77	-	-	-	-	pH	0.01	A-T-031w
Sulphate (leachable)$_A^{\#}$	-	-	18.32	-	-	-	-	mg/l	1	A-T-026w
DOC (leachable)$_A^{\#}$	-	-	8.5	-	-	-	-	mg/l	2	A-T-032w
Antimony (leachable)$_A$	-	-	5	-	-	-	-	µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	-	26	-	-	-	-	µg/l	1	A-T-025w
Boron (leachable)$_A$	-	-	94	-	-	-	-	µg/l	10	A-T-025w

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
Barium (leachable)$_A$	-	-	166	-	-	-	-	µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	-	2	-	-	-	-	µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	-	<1	-	-	-	-	µg/l	1	A-T-025w
Copper (leachable)$_A$	-	-	105	-	-	-	-	µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	-	5	-	-	-	-	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)$_A$	-	-	368	-	-	-	-	µg/l	1	A-T-025w
Mercury (leachable)$_A$	-	-	0.5	-	-	-	-	µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	-	19	-	-	-	-	µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	-	12	-	-	-	-	µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	-	2	-	-	-	-	µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	-	27	-	-	-	-	µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	-	104	-	-	-	-	µg/l	2	A-T-025w
Carbon Disulphide (leachable)$_A$	-	-	<1	-	-	-	-	µg/l	1	A-T-006w
Hexachlorobutadiene (leachable)$_A$	-	-	<1	-	-	-	-	µg/l	1	A-T-006w
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

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	Chrysotile	NAD	NAD	Chrysotile	-	-			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	Loose Fibres	-	-	Loose Fibres	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	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)$_{D}$	-	0.006	-	-	<0.001	-	-	% w/w	0.001	A-T-054

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
PAH-16MS										
Acenaphthene$_A^{M\#}$	1.04	0.07	1.22	0.01	0.13	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.74	0.02	0.21	0.01	0.09	-	-	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	3.50	0.12	2.17	0.05	0.46	-	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	10.9	0.47	5.48	0.25	1.31	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	8.24	0.76	3.98	0.22	1.17	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	7.93	0.69	4.14	0.29	1.16	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	3.77	0.75	1.71	0.15	0.71	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	2.89	0.21	1.36	0.09	0.37	-	-	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	9.61	0.54	5.19	0.30	1.28	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	1.01	0.14	0.41	<0.04	0.17	-	-	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	21.1	0.86	12.6	0.44	2.72	-	-	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	1.18	0.05	1.05	0.01	0.18	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	4.52	0.71	1.98	0.15	0.76	-	-	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.37	<0.03	2.64	<0.03	0.04	-	-	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	10.9	0.47	9.96	0.18	1.80	-	-	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	21.2	0.83	11.3	0.53	2.41	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	109	6.69	65.4	2.68	14.8	-	-	mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	-	-	0.90	-	-	-	-	µg/l	0.02	A-T-019w
Acenaphthylene (leachable)$_A$	-	-	0.16	-	-	-	-	µg/l	0.02	A-T-019w
Anthracene (leachable)$_A$	-	-	0.89	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable)$_A$	-	-	0.25	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) $_A$	-	-	0.08	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	-	-	0.09	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	-	-	0.04	-	-	-	-	µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	-	-	0.05	-	-	-	-	µg/l	0.02	A-T-019w
Chrysene (leachable)$_A$	-	-	0.31	-	-	-	-	µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	-	-	<0.02	-	-	-	-	µg/l	0.02	A-T-019w
Fluoranthene (leachable)$_A$	-	-	2.36	-	-	-	-	µg/l	0.02	A-T-019w
Fluorene (leachable)$_A$	-	-	1.17	-	-	-	-	µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	-	-	0.04	-	-	-	-	µg/l	0.02	A-T-019w
Naphthalene (leachable) $_A$	-	-	0.11	-	-	-	-	µg/l	0.02	A-T-019w
Phenanthrene (leachable)$_A$	-	-	4.36	-	-	-	-	µg/l	0.02	A-T-019w
Pyrene (leachable)$_A$	-	-	1.86	-	-	-	-	µg/l	0.02	A-T-019w
Total PAH 16MS (leachable)$_A$	-	-	12.7	-	-	-	-	µg/l	0.02	A-T-019w
Phenols (speciated HPLC)										
Phenol$_A$	<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	-	-	mg/kg	0.2	A-T-050s
Xylenols$_A$	<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	-	-	mg/kg	0.2	A-T-050s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	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: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
Speciated PCB-EC7										
PCB BZ $28_A^{M\#}$	-	-	<0.003	-	-	-	-	mg/kg	0.003	A-T-004s
PCB BZ $52_A^{M\#}$	-	-	<0.002	-	-	-	-	mg/kg	0.002	A-T-004s
PCB BZ $101_A^{M\#}$	-	-	<0.004	-	-	-	-	mg/kg	0.004	A-T-004s
PCB BZ $118_A^{M\#}$	-	-	<0.007	-	-	-	-	mg/kg	0.007	A-T-004s
PCB BZ $138_A^{M\#}$	-	-	<0.006	-	-	-	-	mg/kg	0.006	A-T-004s
PCB BZ $153_A^{M\#}$	-	-	<0.004	-	-	-	-	mg/kg	0.004	A-T-004s
PCB BZ $180_A^{M\#}$	-	-	<0.004	-	-	-	-	mg/kg	0.004	A-T-004s
Total Speciated PCB-EC7$_A^{M\#}$	-	-	<0.007	-	-	-	-	mg/kg	0.003	A-T-004s

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Dibenzofuran$_A$	-	<100	3770	-	<100	978	151	µg/kg	100	A-T-052s
Carbazole$_A$	-	<100	3250	-	<100	901	<100	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	-	<500	<500	-	976	594	<500	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	-	<100	128	-	11100	140	<100	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Methylphenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	-	<100	120	-	1380	<100	<100	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	-	<100	3990	-	<100	1010	<100	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Phenol$_A$	-	<100	<100	-	298	<100	<100	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
n-Dioctylphthalate$_A$	-	<500	<500	-	<500	<500	<500	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	-	308	335	-	342	321	252	µg/kg	100	A-T-052s
Nitrobenzene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Isophorone$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachloroethane$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachlorocyclopentadiene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	-	<100	<100	-	<100	<100	<100	µg/kg	100	A-T-052s
Perylene$_A$	-	241	3190	-	347	1030	137	µg/kg	100	A-T-052s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
SVOC+TICS (UKWIR)										
SVOC TICs (Tentatively Identified Compounds)$_A$	-	-	-	-	-	Appended	Appended			A-T-052s
Acenaphthylene$_A$	-	-	-	-	-	915	<100	µg/kg	100	A-T-052s
Acenaphthene$_A$	-	-	-	-	-	596	130	µg/kg	100	A-T-052s
Anthracene$_A$	-	-	-	-	-	2470	315	µg/kg	100	A-T-052s
Benzo(a)anthracene$_A$	-	-	-	-	-	5500	591	µg/kg	100	A-T-052s
Benzo(b)fluoranthene$_A$	-	-	-	-	-	3990	488	µg/kg	100	A-T-052s
Benzo(k)fluoranthene$_A$	-	-	-	-	-	2020	321	µg/kg	100	A-T-052s
Benzo(a)pyrene$_A$	-	-	-	-	-	4160	546	µg/kg	100	A-T-052s
Benzo(ghi)perylene$_A$	-	-	-	-	-	2390	281	µg/kg	100	A-T-052s
Chrysene$_A$	-	-	-	-	-	4750	521	µg/kg	100	A-T-052s
Fluoranthene$_A$	-	-	-	-	-	> 8880	1630	µg/kg	100	A-T-052s
Fluorene$_A$	-	-	-	-	-	1940	<100	µg/kg	100	A-T-052s
Indeno(1,2,3-cd)pyrene$_A$	-	-	-	-	-	2730	310	µg/kg	100	A-T-052s
Phenanthrene$_A$	-	-	-	-	-	>8400	1690	µg/kg	100	A-T-052s
Pyrene$_A$	-	-	-	-	-	>8180	1340	µg/kg	100	A-T-052s
Naphthalene$_A$	-	-	-	-	-	1760	<100	µg/kg	100	A-T-052s
Dibenzo(ah)anthracene$_A$	-	-	-	-	-	682	<100	µg/kg	100	A-T-052s
Cresol & Chlorinated Phenol Total$_A$	-	-	-	-	-	307	<100	µg/kg	100	A-T-052s
Phenols Total (from SVOC)$_A$	-	-	-	-	-	<100	<100	µg/kg	100	A-T-052s
SVOC Total (excl. PAH/Phenols/Cresols and Chlorophenols)$_A$	-	-	-	-	-	3800	402	µg/kg	100	A-T-052s
SVOC Total (excl. PAH/Phenols/Cresols/Chlorophenols/Ethers/Nitrobenzene)$_A$	-	-	-	-	-	3800	402	µg/kg	100	A-T-052s
Ethers Total (from SVOC)$_A$	-	-	-	-	-	<100	<100	µg/kg	100	A-T-052s

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
VOC										
Dichlorodifluoromethane$_A$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Chloromethane$_A$	-	<10	<10	-	<10	<10	<10	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromomethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Chloroethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Trichlorofluoromethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloroethene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Carbon Disulphide$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Dichloromethane$_A$	-	<5	<5	-	<5	<5	<5	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloroethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
2,2-Dichloropropane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromochloromethane$_A$#	-	<5	<5	-	<5	<5	<5	µg/kg	5	A-T-006s
Chloroform$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloropropene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Carbon Tetrachloride$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichloroethane$_A$#	-	<2	<2	-	<2	<2	<2	µg/kg	2	A-T-006s
Benzene$_A$#	-	<1	2	-	<1	<1	<1	µg/kg	1	A-T-006s
Trichloroethene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichloropropane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Dibromomethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromodichloromethane$_A$#	-	<10	<10	-	<10	<10	<10	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Toluene$_A$#	-	<1	2	-	<1	<1	<1	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3-Dichloropropane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Tetrachloroethene$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Dibromochloromethane$_A$#	-	<3	<3	-	<3	<3	<3	µg/kg	3	A-T-006s
1,2-Dibromoethane$_A$#	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
Chlorobenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_A$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Ethylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
m & p Xylene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
o-Xylene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Styrene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromoform$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Isopropylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_A$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromobenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
n-Propylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
2-Chlorotoluene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
4-Chlorotoluene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
tert-Butylbenzene$_A^\#$	-	<2	<2	-	<2	<2	<2	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
sec-Butylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
4-Isopropyltoluene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_A$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
n-Butylbenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_A$	-	<2	<2	-	<2	<2	<2	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_A$	-	<3	<3	-	<3	<3	<3	µg/kg	3	A-T-006s
Hexachlorobutadiene$_A^\#$	-	<1	<1	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_A$	-	<3	<3	-	<3	<3	<3	µg/kg	3	A-T-006s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
VOC+TICS (UKWIR)										
VOC Total (excl. BTEX)$_A$	-	-	-	-	-	<10	<10	µg/kg	10	A-T-006s
BTEX Total (from VOC)$_A$	-	-	-	-	-	<1	<1	µg/kg	1	A-T-006s
VOC TICs$_A$	-	-	-	-	-	None detected	None detected			A-T-006s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
TPH CWG (UKWIR) with Clean Up										
Ali >C5-C6$_A^{\#}$	-	<0.01	<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	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	1	-	<5	<1	<5	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	<1	<1	-	<5	<1	<5	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	<1	6	-	<5	1	<5	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	6	18	-	9	13	8	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	162	209	-	411	153	345	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	-	-	-	-	166	353	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	<0.01	0.02	-	<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	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	3	2	-	<5	1	20	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	2	5	-	19	6	7	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	3	24	-	12	21	27	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	10	96	-	28	79	81	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	97	328	-	257	261	254	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C10-C16)$_A^{\#}$	-	-	-	-	-	28	34	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C8-C10)$_A^{\#}$	-	-	-	-	-	1	20	mg/kg	1	A-T-055s
EPH Total Ali & Aro (>C16-C35)$_A^{\#}$	-	-	-	-	-	505	687	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	-	-	-	-	368	389	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	-	-	-	-	534	742	mg/kg	1	Calc-As Recd
BTEX and MTBE Total$_A$	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Benzene$_A^{\#}$	-	<0.01	0.02	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	<0.01	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	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	<0.01	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	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	<0.01	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
VPH total (>C5-C8)$_A^{\#}$	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
TPH UKCWG (leachable) with Clean Up										
Ali >C5-C6 (leachable)$_A$	-	-	2	-	-	-	-	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)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Ali >C12-C16 (leachable)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Ali >C16-C21 (leachable)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Ali >C21-C35 (leachable)$_A$	-	-	<20	-	-	-	-	µg/l	20	A-T-055w
Ali >C35-C44 (leachable)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Total Aliphatics (leachable)$_A$	-	-	<20	-	-	-	-	µg/l	10	Calc-As Recd
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)$_A$	-	-	25	-	-	-	-	µg/l	10	A-T-055w
Aro >C10-C12 (leachable)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Aro >C12-C16 (leachable)$_A$	-	-	14	-	-	-	-	µg/l	10	A-T-055w
Aro >C16-C21 (leachable)$_A$	-	-	20	-	-	-	-	µg/l	10	A-T-055w
Aro >C35-C44 (leachable)$_A$	-	-	<10	-	-	-	-	µg/l	10	A-T-055w
Total Aromatics (leachable) GCxGC$_A$	-	-	70	-	-	-	-	µg/l	20	Calc-As Recd
TPH (Ali & Aro >C5-C44) (leachable)$_A$	-	-	72	-	-	-	-	µg/l	20	Calc-As Recd
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)$_A$	-	-	<20	-	-	-	-	µg/l	20	A-T-055w

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13	22/11222/14	22/11222/15	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102	WS104	WS104	WS105	WS106	Composite 1	Composite 2			
Depth to Top	0.30	0.50	1.30	0.60	0.40					
Depth To Bottom										
Date Sampled	07-Nov-22	07-Nov-22	07-Nov-22	09-Nov-22	11-Nov-22	09-Nov-22	11-Nov-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4AB	4AB	4AB	4AB			
TPH UKCWG with Clean Up										
Ali >C35-C44$_A$	-	153	44	-	447	-	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	321	277	-	867	-	-	mg/kg	1	Calc-As Recd
Aro >C35-C44$_A$	-	181	47	-	389	-	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	297	502	-	704	-	-	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44)$_A$	-	618	779	-	1570	-	-	mg/kg	1	Calc-As Recd

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
% Stones >10mm$_A$	<0.1							% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.48							pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1)$_D$$^{M\#}$	29							mg/l	10	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1							mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Fraction of organic carbon$_D$$^{\#}$	0.0029							N/A	0.0003	A-T-032 FOC
Antimony$_D$	<5							mg/kg	5	A-T-024s
Arsenic$_D$$^{M\#}$	2							mg/kg	1	A-T-024s
Barium$_D$	40							mg/kg	1	A-T-024s
Beryllium$_D$	<0.5							mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5							mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	8							mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	9							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Chromium (trivalent)	9							mg/kg	1	Calc
Lead$_D$$^{M\#}$	7							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	9							mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	9							mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	23							mg/kg	5	A-T-024s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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									A-T-045

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.12							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.02							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.14							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.10							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.40							mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
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: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
Speciated PCB-EC7										
PCB BZ $28_A^{M\#}$	<0.003							mg/kg	0.003	A-T-004s
PCB BZ $52_A^{M\#}$	<0.002							mg/kg	0.002	A-T-004s
PCB BZ $101_A^{M\#}$	<0.004							mg/kg	0.004	A-T-004s
PCB BZ $118_A^{M\#}$	<0.007							mg/kg	0.007	A-T-004s
PCB BZ $138_A^{M\#}$	<0.006							mg/kg	0.006	A-T-004s
PCB BZ $153_A^{M\#}$	<0.004							mg/kg	0.004	A-T-004s
PCB BZ $180_A^{M\#}$	<0.004							mg/kg	0.004	A-T-004s
Total Speciated PCB-EC7$_A^{M\#}$	<0.007							mg/kg	0.003	A-T-004s

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
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$_A$	<100							µg/kg	100	A-T-052s
Carbazole$_A$	<100							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$_A$	<100							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

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
n-Dioctylphthalate$_A$	<500							µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<200							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$_A$	<100							µg/kg	100	A-T-052s

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
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	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
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: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
TPH CWG (UKWIR) 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$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	2							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$_A$	<1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	2							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

Envirolab Job Number: 22/11222

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11222/16							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS102									
Depth to Top	3.00									
Depth To Bottom										
Date Sampled	08-Nov-22									
Sample Type	Soil - ES									
Sample Matrix Code	4A									
TPH UKCWG with Clean Up										
Ali >C35-C44$_A$	<1							mg/kg	1	A-T-055s
Total Aliphatics$_A$	2							mg/kg	1	Calc-As Recd
Aro >C35-C44$_A$	<1							mg/kg	1	A-T-055s
Total Aromatics$_A$	3							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44)$_A$	6							mg/kg	1	Calc-As Recd

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: Plot 10b, First Street

Clients Project No: 4513

Project No: 22/11222

Date Received: 15/11/2022 (am)

Cool Box Temperatures (°C): 9.5 & 10.0

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	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13
Client Sample No												
Client Sample ID/Depth	TP101 0.30m	TP102 0.40m	TP103 0.80m	TP103 2.00m	TP105 1.00m	TP107 1.00m	WS101 0.80m	WS102 0.30m	WS104 0.50m	WS104 1.30m	WS105 0.60m	WS106 0.40m
Date Sampled	08/11/22	08/11/22	08/11/22	08/11/22	08/11/22	08/11/22	07/11/22	07/11/22	07/11/22	07/11/22	09/11/22	11/11/22
A-T-004s			21/11/2022		21/11/2022					21/11/2022		
A-T-004w	21/11/2022									21/11/2022		
A-T-006s	18/11/2022	18/11/2022			18/11/2022		18/11/2022		18/11/2022	18/11/2022		18/11/2022
A-T-006w	21/11/2022									21/11/2022		
A-T-007s												
A-T-019s	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022
A-T-019w	21/11/2022									21/11/2022		
A-T-022s	18/11/2022	18/11/2022	18/11/2022		18/11/2022		18/11/2022		18/11/2022	18/11/2022		18/11/2022
A-T-022w	22/11/2022									22/11/2022		
A-T-024s	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
A-T-025w	23/11/2022									24/11/2022		
A-T-026s	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
A-T-026w	21/11/2022									21/11/2022		
A-T-027s	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
A-T-030s												
A-T-031s	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022	23/11/2022
A-T-031w	18/11/2022									18/11/2022		
A-T-032 FOC	23/11/2022	23/11/2022	22/11/2022	23/11/2022	23/11/2022	23/11/2022	22/11/2022	22/11/2022	23/11/2022	22/11/2022	22/11/2022	23/11/2022
A-T-032s												
A-T-032w	21/11/2022									21/11/2022		
A-T-037s												
A-T-037w												
A-T-040s	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
A-T-040w	21/11/2022									21/11/2022		
A-T-042sTCN	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022
A-T-044	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022	18/11/2022
A-T-045	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022	16/11/2022
A-T-050s	17/11/2022	17/11/2022	17/11/2022	17/11/2022	18/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022
A-T-050w												
A-T-052s	18/11/2022	18/11/2022			22/11/2022		18/11/2022		18/11/2022	18/11/2022		18/11/2022
A-T-054	21/11/2022	21/11/2022		21/11/2022	21/11/2022	21/11/2022			21/11/2022			21/11/2022
A-T-055s	18/11/2022	18/11/2022	18/11/2022		18/11/2022		18/11/2022		18/11/2022	18/11/2022		18/11/2022

Lab Sample ID	22/11222/1	22/11222/2	22/11222/3	22/11222/4	22/11222/5	22/11222/6	22/11222/7	22/11222/8	22/11222/9	22/11222/11	22/11222/12	22/11222/13
Client Sample No												
Client Sample ID/Depth	TP101 0.30m	TP102 0.40m	TP103 0.80m	TP103 2.00m	TP105 1.00m	TP107 1.00m	WS101 0.80m	WS102 0.30m	WS104 0.50m	WS104 1.30m	WS105 0.60m	WS106 0.40m
Date Sampled	08/11/22	08/11/22	08/11/22	08/11/22	08/11/22	08/11/22	07/11/22	07/11/22	07/11/22	07/11/22	09/11/22	11/11/22
A-T-055w	21/11/2022									21/11/2022		
A-T-ANCs												
Calc	23/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	23/11/2022	21/11/2022	21/11/2022
Calc-As Recd	22/11/2022	18/11/2022	18/11/2022		18/11/2022		18/11/2022		18/11/2022	22/11/2022		18/11/2022
Calc-no stones												
Probe												
Probe (w)												

Lab Sample ID	22/11222/14	22/11222/15	22/11222/16
Client Sample No			
Client Sample ID/Depth	Composite 1	Composite 2	WS102 3.00m
Date Sampled	09/11/22	11/11/22	08/11/22
A-T-004s	21/11/2022	21/11/2022	23/11/2022
A-T-004w			
A-T-006s	18/11/2022	18/11/2022	21/11/2022
A-T-006w			
A-T-007s	18/11/2022	18/11/2022	
A-T-019s	18/11/2022	18/11/2022	21/11/2022
A-T-019w			
A-T-022s	21/11/2022	21/11/2022	21/11/2022
A-T-022w			
A-T-024s			21/11/2022
A-T-025w	23/11/2022	23/11/2022	
A-T-026s			21/11/2022
A-T-026w	23/11/2022	23/11/2022	
A-T-027s			21/11/2022
A-T-030s	18/11/2022	18/11/2022	
A-T-031s	23/11/2022	23/11/2022	23/11/2022
A-T-031w	23/11/2022	23/11/2022	
A-T-032 FOC			22/11/2022
A-T-032s	22/11/2022	22/11/2022	
A-T-032w	23/11/2022	23/11/2022	
A-T-037s	23/11/2022	23/11/2022	
A-T-037w	23/11/2022	23/11/2022	
A-T-040s			21/11/2022
A-T-040w			
A-T-042sTCN			21/11/2022
A-T-044	18/11/2022	18/11/2022	18/11/2022
A-T-045			16/11/2022
A-T-050s			21/11/2022
A-T-050w	23/11/2022	23/11/2022	
A-T-052s	25/11/2022	25/11/2022	21/11/2022
A-T-054			
A-T-055s	18/11/2022	18/11/2022	21/11/2022
A-T-055w			
A-T-ANCs	23/11/2022	23/11/2022	

Lab Sample ID	22/11222/14	22/11222/15	22/11222/16
Client Sample No			
Client Sample ID/Depth	Composite 1	Composite 2	WS102 3.00m
Date Sampled	09/11/22	11/11/22	08/11/22
Calc			21/11/2022
Calc-As Recd	18/11/2022	18/11/2022	21/11/2022
Calc-no stones	23/11/2022	23/11/2022	
Probe	23/11/2022	23/11/2022	
Probe (w)	23/11/2022	23/11/2022	

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: 22/11602
Issue Number: 1 **Date:** 02 December, 2022

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

Project Manager: Reece McGuinness
Project Name: Plot 10b, First Street
Project Ref: 4513
Order No: 1814
Date Samples Received: 23/11/22
Date Instructions Received: 25/11/22
Date Analysis Completed: 02/12/22

Approved by:



Richard Wong
Client Manager

UKAS TESTING
1247

Envirolab Job Number: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
pH (w)$_{A}^{\#}$	7.33	7.59						pH	0.01	A-T-031w
Sulphate (w)$_{A}^{\#}$	527	219						mg/l	1	A-T-026w
DOC - Dissolved Organic Carbon (w)$_{A}^{\#}$	3.9	3.7						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)$_{A}^{\#}$	258	246						mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	<4	<4						µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<1	<1						µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	2						µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1						µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	3	4						µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	3						µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	6	10						µg/l	2	A-T-025w

Envirolab Job Number: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-22								
Sample Type	Water - EW	Water - EW								
Sample Matrix Code	N/A	N/A								
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	0.02	<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)$_A^{\#}$	0.03	<0.01						µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	0.03	<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)$_A^{\#}$	0.02	<0.01						µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	0.02	<0.01						µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	0.03	<0.01						µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.16	<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

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-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$_A$	<7	<7						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: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-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: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-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$_A^\#$	2	<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

Envirolab Job Number: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-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: 22/11602

Client Project Name: Plot 10b, First Street

Client Project Ref: 4513

Lab Sample ID	22/11602/1	22/11602/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RBH101	RBH102								
Depth to Top	6.00	7.60								
Depth To Bottom										
Date Sampled	23-Nov-22	23-Nov-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 $(w)_A$	7	<5						µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5						µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	29	<5						µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	31	<5						µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	<10						µg/l	10	A-T-055w
Total Aromatics $(w)_A$	67	<10						µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	67	<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: Plot 10b, First Street

Clients Project No: 4513

Project No: 22/11602

Date Received: 25/11/2022 (am)

Cool Box Temperatures (°C): 10.0

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	22/11602/1	22/11602/2
Client Sample No		
Client Sample ID/Depth	RBH101 6.00m	RBH102 7.60m
Date Sampled	23/11/22	23/11/22
A-T-006w	28/11/2022	28/11/2022
A-T-019w	29/11/2022	29/11/2022
A-T-022w	29/11/2022	29/11/2022
A-T-025w	01/12/2022	01/12/2022
A-T-026w	29/11/2022	29/11/2022
A-T-031w	30/11/2022	30/11/2022
A-T-032w	29/11/2022	29/11/2022
A-T-049w	01/12/2022	01/12/2022
A-T-050w	02/12/2022	02/12/2022
A-T-052w	30/11/2022	30/11/2022
A-T-055w	29/11/2022	29/11/2022
Calc-As Recd	29/11/2022	29/11/2022

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

Appendix F
TECHNICAL BACKGROUND

H1 Desk Study

Aquifer designation and Source protection zones

Principal aquifer: layers of rock or drift deposit that have high intergranular and/or fracture permeability (usually providing a high level of water storage). They may support water supply and/or river base flow on a strategic scale.

Secondary A aquifer: permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Secondary B aquifer: predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Secondary undifferentiated aquifer: it has not been possible to attribute either a category A or B to a rock type. In most cases this means that it was previously designated as both a minor and non-aquifer in different locations owing to the variable characteristics.

Unproductive' strata: low permeability with negligible significance for water supply or river base flow.

The EA generally adopts a three-fold classification of source protection zones (SPZ) surround abstractions for public water supply. The Site is situated in an area defined as follows:

- Zone 1 or the 'inner protection zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time from any point below the water table to the source. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source
- Zone 2 or the 'outer protection zone' is defined by a 400-day travel time from a point below the water table to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants
- Zone 3 or the 'total catchment' is the area around the source within which all groundwater recharge is presumed to be discharged at the source.

Preliminary risk assessment methodology

LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) contaminant linkages (contaminant–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the

likelihood and the consequences of an event must be taken into account when assessing risk. ROC has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term
- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000)
- medium: chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem
- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment
- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the probability of an event occurring and its consequences have been classified, a risk category can be assigned according to the table below.

		Consequences			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**Highly likely**	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required
- high: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term
- moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term
- low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild
- very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.