



**EARTH ENVIRONMENTAL
& GEOTECHNICAL**
A Technics Group Company

Phase II GeoEnvironmental Ground Investigation

54 Derby Street, Cheetham Hill

Manchester

February 2026

On behalf of

Kacoo Investments Ltd



Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

Tel: 0161 975 6088

Email info@earthenvironmental.co.uk
www.earthenvironmental.co.uk



**EARTH ENVIRONMENTAL
& GEOTECHNICAL**
A Technics Group Company

PHASE 2 GEOENVIRONMENTAL

SITE INVESTIGATION REPORT

54 DERBY STREET, CHEETHAM HILL

MANCHESTER

FOR

KACOO INVESTMENTS LTD

Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business & Arts Centre
Houldsworth Street
Stockport
SK5 6DA

www.earthenvironmental.co.uk

Tel: 0161 975 6088

Report No. A6542/25/SI

February 2026

Report Title:	54 Derby Street, Cheetham Hill	
Report Type:	Phase 2 GeoEnvironmental Site Investigation Report	
Report Reference:	A6542/25/SI	Version 2 - Update to reference in Section 9.2
Client:	Kacoo Investments Ltd	
Issue Date:	25th January 2026	Amended 23rd February 2026
Drafted By:	D Shanks - Principal Consultant	<i>D Shanks</i>
Reviewed By:	Adam Czarnecki - Director	<i>Adam Czarnecki</i>
Authorised By:	Adam Czarnecki - Director	<i>Adam Czarnecki</i>

This document has been prepared for the titled project (or named part thereof). It should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authorisation being obtained from Earth Environmental & Geotechnical. Earth Environmental & Geotechnical accepts no responsibility or liability for the consequences of the use of this document, wholly or in part, for any other purpose than that for which it was commissioned. Any person who uses or relies upon this document for any other purpose does so at their own risk.

This report was prepared for the sole use of the Client. It shall not be relied upon or transferred to any other party without the express written authorisation of Earth Environmental & Geotechnical. It may contain material subject to copyright or obtained subject to license; unauthorised copying of this report will be in breach of copyright/license.

The findings and opinions provided in this document are given in good faith. They are subject to the limitations imposed by employing site assessment methods and techniques appropriate to the time of investigation and within the constraints defined in this document. The findings and opinions are relevant to the dates when the assessment was undertaken, but should not necessarily be relied upon to represent conditions at a substantially later date.

The findings and opinions conveyed in this report are based on information obtained from a variety of sources, as detailed, which Earth Environmental & Geotechnical assumes to be reliable but have not been independently confirmed. Therefore, Earth Environmental & Geotechnical cannot and does not guarantee the authenticity or reliability of third-party information it has relied upon.

Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted by Earth Environmental & Geotechnical for the effects of any future changes to such policies and legislation.

The limitations of liability of Earth Environmental & Geotechnical for the contents of this document have been agreed with the Client, as set out in the terms and conditions of the offer and related contract documentation.

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	BACKGROUND	1
1.2	EXISTING PLANNING APPLICATIONS	1
1.2.1	<i>Planning Application to Manchester City Council, Ref - 141689/FO/2024, dated December 2024.....</i>	<i>1</i>
1.3	TERMS OF REFERENCE	1
1.4	REPORT SCOPE	1
1.5	LIMITATIONS OF THE STUDY	1
1.6	PREVIOUS INVESTIGATIONS.....	2
1.6.1	<i>Earth Environmental & Geotechnical Ltd, Phase 1 GeoEnvironmental Desk Study, 54 Derby Street, Cheetham Hill, Ref: A6542/25/FDS/V2, dated March 2025</i>	<i>2</i>
2.0	SITE LOCATION & DESCRIPTION	4
2.1	PROPOSED DEVELOPMENT	6
3.0	SITE INVESTIGATION	7
3.1	EXPLORATORY FIELDWORK.....	7
3.2	LABORATORY TESTING	10
3.2.1	<i>Geotechnical Testing</i>	<i>10</i>
3.2.2	<i>Environmental Testing</i>	<i>10</i>
4.0	GROUND CONDITIONS ENCOUNTERED.....	11
4.1	LOCAL RECORDED GEOLOGY	11
4.2	SOIL PROFILE ENCOUNTERED	11
4.3	OBSERVABLE INDICATIONS OF CONTAMINATION	11
4.4	OBSTRUCTIONS.....	11
4.5	GROUNDWATER.....	12
5.0	ENGINEERING PROPERTIES OF SOILS ENCOUNTERED	13
5.1	GENERAL	13
5.2	MADE GROUND	13
5.3	SUPERFICIAL DEPOSITS	13
5.3.1	<i>Clay</i>	<i>13</i>
6.0	GEOTECHNICAL ASSESSMENT.....	18
6.1	PROPOSED DEVELOPMENT	18
6.2	GROUND CONDITIONS ENCOUNTERED	18
6.3	FOUNDATION CONSIDERATIONS	18
6.3.1	<i>Piled Foundations.....</i>	<i>18</i>
6.3.2	<i>Ground Improvement</i>	<i>19</i>
6.3.3	<i>Controlled Modulus Columns</i>	<i>19</i>
6.4	PAVEMENT DESIGN.....	19
6.5	CHEMICAL ATTACK ON BURIED CONCRETE	20
6.6	SUITABILITY OF EXCAVATED MATERIALS	20
6.7	TEMPORARY WORKS	21
7.0	SOIL CONTAMINATION RISK ASSESSMENT.....	22
7.1	TIER I HUMAN HEALTH SOIL RISK ASSESSMENT – GROUNDWORKERS DURING DEVELOPMENT	22
7.2	TIER I HUMAN HEALTH SOIL RISK ASSESSMENT – FUTURE SITE USERS	22
7.3	SOIL WASTE ASSESSMENT	25
8.0	GROUNDWATER CONTAMINATION RISK ASSESSMENT	27
8.1	VAPOUR RISK MODELLING	29
9.0	GROUND GAS AND RADON GAS CONTAMINATION RISK ASSESSMENT	31
9.1	RADON GAS	31



9.2	ANALYSES OF MONITORING RESULTS	31
9.3	DETAILED ASSESSMENT	33
10.0	CONCLUSIONS & RECOMMENDATIONS	37
10.1	SOIL CONTAMINATION.....	37
10.2	ASBESTOS IN SOILS	37
10.3	SOIL DISPOSAL.....	37
10.4	GROUNDWATER ASSESSMENT	37
10.5	GROUND GAS.....	38
10.6	FOUNDATIONS.....	38
10.7	PAVEMENT DESIGN.....	38
10.8	RISK TO BURIED (WATER) SERVICES.....	38
10.9	SITE PERSONNEL	38
10.10	OTHER MATTERS.....	39

LIST OF FIGURES

Figure 1	Site Location Plan
Figure 2	General Site Photographs
Figure 3	Proposed Development Plan
Figure 4	Exploratory Hole Location Plan
Figure 5	SPT v Depth Plot
Figure 6	Plasticity Chart
Figure 7	Gas Ratio Ternary Plot
Figure 8	Carbon Dioxide: Oxygen Ratio Plot
Figure 9	Nitrogen/Oxygen: Carbon Dioxide Ratio Plot

TABLES

Table 1	Sampling Location Justification
Table 2	Shear Strength Definitions
Table 3	Summary of Exploratory Holes Undertaken
Table 4	Summary of Laboratory Geotechnical Tests Undertaken
Table 5	Summary of Ground Conditions Encountered
Table 6	Summary of Laboratory Geotechnical Test Results
Table 7	Summary of Design Parameters (Clay)
Table 8	Soil Desiccation Indicators in the Clay
Table 9	Comparison of Capping Thickness with and without Geotextile
Table 10	Summary of Guideline Values for Protection of Workers and the General Public During the Development of Contaminated Land
Table 11	Soil Results Comparison with C4SL/S4UL Values
Table 12	Waste Classification of Soils
Table 13	Summary of WAC Test Results
Table 14	Groundwater Results Comparison with EQS/Drinking Water Quality Values
Table 15	Groundwater Results Comparison with Screening GAC for Groundwater Vapour Generation Hazard
Table 16	Characteristic Situation (Wilson et al 2006/2007 modified from Wilson and Card, 1999)

APPENDICES

Appendix 1	Exploratory Hole Logs
Appendix 2	Geotechnical Testing Results
Appendix 3	Soil Chemical Testing Results
Appendix 4	Soil Waste Assessment
Appendix 5	Groundwater Chemical Testing Results
Appendix 6	Ground Gas Monitoring Data
Appendix 7	Report Limitations

1.0 INTRODUCTION

1.1 Background

A site investigation has been commissioned by Lapas Chowdhury, on behalf of Kacoo Investments Ltd (the Client) to examine ground conditions for a proposed new development at 54 Derby Street, Cheetham Hill, Manchester.

1.2 Existing Planning Applications

1.2.1 *Planning Application to Manchester City Council, Ref - 141689/FO/2024, dated December 2024.*

A planning application has been submitted for the site to Manchester City Council (Reference: 141689/FO/2024) for the construction of a single storey building comprising 2no. units (B8 storage or distribution) with associated alterations to car parking layout.

The application was approved in February 2025.

1.3 Terms of Reference

The Client has commissioned Earth Environmental and Geotechnical Ltd (EEG) to undertake a site investigation in accordance with proposal A6542/25/V1 dated 23rd September 2025. The objectives of this investigation are as follows:

- *Provide factual information on the work undertaken, including sampling location plan, borehole logs, and geotechnical and chemical testing.*
- *Tier 1 (semi-quantitative) risk assessment will be undertaken. This will compare the concentrations of soil, groundwater & ground gas contaminants identified against current and appropriate published guidelines, in relation to identified receptors, e.g., existing/ future end users and site neighbours.*
- *Classification of soils for off-site disposal.*
- *Assessment of ground conditions for foundation design.*

1.4 Report Scope

This report presents complete factual records of the site work carried out, the ground conditions encountered in the exploratory holes, and the in situ and laboratory test results. All information collected has been used to provide an interpretation of the ground conditions, along with recommendations on geotechnical design and potential risks of ground contamination for the proposed development.

1.5 Limitations of the Study

The report is written within the agreed scope of work and budget and should not be used in a different context. New information, improved practices or changes in legislation may require a reinterpretation of the report in whole or in part. EEG reserves the right to amend either conclusions or recommendations in light of any further information that may become available. The report is provided solely for the client's use and is confidential to them.

Recommendations within this report are also based on exploratory records and examination of samples and, where applicable, laboratory tests. No liability can be accepted for conditions not

revealed by the boreholes, particularly at intervening locations. Whilst every effort is made to ensure the accuracy of the data supplied, all opinions expressed regarding the spatial distribution of strata between sampling locations are for guidance only, and no responsibility is accepted for their accuracy.

1.6 Previous Investigations

1.6.1 *Earth Environmental & Geotechnical Ltd, Phase 1 GeoEnvironmental Desk Study, 54 Derby Street, Cheetham Hill, Ref: A6542/25/FDS/V2, dated March 2025*

Earth Environmental & Geotechnical Ltd has previously conducted a Phase 1 GeoEnvironmental Desk Study for the site. The report highlighted the following:

Historical mapping dated 1848 recorded the site and surrounding area to initially comprise undeveloped land, with a pond in the east of the site, and residential development to the west of the site.

In the 1890s the east of the site was occupied by a clay pit, which extended to the northeast of the site, assumed to be associated with a brick works approximately 100m north of the site. At this stage a large building was constructed in the south of the site which was recorded as a police station in 1906.

By 1908, the clay pit on site was infilled and was recorded as undeveloped until 1933 where Aquatite Mill was recorded to occupy the majority of the site.

At this stage, the structure which was recorded as a police station was spilt into multiple buildings, potentially used for residential use. Other than the mill being divided into an electrical engineering works and the original mill in the 1950s, the site underwent little change until the 1970s where the whole building was recorded as a printing works. By the late 1980s, the site was in its modern day configuration.

The area surrounding the site was originally unoccupied with small residential developments to the west. Brick works and other industrial/ commercial works later occupied the area, particularly from the 1900s.

By the 1960s, the clay pits to the north of the site were infilled, with further works, warehouses and offices constructed.

The superficial deposits beneath the site are recorded as Devensian Till, comprising clay and sand with or without boulders.

The bedrock geology beneath the site is recorded as the Chester Formation, comprising sandstone. It was noted that due to the historical setting of the site, made ground was anticipated.

The overall risk from soil contamination to receptors was concluded to be **MODERATE to LOW**.

The overall risk to controlled waters was concluded to be **LOW** based on the limited source potential and the lack of nearby surface water features.

Although possible ground gas sources were identified onsite and within 250m of the site, due to the age of infilled material, the risk from ground gas to end users was considered to be **MODERATE to LOW**.

The site is not located in a radon-affected area, therefore it was concluded that no radon protection measures are required in any new structures.

The Phase 1 Geoenvironmental Desk Study recommended that a further intrusive investigation be undertaken to establish geotechnical parameters for the design of foundations, as well as to recover soil samples for contamination testing.

It was additionally recommended that ground gas monitoring should be undertaken as part of any further investigation.

2.0 SITE LOCATION & DESCRIPTION

The site (1.04 hectares) is located within a commercial setting in Cheetham Hill.

The approximate National Grid Reference for the centre of the site is SJ 83918 99930 (X: 383918, Y: 399930)) with the nearest postcode being M4 6DH.

The site is a generally square shaped parcel of land with maximum dimensions of approximately 141m northwest to southeast and 150m northeast to southwest.

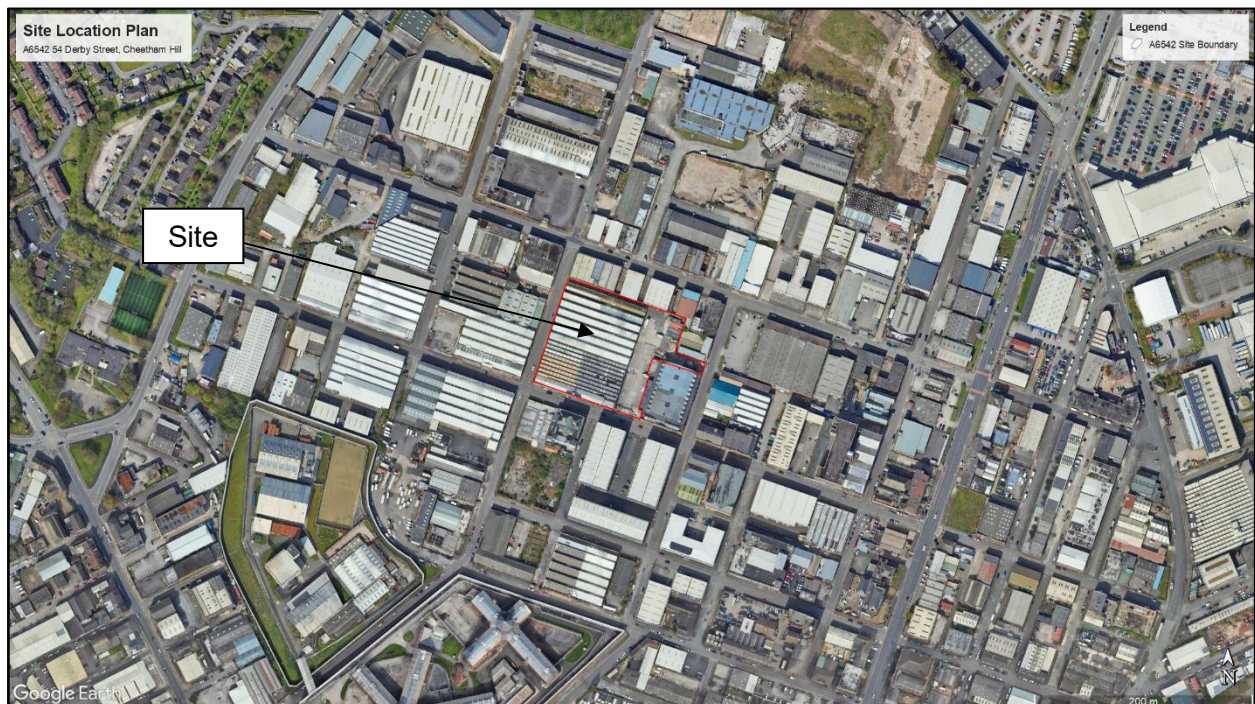
The site is currently occupied by a commercial warehouse, which is segregated into multiple commercial businesses. The remainder of the site, including the proposed development area in the northeast of the site, comprises hardstanding associated with access and parking for the surrounding commercial units.

Access to the site can be gained via a metal fence gate, to the south of the site off Derby Street.

The site is surrounded by commercial properties, with Manchester Prison (aka Stangeways Prison) located approximately 190m south of the site. It is understood that the closest residential properties to the site are located approximately 360m west of the site.

The site location is shown in the aerial photograph presented as Figure 1.

Figure 1: Site Location Plan



General site photographs are presented in Figure 2 overleaf.

Figure 2: General Site Photographs

Photograph facing north, showing overview of existing site layout



Photograph showing natural strata, exclusively observed in WS01



3.0 SITE INVESTIGATION

3.1 Exploratory Fieldwork

The fieldwork was carried out by EEG on the 3rd December 2025 and comprised:

4no. window sample boreholes (designated WS01 - WS04 inclusive) were sunk to depths between 3.70m and 6.00m below the existing ground level. The boreholes were all drilled with the intention of reaching 6.00m bgl; however, one location was terminated early due to SPT refusals in very stiff clay.

Standard Penetration Tests (SPTs) were undertaken in the borehole in accordance with BS EN ISO 22476-3.

Groundwater observations were noted where possible. These observations pertain only to the time of the investigation and do not necessarily reflect seasonal fluctuations.

Exploratory hole logs are included in Appendix 1.

Exploratory hole locations were selected by EEG Ltd prior to the site works, based on the proposed development, and to avoid known services.

Each exploratory location was scanned with a Cable Avoidance Tool (CAT) to locate unrecorded underground services, and the locations were repositioned where necessary.

Table 1 below outlines the targeted features.

Table 1: Sampling Location Justification

Exploratory Hole	Sampling Location
WS01 - WS04	Within the footprint of the proposed development.

On completion, samples recovered from the site were taken to specialist laboratories for chemical and geotechnical testing.

Soil samples were recovered in 250g glass amber jars and 1kg plastic tubs. If collection was not possible the same day, then samples were stored in the sample storage fridge at the EEG offices below 4°C.

Samples were tracked using the appropriate Chain of Custody forms provided by DETS.

It should be noted that hexavalent chromium soil is analysed using the USEPA-recommended method of alkaline leach. This method limits chromium(VI) reduction to chromium(III).

All site investigation work was supervised full-time by an EEG representative. The logging of soils and rocks has been carried out in accordance with BS5930^(2015+A1:2020) except where superseded by the soil and rock description methodology in BS EN14688-1⁽²⁰⁰²⁾, BS EN 14688-2⁽²⁰⁰⁴⁾ and BS EN 14689-1⁽²⁰⁰³⁾.

All sampling locations were surveyed using a handheld Trimble GeoXH GPS instrument capable of surveying to an accuracy of less than 10mm, depending on satellite coverage, proximity to trees, and building structures.

The descriptive terminology, such as firm, etc., formerly used in older versions of BS5930 to describe strength, now relates solely to consistency. Shear strength is now defined in relation to results obtained in the field (using a hand vane, for example) or in the laboratory (from triaxial tests), as detailed in Table 2 below.

Table 2: Shear Strength Definitions

Term based on measurement	Undrained Strength (c_u) definition in kN/m^2 (from BS EN ISO 14688-2: 2004, 5.3, Table 5)
Extremely Low Strength	<10
Very Low Strength	10 to 20
Low Strength	20 to 40
Medium Strength	40 to 75
High Strength	75 to 150
Very High Strength	150 to 300
Extremely High Strength	300 to 600

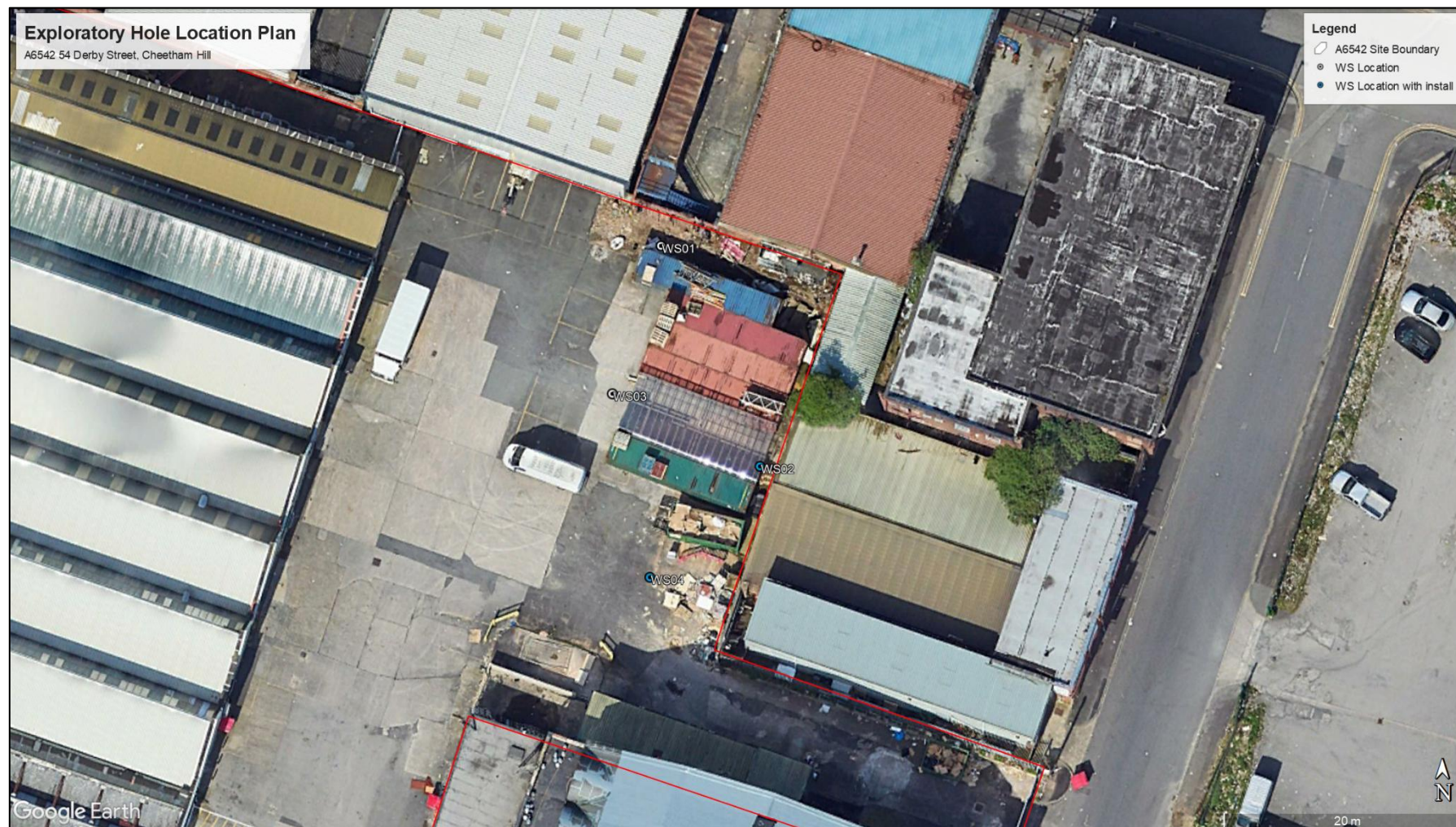
An Exploratory Hole Location Plan is presented as Figure 4, overleaf.

A summary of exploratory holes and tests undertaken during the investigation is presented in Table 3 below.

Table 3: Summary of Exploratory Holes Undertaken

Hole/ Test	Type*	Depth (m)	Date Started	Date Finished	Easting (m)	Northing (m)	Backfill Details**
WS01	WS	3.70	03/12/2025	03/12/2025	399952	383992	A
WS02	WS	6.00	03/12/2025	03/12/2025	399934	384003	M
WS03	WS	6.00	03/12/2025	03/12/2025	399940	383991	A
WS04	WS	6.00	03/12/2025	03/12/2025	399925	383994	M
*WS = Window Sample Borehole, CP = Cable Percussion Drilling, TP = Trial Pit							
**M = Monitoring Well, B = Bentonite, A = Arisings							

Figure 4: Exploratory Hole Location Plan



3.2 Laboratory Testing

3.2.1 Geotechnical Testing

A programme of laboratory testing was carried out on samples taken from the various strata to assist in classification and determine the engineering properties of the materials underlying the site. The tests were scheduled by EEG and carried out by Murray Rix and Envirolab. The test procedures used were generally in accordance with the methods described in BS1377:2022. Details of the specific tests used in each case are given in Table 4, below.

Table 4: Summary of Laboratory Geotechnical Tests Undertaken

TEST	STANDARD	No.
Moisture Content	BS1377-2:2022, Cl. 4	3
Liquid Limit, Plastic Limit, Plasticity Index	BS1377-2:2022, Cl. 5.3/ 6	3
Particle size distribution (wet)	BS1377-2:2022, Cl. 10	1
BRE Suite	BRE SD1:2005	4

The results of the laboratory geotechnical tests are discussed in Section 5 and included in Appendix 2.

3.2.2 Environmental Testing

The environmental chemistry of the ground was investigated by specialist chemical analysis of selected samples, scheduled by EEG, and carried out by DETS, a UKAS and MCERTS accredited laboratory.

Chemical analyses were carried out on 6no. soil samples, and were submitted for the following suite of determinants:

Asbestos Screen, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc, Cyanide, Phenol, Sulphate (SO₄), Sulphide, pH, Soil Organic Matter, Speciated Petroleum Hydrocarbons and Speciated Polyaromatic Hydrocarbons (PAH).

A total of 1no. soil sample was additionally submitted for Waste Acceptance Criteria (WAC) testing.

Complete results of the laboratory contamination tests are discussed in Section 7 and included in Appendix 3.

Additionally, chemical analyses were also carried out on 2no. groundwater samples, which were submitted for the following suite of determinants:

Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Hexavalent Chromium, Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc, Cyanide, Phenol, Sulphate (SO₄), Sulphide, pH, Total Organic Carbon (TOC), Extractable Petroleum Hydrocarbons (EPH), Speciated Petroleum Hydrocarbons (TPH), Speciated Polyaromatic Hydrocarbons (PAH) and BTEX.

The results of the laboratory water contamination tests are discussed in Section 8 and included in Appendix 5.

4.0 GROUND CONDITIONS ENCOUNTERED

4.1 Local Recorded Geology

BGS digital mapping shows that the site is underlain by superficial Devensian Till deposits, comprising Diamicton, i.e. clay and sand with occasional boulders.

The bedrock geology beneath the site is shown to be the Chester Formation, comprising Triassic sandstone.

4.2 Soil Profile Encountered

The sequence of strata identified on site is as follows:

- **Made Ground** was encountered in all exploratory boreholes between ground level and to a maximum depths between 2.30m and 6.00m bgl, generally comprising:
 - Asphalt.
 - Concrete.
 - Dark brown CLAY, with variable quantities of sand and gravel of red brick, concrete, clinker, glass, plastic, metal, limestone, sandstone and mudstone.
 - COBBLES of red brick.
 - Light grey GRAVEL, with variable quantities of clay and sand. Gravel comprising red brick, concrete and sandstone.
 - Light grey SAND, with variable quantities of clay and gravel of red brick, concrete and sandstone.
- **Superficial Deposits** were encountered exclusively within WS01, between 2.30m and 3.70m bgl, generally comprising:
 - Stiff brown, slightly sandy slightly gravelly CLAY, with gravel comprising mudstone.

The depths of the various materials encountered in the exploratory holes are summarised in Table 5, overleaf.

It should be noted that in all exploratory hole locations, other than WS01, a loss of recovery was observed within the deeper made ground. It is assumed that this is due to cobbles displacing the material during drilling.

As a result of this, interpretation of the ground conditions have been made in these areas of poor recovery.

Full details of the exploratory hole logs are provided in Appendix 1.

4.3 Observable Indications of Contamination

Although significant made ground was observed across the site, no observable indication of visual or olfactory contamination was encountered.

4.4 Obstructions

No sub-surface obstructions were encountered during the site investigation.

4.5 Groundwater

Groundwater, assumed to be perched, was encountered during the ground investigation within WS03 and WS04 at 5.00m bgl.

Subsequent monitoring visits identified perched groundwater in both installed boreholes (WS02 & WS04) at depths between 3.66m and 4.98m bgl.

Table 5: Summary of Ground Conditions Encountered

Hole	Depth to Stratum (m bgl)				Groundwater Strike (m bgl)	Monitoring Groundwater (m bgl)
	MADE GROUND			CLAY		
	HARDSTANDING	GRANULAR	COHESIVE			
WS01	-	-	GL - 2.30	2.30 - 3.70+	-	-
WS02	GL - 0.19	0.19 - 0.35	0.35 - 6.00+	-	-	4.04 - 4.98
WS03	GL - 0.02	0.02 - 0.38 1.00 - 1.30	0.38 - 1.00 1.30 - 6.00+	-	5.00	-
WS04	GL - 0.05	0.05 - 0.22 0.80 - 3.00	0.22 - 0.80 3.00 - 6.00+	-	5.00	3.66 - 4.43

5.0 ENGINEERING PROPERTIES OF SOILS ENCOUNTERED

5.1 General

The following sections discuss the engineering properties of the strata encountered, based on results of in situ testing and laboratory testing obtained during this investigation.

The results of laboratory geotechnical testing are summarised in Table 6.

Table 6: Summary of Laboratory Geotechnical Test Results

LOCATION	DEPTH	MATERIAL	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425µm (%)	Modified Plasticity Index	PSD Gravel (%)	PSD Sand (%)	PSD Silt (%)	PSD Clay (%)	pH Value	Water Soluble Sulphate SO ₄ (mg/l)
WS01	2.40	CLAY	21.5	36	14	22	98	22	-	-	-	-	7.89	21
WS01	2.80	CLAY	17.5	38	13	25	96	24	2	14	68	16	-	-
WS01	3.60	CLAY	15.9	37	14	23	96	22	-	-	-	-	-	-
WS02	2.10	MG	-	-	-	-	-	-	-	-	-	-	8.19	33
WS03	3.10	MG	-	-	-	-	-	-	-	-	-	-	7.90	19
WS03	4.10	MG	-	-	-	-	-	-	-	-	-	-	7.93	25

5.2 Made Ground

Made ground, varying between granular and cohesive in nature, was encountered in all exploratory borehole locations between ground level and to a maximum depth of 6.00m below ground level.

SPT tests carried out in the made ground resulted in **SPT N values** between 2 and 14, as shown on the SPT v Depth Plot in Figure 5 (overleaf).

BRE SD1 testing has been conducted on 3no. made ground samples. The **water-soluble sulphate** content ranged from 19mg/l to 33mg/l SO₄, together with **pH values** of 7.9 to 8.19.

5.3 Superficial Deposits

As discussed in Section 4, superficial material was encountered as variable clay exclusively within WS01, at a depth of 2.30m to 3.70m bgl.

5.3.1 Clay

SPT tests carried out in the clay resulted in **SPT N values** of 27 and 50, as shown on the SPT v Depth Plot in Figure 5 (overleaf). This result suggests the clay is stiff to very stiff.

Atterberg Limit tests were carried out on 3no. samples of the clay. The test results reported liquid limit values in the range of 36% to 38% and plastic limit values in the range of 13% to 14%, resulting in a plasticity index of 22% to 25%. These results suggest the clay to be of **intermediate plasticity**. Results are shown on the Plasticity Chart in Figure 6, overleaf.

BRE SD1 testing has been conducted on 1no. sample of the clay. The **water-soluble sulphate** content of the tested sample was reported as 21mg/l SO₄, together with a **pH value** of 7.89.

Recommended N values and derived design values for the cohesive soils are summarised in Table 7, below.

Table 7: Summary of Design Parameters (Clay)

Depth	SPT N Value Range	Design N Value*	Equivalent Shear Strength** (kN/m ²)	Coefficient of Volume Compressibility** (mv)
3.00	27	27	136 (High Strength)	0.07 (Low Compressibility)
4.00	50	50	252 (Very High Strength)	0.04 (Very Low Compressibility)
*Based on lower quartile N value and correlations by Peck Hanson and Thornburn ⁽¹⁹⁷⁴⁾				
**Based on correlation by Stroud & Butler ⁽¹⁹⁷⁵⁾				

It is recommended that for assessing ultimate bearing capacities, where the lower values are critical, the lower quartile value of N values is used. Based on the N Values in the above table, the equivalent shear strength values were between 136 and 252kN/m².

For design purposes, a value of plasticity index = 24% is recommended, based on the upper quartile value of the results.

The **coefficient of volume compressibility (mv)** has been estimated using the following correlation by Stroud and Butler ⁽¹⁹⁷⁵⁾: for a clay with a plasticity index of 24%, mv = 1 / (0.505 x N value). This correlation gives a value of coefficient of volume compressibility of 0.07 to 0.04m²/MN, as shown in Table 7, above. The results suggest the clay has a **low to very low compressibility**.

In accordance with NHBC Chapter 4.2 Building Near Trees ⁽²⁰⁰³⁾ soils can be classified in terms of volume change potential, using the relationship:

$$I'_p = I_p \times \frac{\% \text{ less than } 425\mu\text{m}}{100\%}$$

I'_p = modified plasticity index,

I_p = plasticity index.

Based on the laboratory test results, the above relationship and Table 1 of NHBC Chapter 4.2, the samples of clay are shown to have a **medium volume change potential**.

The **Natural Moisture Content (NMC)** and **Liquid Limit (LL)** of the soil can be used to indicate soil desiccation. Specifically, when the NMC is less than 40% of the LL, the soil is inferred to be desiccated, as summarised in Table 8 below.

Table 8: Soil Desiccation Indicators in Clay

Location	Depth (m)	Liquid Limit (%)	40% Liquid Limit (%)	Natural Moisture Content (%)	Desiccation
WS01	2.40	36	14	21.5	No
WS01	2.80	38	15	17.5	No
WS01	3.60	37	15	15.9	No

The results in the above table show that none of the clay samples tested show evidence of desiccation.

Figure 5: SPT N Value v Depth Plot

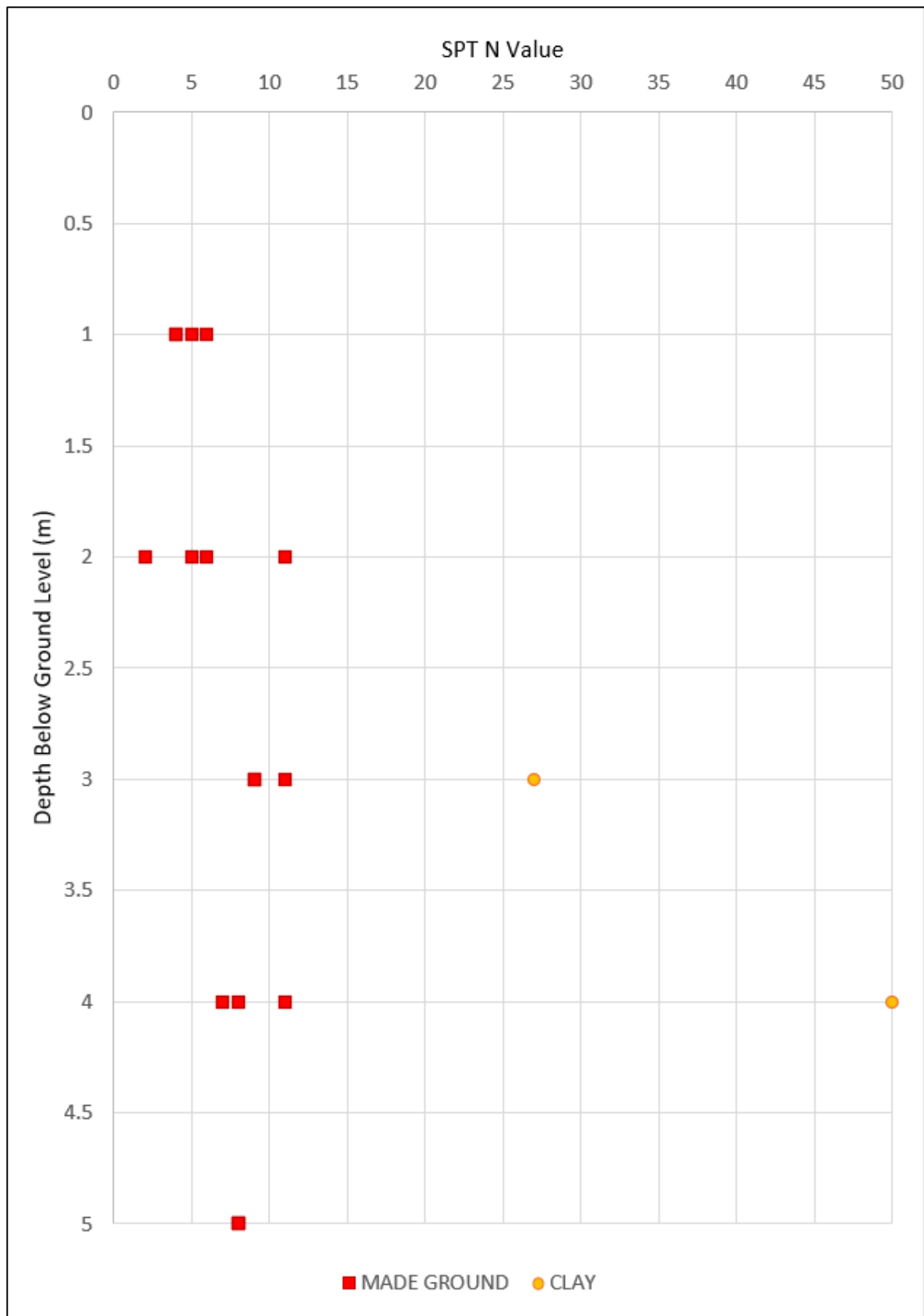
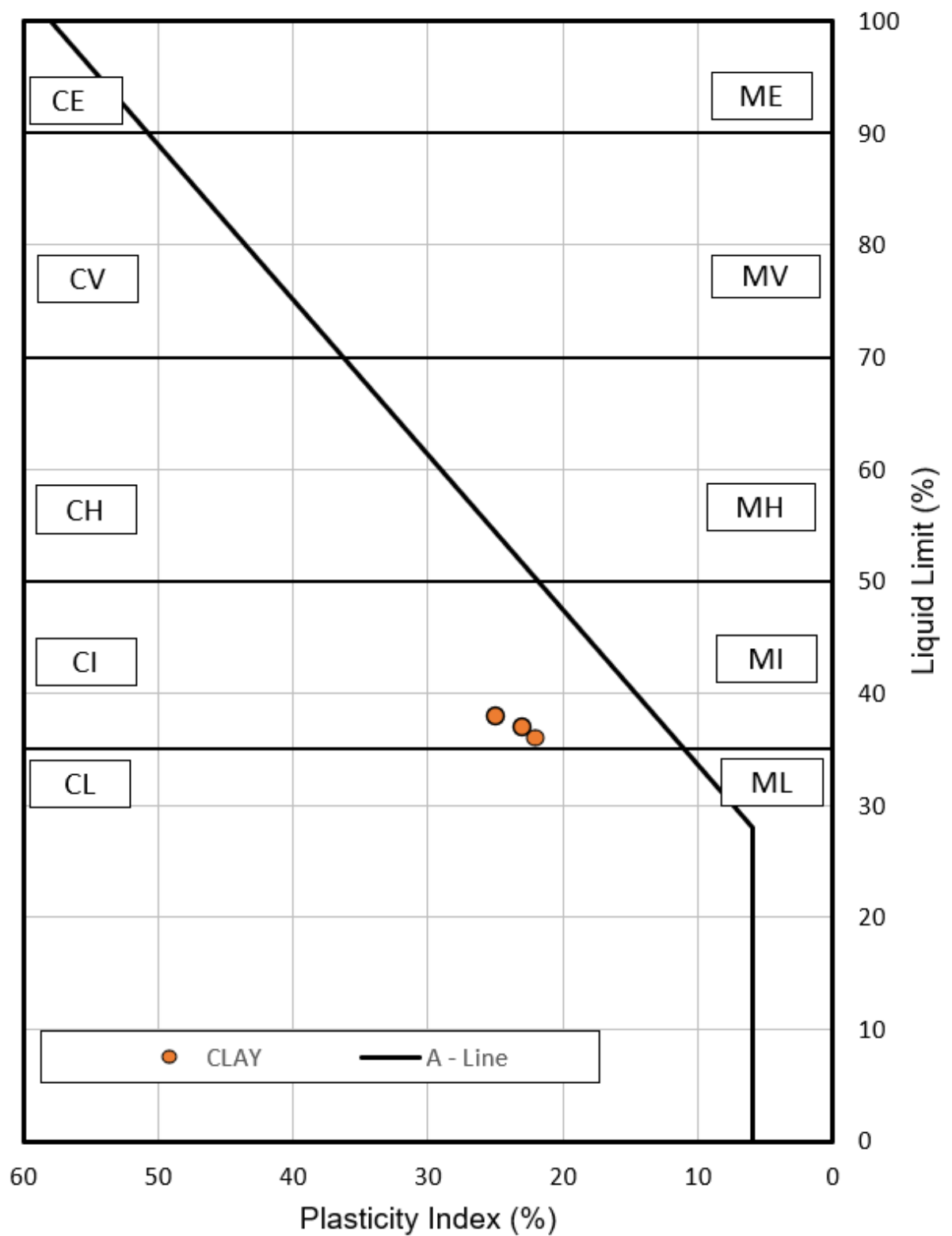


Figure 6: Plasticity Chart



6.0 GEOTECHNICAL ASSESSMENT

6.1 Proposed Development

It is understood that the client is proposing to construct a new single-storey commercial building comprising 2 no. units, along with associated alterations to the car parking layout.

Detailed information regarding structural loadings was not available at the time of authoring this report.

6.2 Ground Conditions Encountered

The exploratory holes generally encountered variable made ground between ground level and a maximum identified depth of 6.00m bgl. Natural clay deposits were identified in one location (WS01 on the northern boundary of the site) between 2.30m and a maximum identified depth of 3.70m bgl.

Groundwater was encountered during the ground investigation exclusively within WS03 and WS04 at 5.00m bgl. Subsequent monitoring visits identified groundwater in both installed boreholes (WS02 and WS04) at depths of 3.66-4.98m bgl. Considering the ground conditions, it is assumed that the encountered water is perched within the made ground.

6.3 Foundation Considerations

Based on the ground conditions encountered, i.e., deep, variable-made ground, conventional shallow depth foundations (strip/pad or trench fill) are not considered suitable for the proposed development. Therefore, alternative foundation solutions, such as piles, should be considered.

6.3.1 Piled Foundations

Due to the deep and variable nature of the encountered ground, driven or bored piles could be adopted. Driven piles would have the advantage of minimising spoil generation; however, the noise and vibration associated with their installation may prevent this type of pile from being selected. It should also be noted that driven piles can create preferential pathways for pollutants.

Short bored (cast-in-situ) piles installed using continuous flight auger (CFA) techniques may therefore be more appropriate. Still, given the advantages and limitations of each pile type and their cost implications, advice should be sought from specialist piling contractors to determine the most suitable and cost-effective type.

They should also be able to give recommended pile diameters and depths and likely pile capacities, with guaranteed performance. It is recommended that a pile test be carried out to confirm pile capacities. When assessing pile capacities, contractors should allow for the effects of negative skin friction, particularly in made ground.

There may be differential settlement between piled structures and the surrounding ground level. Provision should, therefore, be made to make up ground levels at threshold positions, loading bays, vehicle access doorways, etc. Alternatively, these materials should be removed and replaced in a controlled manner by suitable existing materials or imported engineered fill.

It is essential that the advice of a specialist piling contractor is sought and that the piling contractor provides positive assurances that their proprietary system is capable of providing the required working loads in the ground conditions encountered.

6.3.2 Ground Improvement

Ground treatment (e.g., vibro displacement) may be an option, subject to environmental and noise/vibration constraints.

For example, vibro stone columns are often used to solve a wide range of static, dynamic, and seismic foundation problems by using powerful depth vibrators to densify soils and form stone columns that compact or reinforce soils in situ. Vibro systems can be used to treat granular deposits, fills, made ground and soft clays/silts.

Soils treated by vibro could offer an allowable bearing pressure in the range of 100 kN/m² to 200 kN/m², depending on column spacing and the ground encountered.

Once the treatment has been carried out, spread foundations may be adopted across the site, and designed to the loadings given above. Providing that any imported fill material between the tops of the columns and the underside of the floor slab is placed in a controlled manner, floor slabs may be ground bearing. Positive assurances should be sought from an experienced specialist contractor that the proprietary system proposed is capable of providing the required working loads in the ground conditions encountered, with a guarantee on maximum settlement for both footings and floor slabs.

6.3.3 Controlled Modulus Columns

Where traditional ground improvement techniques may not be suitable due to either poor soil strength, high loadings or tight settlement criteria, controlled modulus columns (CMCs) provide a fast and economical ground improvement alternative to piling.

The technique installs low-strength concrete columns, 280mm to 500mm in diameter, up to 50m in depth, using displacement tools.

The benefits are:

- Ground bearing foundation solution utilising a distribution mattress.
- The rig working platform can be used as part of the distribution mattress.
- No breaking down of CMCs. Trimming is undertaken while the CMCs are still wet.
- The vibration-free displacement process creates minimal spoil.

The technique can be used for a wide range of structures, including heavily loaded commercial/industrial floor slabs, road and rail embankments, silos, tanks, wind turbines, and residential buildings traditionally founded on driven piles.

Positive assurances should be sought from an experienced specialist contractor that the proprietary system proposed is capable of providing the required working loads in the ground conditions encountered, with a guarantee on maximum settlement for both footings and floor slabs.

6.4 Pavement Design

The ground investigation identified the soil type at the subgrade level to typically be made ground. Based on the recommendations for design CBR values provided in Interim advice note 73/06, Revision 1 (2009), a conservative design CBR value of 1% should be adopted in areas where made ground is encountered at the subgrade level.

Consideration should be given to potential differences in ground conditions near the surface, which could result in pavements being constructed on variable-made ground. In this context, a flexible pavement design may be required.

Consideration should also be given to the use of geotextiles to reduce capping thickness. For example, biaxial geogrids such as Tensar SSLA20 and SSLA30 are often used to reduce capping thickness. The advice of a suitable contractor should be sought as to the most appropriate type of geotextile to use in the ground conditions encountered at this site. For guidance, the following table compares granular layer thickness with and without a geotextile, in accordance with HA25/94 Part 2.

It should be noted that the type of construction will depend on the proposed finished pavement levels across the site, and it is recommended that the pavement design be reviewed once these levels are known. In this context, it is essential that further in situ CBR testing is carried out once formation levels are known to confirm design CBR values.

Table 9: Comparison of Capping Thickness with and without Geotextile

CBR	Unreinforced			Reinforced with Tensar Geogrid				
	Sub-base	Capping	Total	Sub-base	Capping	No. of grids	Total	Thickness saving
0.5%	Design not suitable			200mm	400mm	2	600mm	-
1.0%	150mm	600mm	750mm	400mm	0	1	400mm	350mm
1.5%	150mm	600mm	750mm	310mm	0	1	310mm	440mm
2.0%	150mm	600mm	750mm	260mm	0	1	260mm	490mm
3.0%	150mm	350mm	500mm	210mm	0	1	210mm	290mm
4.0%	150mm	300mm	450mm	175mm	0	1	175mm	275mm
5.0%	150mm	250mm	400mm	160mm	0	1	160mm	240mm
These figures are suitable for light access roads and car parks, based on 1000 standard axles. For heavily loaded pavements, the advice of a specialist contractor should be sought.								

A suitably experienced engineer or inspector should examine all formation excavations to check for soft or unsuitable material, which should be removed and replaced with compacted granular fill. Also, to ensure good compaction and remove unevenness, the formation should be compacted with equipment suitable for use in the ground conditions encountered. Careful inspection of this work will also help identify any soft spots at or just below the formation level.

6.5 Chemical Attack on Buried Concrete

Chemical tests (see Appendices) show low levels of water-soluble sulphates and generally neutral conditions, although several of the tested made ground samples are more alkaline. Based on these conditions, it is recommended that for concrete placed in natural strata, the Design Sulphate Class for the site, as defined in BRE Special Digest 1⁽²⁰⁰⁵⁾, be taken as DS-1, and the Aggressive Chemical Environment for Concrete (ACEC) site classification be taken as AC-1s. The recommendations of BRE Special Digest 1 should be followed for concrete foundations and ground-bearing floor slabs.

6.6 Suitability of Excavated Materials

Acceptability criteria, testing, and compaction/placement methods will depend on the type of contract and specification used for the construction of the proposed development, and it is recommended that a suitably qualified engineer reviews the earthworks specifications once prepared by the relevant parties.

Granular made ground and natural sand could be suitable for re-use as structural fill, provided they are not contaminated, do not contain excessive amounts of clay, and moisture contents are controlled during placement. The control of moisture content will be important, as the cohesive content of this stratum is likely to be sensitive to changes in moisture.

6.7 Temporary Works

Formations will be susceptible to damage from weather and trafficking and should be protected immediately upon exposure, particularly in areas where construction plant will access the site.

Excavations in Made Ground are likely to be unstable and should be battered back to an angle of 1 in 2, or a system of close sheeting and shoring should be adopted to ensure stability, particularly where personnel are required to enter the excavations. All excavations should be adequately supported where personnel are required to enter.

Groundwater seepages could be encountered near the surface within excavations, particularly during the wetter months of the year. Pumping of excavations from a suitably located sump is likely to be required to keep excavations dry.

7.0 SOIL CONTAMINATION RISK ASSESSMENT

7.1 Tier I Human Health Soil Risk Assessment – Groundworkers During Development

To assess the risk of soil contamination to construction and ground workers during development, guidelines from the HSE Document 'Protection of workers and the general public during development of contaminated land' ⁽¹⁹⁹¹⁾ are used. The document assesses soil contamination test results and classifies the site as being uncontaminated or contaminated with varying degrees of contamination from 'slight' to 'unusually heavy.' The guideline values and laboratory test results are summarised in the following table:

Table 10: Summary of Guideline Values for Protection of Workers and the General Public During the Development of Contaminated Land

Determinant	Typical Values* for:					Test Results	Class
	Uncontaminated Soils	Slight Contamination	Contaminated	Heavy Contamination	Unusually Heavy Contamination		
	Class A	Class B	Class C	Class D	Class E		
pH (acid)	6 - 7	5 - 6	4 - 5	2 - 4	<2	-	-
pH (alkaline)	7 - 8	8 - 9	9 - 10	10 - 12	12	7.8 - 12.4	A - E
Arsenic	0 - 30	30 - 50	50 - 100	100 - 500	500	8.1 - 31	A - B
Cadmium	0 - 1	1 - 3	3 - 10	10 - 50	50	0.2 - 0.6	A
Chromium	0 - 100	100 - 200	200 - 500	500 - 2500	2500	12 - 23	A
Copper	0 - 100	100 - 200	200 - 500	500 - 2500	2500	51 - 78	A
Lead	0 - 500	500 - 1000	1000 - 2000	2000 - 1%	1.0%	55 - 150	A
Mercury	0 - 1	1 - 3	3 - 10	10 - 50	50	0.10 - 0.45	A
Nickel	0 - 20	20 - 50	50 - 200	200 - 1000	1000	12 - 35	A - B
Zinc	0 - 250	250 - 500	500 - 1000	1000 - 5000	5000	47 - 210	A
Boron	0 - 2	2 - 5	5 - 50	50 - 250	250	0.3 - 0.8	A
Selenium	0 - 1	1 - 3	3 - 10	10 - 50	50	<0.5	A
Barium	0 - 500	500 - 1000	1000 - 2000	2000 - 1.0%	1.0%	90 - 190	A
Beryllium	0 - 5	5 - 10	10 - 20	20 - 50	50	0.5 - 1.6	A
Vanadium	0 - 100	100 - 200	200 - 500	500 - 2500	2500	21 - 43	A
Sulphate	0 - 2000	2000 - 5000	5000 - 1%	1% - 5%	5.05%	400 - 2500	A - B
Sulphide	0 - 10	10 - 20	20 - 100	100 - 500	500	<10 - 48	A - C
Cyanide (free)	0 - 1	1 - 5	5 - 50	50 - 100	100	<0.1	A
Phenol	0 - 2	2 - 5	5 - 50	50 - 250	250	<0.3 - 9.6	A - C

Based on the above results, the soils range from uncontaminated to contaminated; the alkaline pH of one sample is classified as unusually high. Therefore, there is a **MODERATE to LOW** potential risk from soil contamination to construction workers, ground workers and members of the public during construction. Appropriate measures, such as PPE, site health plans, and the appropriate disposal of material arisings, will further mitigate any risk.

7.2 Tier I Human Health Soil Risk Assessment – Future Site Users

The following section provides a Human Health Soil Assessment for future site users.

Based on the proposed development type, the following section compares the results of contamination analyses with residential end development types specified by Defra/LQM/CIEH.

As part of the contamination assessment, the chemical results obtained by EEG have been screened against accepted compliance criteria, namely:

- Defra C4SL Health Criteria Values (March 2014), where available; and
- Tier 1 assessment values - based on LQM/CIEH Suitable 4 Use Levels ⁽²⁰¹⁵⁾ (S4ULs).

The contaminated land guidance has recently changed the risk evaluation from 'minimal' (SGVs) to 'low' (referred to as Lowest Level of Toxicological Concern (LLTCs)). The policy companion document and supporting letter from DEFRA state that C4SLs could be used under the planning regime as well as within Part 2A.

Based on these comments, EEG considers the justifications and assumptions used to generate 'low' risk are suitable for the planning regime.

Where no C4SLs have been generated, EEG will use the LQM S4ULs. Similar assumptions and land use to C4SLs have been used. However, toxicological information has been based on 'minimal risk' as per previous guidelines and assumptions. If contaminants are not present as C4SLs or S4ULs, then EEG will use CL:AIRE GACs. These follow the 'minimal' risk principle and more stringent exposure parameters and will be conservative.

EEG consider the main risk drivers for PAHs to be benzo(a)pyrene (B(a)P) and naphthalene.

This is due to B(a)P possibly being a carcinogen and the most toxic of the PAHs, and naphthalene is the most volatile and soluble. The new C4SLs indicate B(a)P as a surrogate marker for carcinogenic PAHs, since the risk from other non-carcinogenic PAHs is considered negligible. Naphthalene will be treated separately using the Defra C4SL (2024).

As a preliminary screening assessment, all results have been compared to **commercial end-use** criteria at 1% soil organic matter content.

The soil chemical testing results are summarised in Table 11, overleaf.

Table 11: Soil Results Comparison with C4SL/S4UL Values

Determinant	C4SL/S4UL Levels Commercial SOM 2.5% (mg/kg)	WS01 0.35m	WS01 1.20m	WS02 2.50m	WS03 0.80m	WS04 0.50m	WS04 0.90m	No of Exceedances
Metals								
Arsenic	640	8.1	26	11	31	20	16	0
Beryllium	12	0.5	1.2	0.7	1.6	0.6	0.7	0
Boron	240000	0.5	0.8	0.4	0.6	0.8	0.3	0
Cadmium	190	0.2	0.2	0.2	0.6	0.2	0.2	0
Chromium	8600	16	20	14	23	12	19	0
Chromium VI	33	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0
Copper	68000	51	62	71	78	53	63	0
Lead	2300	55	110	150	150	110	120	0
Inorganic Mercury	5100	0.10	0.24	0.45	0.20	0.37	0.43	0
Nickel	980	12	24	18	35	14	23	0
Selenium	12000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0
Vanadium	9000	29	38	21	43	23	28	0
Zinc	730000	66	76	59	210	47	85	0
Polycyclic Aromatic Hydrocarbons								
Naphthalene	3700	0.36	0.49	0.10	0.19	32	23	0
Acenaphthylene	97000 ^{sol}	0.27	< 0.10	< 0.10	0.15	5.0	< 2.00	0
Acenaphthene	97000 ^{sol}	1.2	1.9	< 0.10	0.32	5.0	67	0
Fluorene	68000	1.6	1.6	0.15	0.50	13	94	0
Phenanthrene	22000	10	9.8	0.46	4.3	69	370	0
Anthracene	540000	2.8	2.4	0.64	1.1	14	72	0
Fluoranthene	23000	11	7.6	0.90	6.5	48	270	0
Pyrene	54000	13	8.7	1.6	7.2	54	270	0
Benzo(a)anthracene	170	4.5	3.5	0.51	3.5	23	110	0
Chrysene	350	4.8	3.9	0.50	3.7	26	120	0
Benzo(b)fluoranthene	44	3.6	2.3	0.40	2.7	14	73	1
Benzo(k)fluoranthene	1200	2.0	1.4	0.24	1.6	8.8	42	0
Benzo(a)pyrene	77	5.4	3.8	0.65	3.9	22	100	1
Indeno(1,2,3-cd) pyrene	510	3.1	2.1	0.37	2.4	13	61	0
Dibenzo (a, h) anthracene	3.6	0.30	0.25	< 0.10	0.34	1.8	7.0	1
Benzo(ghi)perylene	4000	2.9	1.9	0.32	1.9	10	45	0
Petroleum Hydrocarbons								
Aliphatic EC >5-6	5900 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	17000 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >8-10	4800 ^{vap}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >10-12	23000 ^{vap}	< 1.50	< 1.50	1.84	< 1.50	< 1.50	< 1.50	0
Aliphatic EC >12-16	82000 ^{sol}	< 1.20	< 1.20	1.44	< 1.20	< 1.20	< 1.20	0
Aliphatic EC >16-21	1700000	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	0
Aliphatic EC >21-35	1700000	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40	0
Aromatic EC >5-7	46000 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	110000 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >8-10	8100 ^{vap}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >10-12	28000 ^{sol}	< 0.90	< 0.90	< 0.90	< 0.90	36.85	5.22	0
Aromatic EC >12-16	37000	0.80	1.58	< 0.50	< 0.50	54.63	46.14	0
Aromatic EC >16-21	28000	7.19	4.45	1.68	2.24	122.9	116.5	0
Aromatic EC >21-35	28000	21.98	< 1.40	< 1.40	< 1.40	92.90	76.69	0
Benzene	50	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Toluene	110000 ^{vap}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Ethylbenzene	13000 ^{vap}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
m-xylenes	14000 ^{vap}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
p-xylenes	14000 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
o-xylenes	15000 ^{sol}	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Phenols								
Phenol	690 ^{dfr}	< 0.3	< 0.3	< 0.3	< 0.3	0.5	9.6	0



Based on the above table, 3no. contaminant concentrations were found in excess of the screening criteria relevant to a commercial end use. This refers to exceedances of benzo(b)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene in the sample tested from WS04 at 0.90m bgl.

Asbestos fibres were not identified during the site investigation.

7.3 Soil Waste Assessment

An assessment of the disposal characteristics of the soil, in accordance with Environment Agency guidance WM3.1, edition of June 2018, "Guidance on the classification and assessment of waste," has been carried out on soils recovered from the site using HazWasteOnline.

The results are summarised in Table 12 below and presented in full in Appendix 4.

Table 12: Waste Classification of Soils

Location	Depth (m bgl)	WM3.1 Classification	WAC Testing Classification	Comments
WS01	0.35	Hazardous	-	Elevated pH (alkaline)
WS01	1.20	Non-Hazardous	-	-
WS02	2.50	Non-Hazardous	-	-
WS03	0.80	Non-Hazardous	-	-
WS04	0.50	Non-Hazardous	Exceeds Hazardous	Elevated TOC, LOI, mineral oil & PAHs
WS04	0.90	Non-Hazardous	-	-

The above table shows that 1no. of the tested samples collected from the site has been classified as **Hazardous** in accordance with WM3.1 due to elevated pH (alkaline). All remaining samples have been classified as **Non-Hazardous** in accordance with WM3.1.

1 no. of soil samples has been submitted for Waste Acceptance Criteria (WAC) testing. The sample tested from WS04 at 0.50m bgl contained concentrations of Total Organic Carbon (TOC) and Loss on Ignition (LOI) above the acceptable limits for disposal at a hazardous waste landfill, as well as concentrations of mineral oil and Total PAHs above the acceptable limits for disposal at an inert waste facility.

We recommend that local landfills and waste facilities be consulted before removing any material from the site.

For Waste Acceptance Criteria (WAC) testing, EEG has compared solid waste and leachate values with the guideline values in the Landfill Regulations. The following table summarises the results of the solid waste analysis and leachate testing, together with limit values for Non-Hazardous waste and Hazardous waste as described in the Landfill Regulations.

Table 13: Summary of WAC Test Results

Determinant	Landfill Regulations Limits (mg/kg unless otherwise indicated)			WS04 0.50m (mg/kg)
	Inert Waste	Stable non-reactive hazardous waste	Hazardous Waste	
TOC (%)	3%	5%	6%	6.3
Loss on ignition (%)	-	-	10%	10.0
BTEX (mg/kg)	6	-	-	< 0.04
Sum of PCBs (mg/kg)	1	-	-	< 0.01
Mineral Oil (mg/kg)	500	-	-	25000.0
Total PAH (mg/kg)	100	-	-	310.0
pH (units)	-	< 6	-	8.2
Acid Neutralisation Capacity (mol/kg)	-	<i>To be evaluated</i>		<1
Arsenic	0.5	2	25	0.03
Barium	20	100	300	< 0.1
Cadmium	0.04	1	5	< 0.02
Chromium	0.5	10	70	< 0.1
Copper	2	50	100	< 0.02
Mercury	0.01	0.2	2	< 0.002
Molybdenum	0.5	10	30	< 0.1
Nickel	0.4	10	40	< 0.1
Lead	0.5	10	50	< 0.05
Antimony	0.06	0.7	5	< 0.05
Selenium	0.1	0.5	7	< 0.03
Zinc	4	50	200	0.01
Chloride	800	15000	25000	< 100
Fluoride	10	150	500	< 0.1
Sulphate	1000	20000	50000	< 100
Total Dissolved Solids	4000	60000	100000	210
Phenol Index	1	-	-	< 1
DOC	500	800	1000	< 50



8.0 GROUNDWATER CONTAMINATION RISK ASSESSMENT

In the absence of specific UK guidelines regarding groundwater quality in the UK, chemical results obtained by EEG have been compared with the following statutory and non-statutory standards:

- Environmental Quality Standards (EQS); and
- UK Drinking Water Quality standards ⁽²⁰⁰⁰⁾.

EQS values have been derived to protect surface water. For this report, the most appropriate EQS data are those established for freshwater.

Many of the EQS values lie just above the method detection limit for parameters and, as such, are highly conservative.

In the absence of EQS values, Drinking Water Quality standards have been used for comparison of results. Again, these standards are highly conservative, especially in this site context.

A total of 2no. groundwater samples were retrieved from the monitoring wells installed in the boreholes drilled in the proposed development area.

A direct comparison was made between the groundwater analysis results and the EQS and Drinking Water Quality standards. Table 14 shows that the laboratory analyses identified multiple determinants with values above the EQS/ Drinking Water Quality standards.

Although exceedances of the conservative EQS and DWQ criteria have been identified, in some cases by orders of magnitude, given the historical and current commercial use of the site and the surrounding area, these concentrations are interpreted as background levels for this report.

As detailed in the Phase 1 GeoEnvironmental Desk Study, there are no surface water features, surface water abstractions or active potable water abstractions within 250m of the site. Additionally, the closest active groundwater abstraction licence is located 215m southeast of the site. The local superficial deposits are classified as a low vulnerability Secondary Undifferentiated Aquifer. Although the bedrock deposits are classified as a Principal Aquifer, they are also recorded as having low vulnerability.

Considering the low permeability of the observed and locally recorded superficial till deposits, as well as the likelihood of contaminant migration into the underlying principal bedrock aquifer (the only relevant sensitive receptor), the risk to controlled waters is interpreted as **LOW**.

Table 14: Groundwater Results Comparison with EQS/Drinking Water Quality Values

Determinant	Threshold Value	WS02 (05.01.2026)	WS04 (05.01.2026)	No. of Exceedances
Arsenic	50 ^(A) (EQS)	4.69	2.53	0
Barium	700 (WHO) (DWQ)	188.6	112.2	0
Beryllium	-	< 0.10	< 0.10	0
Boron	2000 ^(A) (EQS)	131.9	99.66	0
Cadmium	0.9 ^(M) (EQS)	< 0.03	0.03	0
Chromium	32 ^(M) (EQS)	< 0.25	< 0.25	0
Chromium VI	3.4 ^(A) (EQS)	< 7.0	< 7.0	0
Copper	1.0 ^(A) (EQS)	1.94	1.75	2
Lead	14 ^(M) (EQS)	2.88	0.83	0
Mercury	0.07 ^(M) (EQS)	< 0.01	< 0.01	0
Selenium	10 (DWQ)	0.32	3.48	0
Vanadium	20 ^(A) (EQS)	1.55	2.78	0
Nickel	34 ^(M) (EQS)	1.98	2.92	0
Zinc	10.9 ^(A) (EQS)	74.25	61.98	2
Cyanide	5 ^(M) (EQS)	0.1	< 0.1	0
Phenol	46 ^(M) (EQS)	< 1.5	< 1.5	0
Sulphate	400000 ^(A) (EQS)	41000	57000	0
pH	6 - 9 ^(M) (EQS)	7.1	7.1	0
Naphthalene	130 ^(M) (EQS)	15	61	0
Anthracene	0.1 ^(M) (EQS)	25	58	2
Benzo(a)pyrene	0.27 ^(M) (EQS)	53	94	2
Benzo(b)fluoranthene	0.017 ^(M) (EQS)	67	100	2
Benzo(k)fluoranthene	0.017 ^(M) (EQS)	25	40	2
Indeno(123cd) pyrene	10 (DWQ)	34	55	2
Fluoranthene	0.12 ^(M) (EQS)	170	210	2
Benzene	50 ^(M) (EQS)	< 1.0	< 1.0	0
Toluene	380 ^(M) (EQS)	< 1.0	< 1.0	0
Ethylbenzene	300 (WHO) (DWQ)	< 1.0	< 1.0	0
Xylenes	30 ^(A) (EQS)	< 1.0	< 1.0	0
TPH Aliphatic C5-C6	15000 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aliphatic C6-C8	15000 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aliphatic C8-C10	300 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aliphatic C10-C12	300 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aliphatic C12-C16	300 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aliphatic C16-C21	300 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aliphatic C21-C35	300 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aromatic C5-C7	10 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aromatic C7-C8	700 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aromatic C8-C10	300 (WHO) (DWQ)	< 0.1	< 0.1	0
TPH Aromatic C10-C12	90 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aromatic C12-C16	90 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aromatic C16-C21	90 (WHO) (DWQ)	< 1.0	< 1.0	0
TPH Aromatic C21-C35	90 (WHO) (DWQ)	< 1.0	< 1.0	0

*All values in µg/l unless otherwise stated, WHO=World Health Organization guide values.

*EQS Standards – (M) = Maximum Allowable Concentration Standard, (A) = Annual Average Standard.

Zinc EQS is based on bioavailability.

8.1 Vapour Risk Modelling

Guidance from the Society of Brownfield Risk Assessment, Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater, Version 1, February 2017.

The SoBRA groundwater vapour assessment criteria are intended as a conservative screening tool that allows assessors to assess the long-term (chronic) risks to human health from inhalation of vapours arising from groundwater. They are intended for comparison with measured groundwater concentrations and represent the estimated concentration in groundwater below which the long-term risks to human health from vapour migration and inhalation can be considered low/tolerable, i.e. unlikely to be of concern (for the land use scenarios considered).

The assessment criteria have been developed in line with UK risk assessment guidance (e.g. Defra and Environment Agency, 2004; Environment Agency, 2009a) and are intended to be used for sites in the UK.

The GAC have been derived for two land use scenarios for which the vapour intrusion pathway is likely to require assessment: residential and commercial.

Generic assumptions have been made for each land use. These include assumptions about the depth to groundwater, soil type in the unsaturated zone, building dimension and foundation type, and receptor behaviour.

As described in CLEA SR3 report (Environment Agency, 2009a) the parameter values have been chosen to ensure that the GAC are precautionary for the vast majority of commercial and residential properties in the UK.

Table 15 summarises the chemical test data against the SoBRA aqueous assessment criteria.

The assessment criteria are based on conservative risk modelling using the Environment Agency's CLEA 1.07 model, with the only viable pathway being vapour inhalation.

Other conservatisms include:

- The assumption that the impacted groundwater / perched water is directly beneath the building, when in fact it may be laterally offset from the receptor.
- The assumption that there is an infinite source term.
- The assumption that there is no biodegradation between the source term and the receptor.
- The assumption that the groundwater source is at a depth of 0.65m below ground level.
- A permeable sandy soil within the unsaturated zone, with a soil organic matter of 1%.
- Category 4 Screening Levels exposure parameters with minimal risk of HCVs.

Table 15: Groundwater Results Comparison with Screening GAC for Groundwater Vapour Generation Hazard

Parameter	WS02 4.98m	WS04 4.43m	Commercial Assessment Criteria (µg/l)	Exceedance
Acenaphthene	23	51	15,000,000 (sol)	No
Acenaphthylene	11	4.6	20,000,000 (sol)	No
Fluorene	16	52	18,000,000 (sol)	No
Naphthalene	15	61	23,000 (sol)	No
Anthracene	25	58	Not Volatile	-
Benzo(a)pyrene	53	94	Not Volatile	-
Benzo(b)fluoranthene	67	100	Not Volatile	-
Benzo(k)fluoranthene	25	40	Not Volatile	-
Indeno(123cd) pyrene	34	55	Not Volatile	-
Fluoranthene	170	210	Not Volatile	-
Benzene	< 1.0	< 1.0	20,000	No
Toluene	< 1.0	< 1.0	21,000,000 (sol)	No
Ethylbenzene	< 1.0	< 1.0	960,000 (sol)	No
Xylenes*	< 1.0	< 1.0	940,000 (sol)	No
MTBE	< 1.0	< 1.0	7,800,000	No
TPH Aliphatic C5-C6	< 0.1	< 0.1	190,000 (sol)	No
TPH Aliphatic C6-C8	< 0.1	< 0.1	150,000 (sol)	No
TPH Aliphatic C8-C10	< 0.1	< 0.1	5,700 (sol)	No
TPH Aliphatic C10-C12	< 1.0	< 1.0	3,600 (sol)	No
TPH Aliphatic C12-C16	< 1.0	< 1.0	Not Volatile	-
TPH Aliphatic C16-C21	< 1.0	< 1.0	Not Volatile	-
TPH Aliphatic C21-C35	< 1.0	< 1.0	Not Volatile	-
TPH Aromatic C5-C7	< 0.1	< 0.1	20,000,000 (sol)	No
TPH Aromatic C7-C8	< 0.1	< 0.1	21,000,000 (sol)	No
TPH Aromatic C8-C10	< 0.1	< 0.1	190,000 (sol)	No
TPH Aromatic C10-C12	< 1.0	< 1.0	660,000 (sol)	No
TPH Aromatic C12-C16	< 1.0	< 1.0	3,700,000 (sol)	No
TPH Aromatic C16-C21	< 1.0	< 1.0	Not Volatile	-
TPH Aromatic C21-C35	< 1.0	< 1.0	Not Volatile	-

*Criteria for m-xylenes were used due to the most conservative criteria.

9.0 GROUND GAS AND RADON GAS CONTAMINATION RISK ASSESSMENT

9.1 Radon Gas

The site is located in an area with a maximum radon potential of <1%, as defined by the Health Protection Agency. Therefore, radon protection measures are not required for the proposed development.

9.2 Analyses of Monitoring Results

The potential risk associated with gases generated in the ground (whether from natural or man-made sources) depends on the gas concentration and its flow rate to the surface. These factors are assessed by monitoring the gas installations in the boreholes. The variable nature of gas generation and the effect of barometric pressure on gas flow mean that the volume of gas potentially reaching the ground surface is usually inconsistent over time.

Four monitoring visits have been conducted between the 12th of December 2025 and the 20th of January 2026. The results recorded methane (CH₄) levels of 0.0% v/v, with carbon dioxide (CO₂) levels between 0.1% and 10.0% v/v. Oxygen concentrations between 3.1% and 14.7% v/v were also recorded.

In general, no flow rates were detected during the monitoring period. For assessment purposes, a flow rate of 0.1 litres/hour has been used, based on the monitoring instrument's minimum detection limit.

Atmospheric pressure was recorded between 994 mb and 1007 mb, with each visit occurring within either a steady or a falling pressure system.

Complete results of the monitoring are presented in Appendix 6.

Table 16 overleaf, adapted from Table 8.5 of CIRIA C665, Assessing risks posed by hazardous ground gases to buildings, by Wilson et al. 2007, provides a summary of current UK practice regarding appropriate gas protection measures based on a Gas Screening Value (GSV). A GSV for the site has been obtained by multiplying the maximum gas concentration by the steady flow rate of 0.1 l/h adopted for assessment purposes.

- Carbon dioxide: Steady flow rate = 0.1 l/hr, max concentration = 10.0%
- Methane: Steady flow rate = 0.1 l/hr, max concentration = 0.0%.

Based on the above figures, the GSV is calculated as:

- **Carbon Dioxide:** $GSV = 0.1 \times 10.0 / 100 = 0.01 \text{ litres/hour}$
- **Methane:** $GSV = 0.1 \times 0.0 / 100 = 0.00 \text{ litres/hour}$

The CIRIA guidance document notes that '...the GSV is a guideline value and not an absolute threshold'.

The above results suggest that the site can be assigned a Characteristic Situation 2, i.e., 'low risk', in accordance with Table 16 overleaf, due to elevated carbon dioxide levels (>5%) observed in both boreholes across multiple visits.

Table 16: Characteristic Situation (Wilson et al 2006/2007 modified from Wilson and Card, 1999)

Characteristic Situation	Risk Classification	Gas Screening Value CH₄ or CO₂ (l/hr)	Additional Factors	Typical source of generation
1	Very Low	<0.07	Typically, < 1% methane Typically, < 5% carbon dioxide	Typically made ground
2	Low	<0.7	Borehole air flow rate to not exceed 70l/hr; otherwise, consider increasing to Characteristic Situation 3	Typically made ground
3	Moderate	<3.5		Old landfill, inert waste, flooded mine workings.
4	Moderate to High	<15	Quantitative risk assessment	Mine workings are susceptible to flooding, and the completed landfill
5	High Risk	<70		Mineworking is unflooded and inactive, with shallow workings near the surface.
6	Very High Risk	>70		Recent landfill site

9.3 Detailed Assessment

EEG have made reference to *Ground Gas Information Sheet No.1, Using Ternary Plots for Interpretation of Ground Gas Monitoring Results (July 2018)*, which reports that carbon dioxide is widespread in the sub-surface environment at concentrations of up to 21% and is generated by microbial and geochemical processes. Elevated carbon dioxide concentrations are commonly elevated in Glacial Till, Chalk, River Terrace Gravel, Thanet Sand, Lambeth Group and Made Ground.

It is reported that when monitoring wells are installed in these materials, small volumes of organic material are exposed to oxygen, leading to biological respiration and oxidation, producing carbon dioxide. Weathering of pyrites and subsequent reactions of acidic pore water with carbonate material can also increase carbon dioxide concentrations in the monitoring well headspace.

Organic material in Made Ground can also degrade to produce carbon dioxide and or methane, in which case the carbon dioxide may be generated so slowly that it will not be emitted from the ground surface in quantities or at a rate that is sufficient to pose a risk to overlying development.

Based on the above information, the gas monitoring data from this investigation have been analysed with respect to methane, carbon dioxide, oxygen, and nitrogen gas ratios to deduce the potential source of the ground gas, as shown in Figures 7 to 9 overleaf.

Figure 7: Gas Ratio Ternary Plot

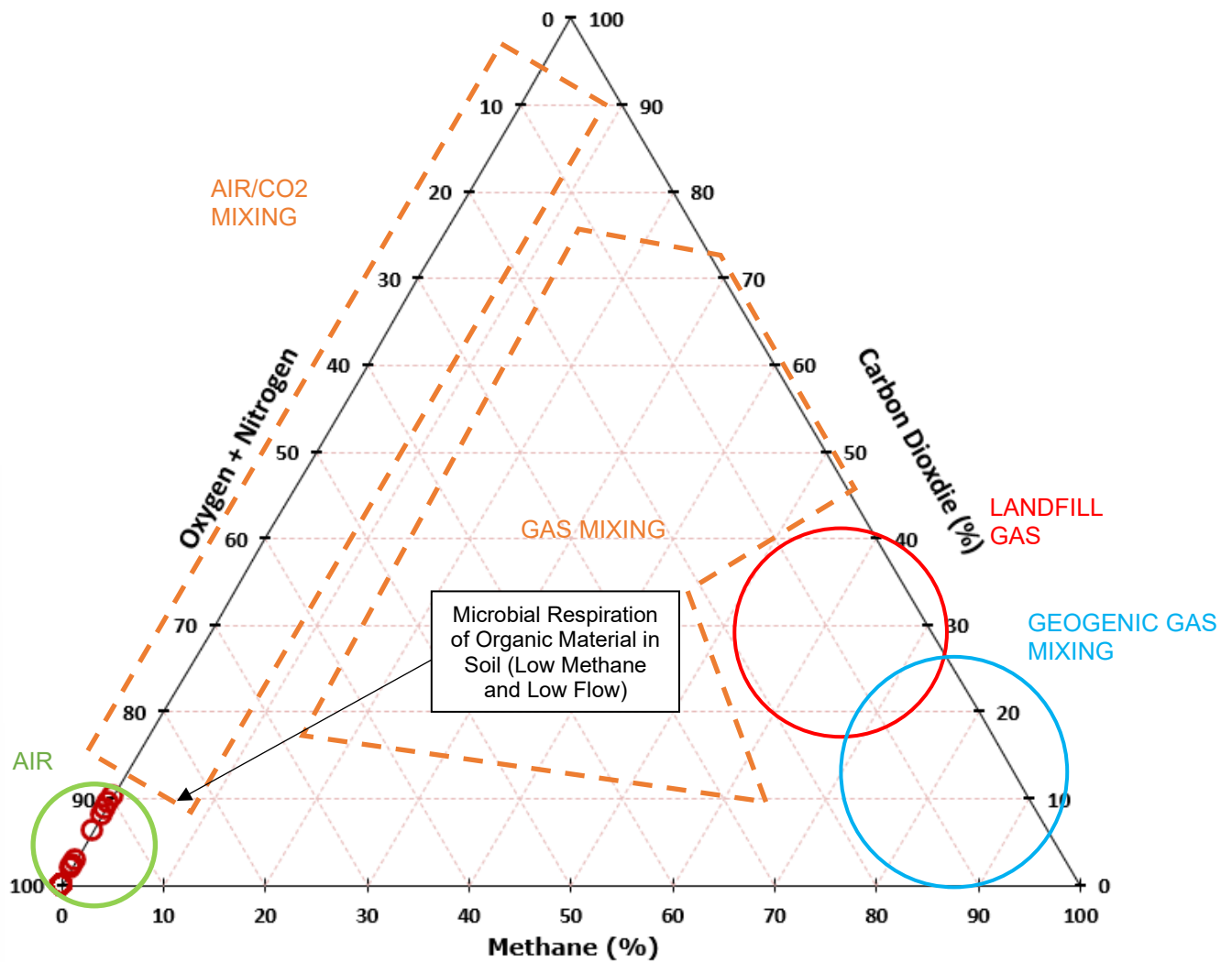


Figure 7 shows the ground gas monitoring results from this site investigation, plotted alongside gas compositions from different sources, adapted from Teasdale et al. 2015. The results indicate that the gas composition in the site's monitoring wells is unlikely to be landfill gas. The results generally correspond to the air on the gas ratios ternary plot.

Figure 8: Carbon Dioxide: Oxygen Ratio Plot

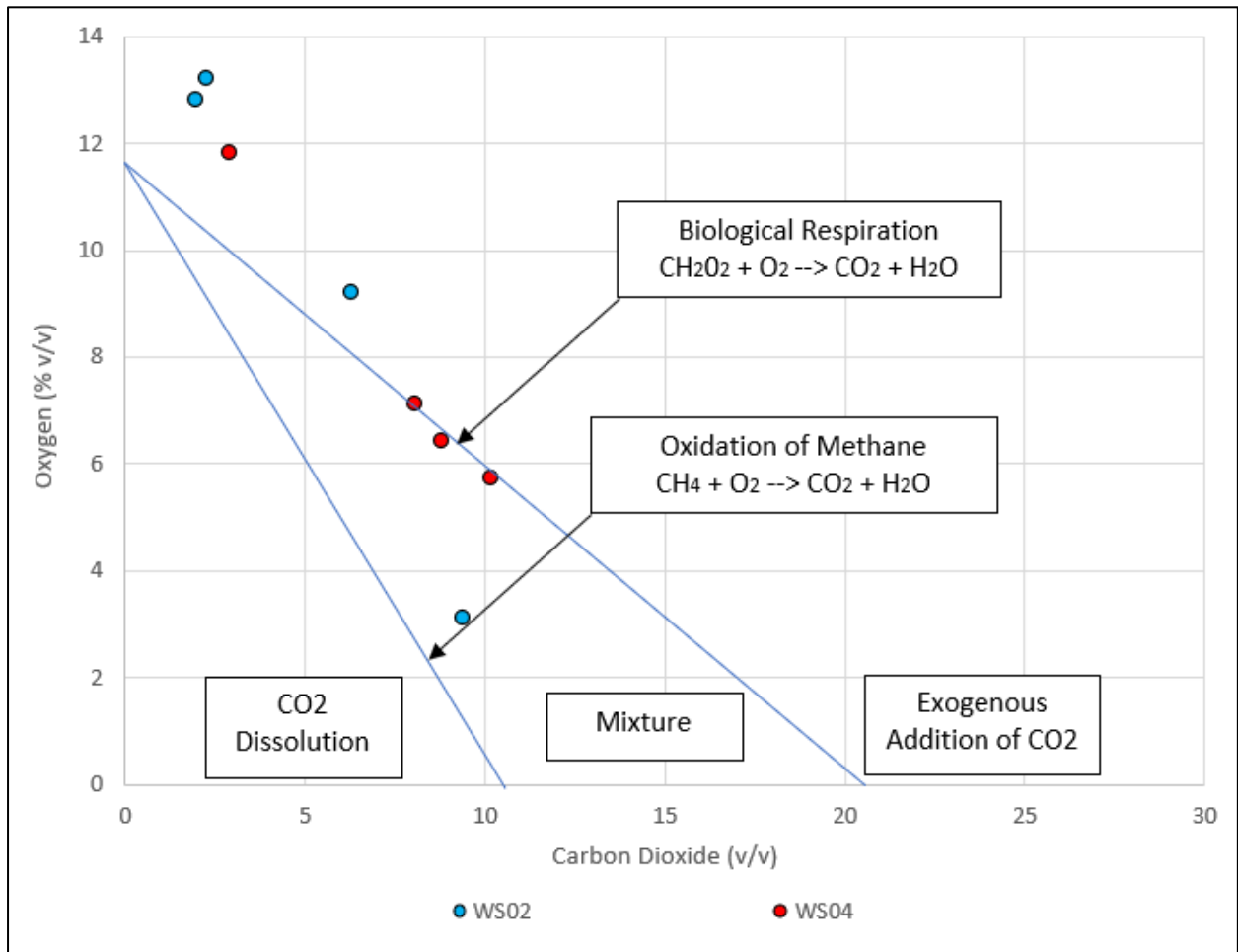


Figure 8 shows that the points to the left of the biological respiration and methane oxidation lines are caused by gas dissolution from ground (or pore) water and by the reaction of rainwater with soil. The points to the right of the biological respiration line are caused by biological respiration (i.e., oxidation of organic material in the soil).

None of the data plots to the left of the oxidation of methane line, and 3no. to the left of the biological respiration line. The majority of the data plots to the right side of the biological respiration line. This indicates that the source of carbon dioxide is likely the oxidation of organic material in the soil, whereas the data to the left indicate a mixture.

Figure 9: Nitrogen/Oxygen: Carbon Dioxide Ratio Plot

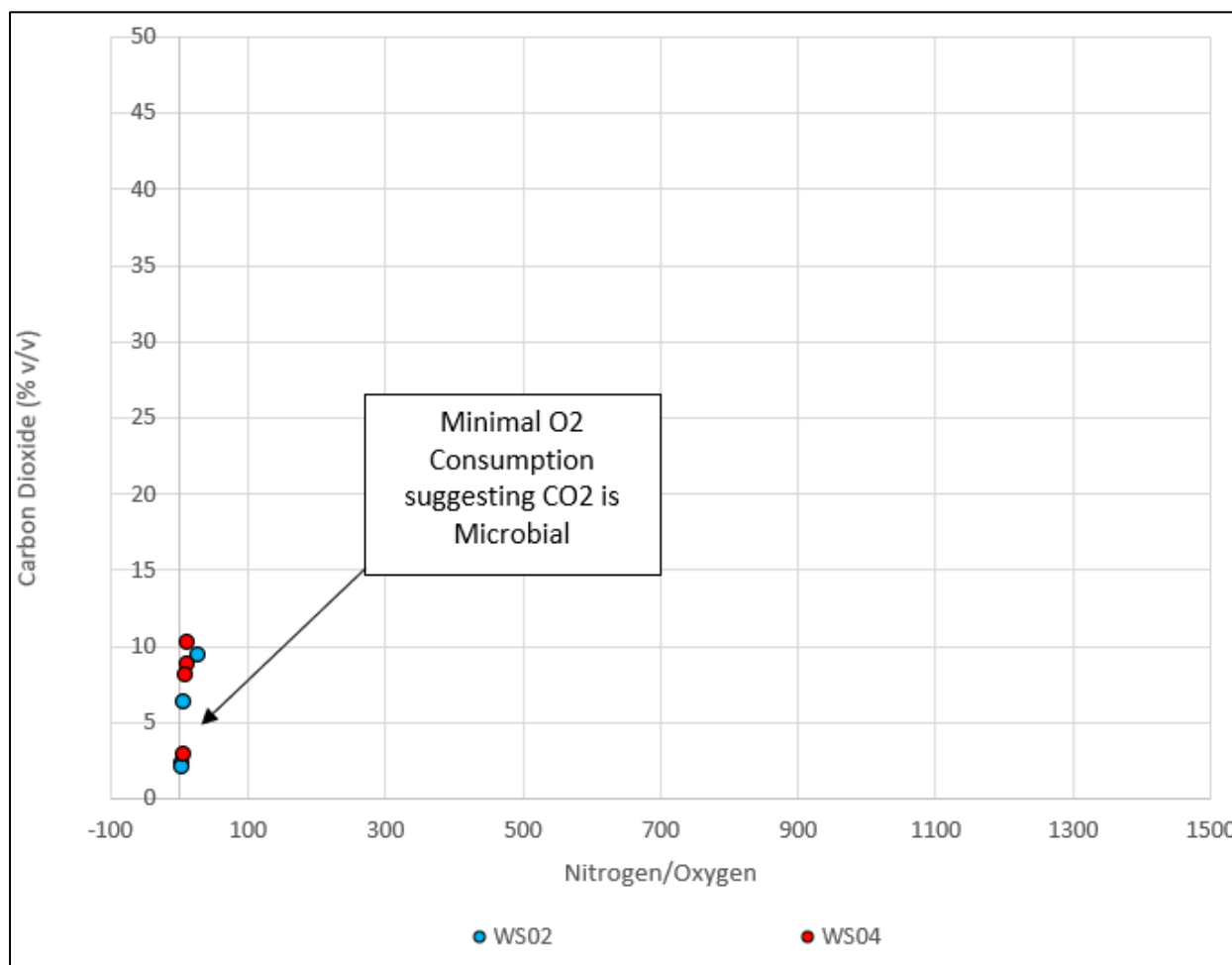


Figure 9 presents an assessment of the nitrogen/oxygen and carbon dioxide ratios. The figure shows all the monitoring results plotted on the left side of the graph, which represents minimal oxygen consumption. No data is plotted towards the right side of this figure, which would suggest methane oxidation.

The above results and assessment suggest that the site can be assigned Characteristic Situation 1, i.e., 'very low risk', in accordance with Table 16 above.

Therefore, ground gas protection measures are not considered necessary at the site.

10.0 CONCLUSIONS & RECOMMENDATIONS

10.1 Soil Contamination

There is a **MODERATE to LOW** potential risk of soil contamination to construction workers and ground workers during development, and appropriate measures, such as PPE, site health plans, and appropriate disposal of material arisings, will be required to mitigate this risk.

Based on the results of the chemical testing, 3no. contaminant concentrations, all of which refer to PAHs, were found to exceed the screening criteria relevant to a commercial end use.

No soft landscaping is proposed as part of this development; the entire site will be covered by hardstanding or building footprint. Therefore, there is no potential pathway between future end users and the identified elevated determinants.

Therefore, the risk to future end users is **LOW**, and no further action is considered necessary.

10.2 Asbestos in soils

No asbestos fibres or fragments have been identified within the soil samples analysed.

10.3 Soil Disposal

Soils should be disposed of at a suitable site, registered to take the levels of contamination encountered. 1no. of the tested soil samples has been classified as **Hazardous** for the purpose of off-site disposal in accordance with Environment Agency guidance WM3.1, due to an elevated alkaline pH. All remaining soil samples have been classified as **Non-Hazardous** for the purpose of off-site disposal in accordance with Environment Agency guidance WM3.1.

Further Waste Acceptance Criteria testing conducted on 1no. of the soil samples (WS04 at 0.50m bgl) identified concentrations of Total Organic Carbon (TOC) and Loss on Ignition (LOI) above the acceptable limits for disposal at a hazardous waste facility, as well as concentrations of mineral oil and Total PAHs above the acceptable limit for disposal at an inert waste facility.

It is recommended that local landfills and waste disposal facilities be consulted before disposing of any soils.

10.4 Groundwater Assessment

Perched water samples have been collected and tested for a wide range of potential contaminants of concern. A preliminary assessment of the measured concentrations using conservative assessment criteria shows multiple determinants exceeded the relevant EQS/Drinking Water threshold values in both tested samples, including copper, zinc and PAHs.

Considering the historical and current industrial/commercial use of the site and the surrounding area, the identified determinant concentrations are considered background levels for this report. Additionally, there is a general lack of sensitive receptors in the vicinity of the site. The risk to controlled waters is therefore interpreted as **LOW**.

A vapour risk assessment has been undertaken using chemical testing data from groundwater samples obtained from the site. None of the tested samples contained concentrations of volatile determinants above the vapour generation hazard assessment criteria relevant for commercial end use.

10.5 Ground Gas

The site is located in an area with a maximum radon potential of <1%, as defined by the Health Protection Agency. Therefore, radon protection measures are not required for the proposed development.

A detailed assessment of the data, with specific reference to gas ratios, shows that the ground gas composition generally resembles air rather than landfill or harmful gases. No oxidation of methane is occurring at the site. The source is likely biological respiration (i.e., the oxidation of organic material in the soil) that has been disturbed and released during drilling.

Based on this analysis and the low flow rates recorded in the window sample boreholes, the risk of ground gas is considered “very low,” with a characteristic situation of CS1.

Therefore, ground gas protection measures are not necessary in the proposed buildings on this site.

10.6 Foundations

Based on the ground conditions encountered, conventional shallow strip/pad foundations are not considered suitable for the proposed development, and alternative foundation options, such as piles, should be considered.

It is recommended that for foundations and ground floor slabs in contact with the made ground, the Design Sulphate Class should be taken as DS-1, and the Aggressive Chemical Environment for Concrete (ACEC) site classification should be taken as AC-1.

10.7 Pavement Design

Based on the site investigation findings, the soil type at the subgrade level was typically made ground. Based on the recommendations for design CBR values provided in Interim advice note 73/06, Revision 1 (2009), a conservative design CBR value of 1% should be adopted in areas where made ground is encountered at the subgrade level.

10.8 Risk to Buried (Water) Services

It is considered that, due to the presence of hydrocarbons in the tested soils (EC10-EC16 TPH fraction in both WS04 samples), standard materials may not be suitable for new water pipes. Further advice should be sought from the local water company.

Previous guidance on buried water pipes was contained in the Water Regulations Advisory Scheme (WRAS) Guidance Note No. 9-04-03 (2002). This has been superseded by the UK Water Industry Research Report ‘Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites’ Ref 10/WM/03/21 (January 2011).

10.9 Site Personnel

As with all construction sites, personnel working on the site during construction should be encouraged to maintain a high standard of personal hygiene, and on-site washing facilities should be available.

10.10 Other Matters

Due diligence is required during the construction period, and if any further evidence of contamination is found, appropriate investigation and/or action should be taken. The significance of any contamination not discovered by this investigation is outside the scope of this report.

APPENDIX 1

EXPLORATORY HOLE LOGS

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company		Project Title: Derby Street, Cheetham Hill				WS01	
		Project Number: A6542		Client: Lapas Chowdhury			
		GL (mAOD): 53		N Coord: 399952		E Coord: 383995	
Date: 03/12/2025		Method: Window Sampler		Driller: PM Sampling		Logged By: LJ	

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.35	ES	S N=5 (1,1,1,2)	52.6		0.40	MADE GROUND: Dark brown locally red sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick, concrete, limestone, clinker, glass and wood. MADE GROUND: Dark brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick, concrete and sandstone.		
1.20	ES		52.00		1.00			
1.50	ES							
		S N=11 (2,2,3,4)	51.00		2.00			
2.40	D		50.7		2.30			
2.80	D							
		S N=27 (6,6,7,8)	50.00		3.00	Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of mudstone.		
3.60	D							
		S pp 50/245mm	49.3		3.70	End Of Borehole At 3.70 m		
			49.00		4.00			
			48.00		5.00			
			47.00		6.00			

KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level		REMARKS 1. Position cleared with CAT + GENNY 2. Hand dug pit to a depth of 1.00mbgl 3. No waterstrike encountered 4. WS terminated at 3.70mbgl due to SPT refusal Scale: 1:40	Water Strikes																											
			<table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Strike	Level	Minutes	Casing	Sealed																					
Date	Strike	Level	Minutes	Casing	Sealed																									
Daily Log Of Depths		Chiselling																												
		<table border="1"> <thead> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Casing	Water	From	To	Hours																						
Date	Casing	Water	From	To	Hours																									

Printed By GeoLogs (www.GeoLogs.com)



EARTH ENVIRONMENTAL
& GEOTECHNICAL
A Technics Group Company

Project Title: Derby Street, Cheetham Hill

Project Number: A6542

GL (mAOD): 52

Client: Lapas Chowdhury

N Coord: 399925

E Coord: 383994

WS04

Sheet 1 Of 1

Date: 03/12/2025

Method: Cable Percussion

Driller: PM Sampling

Logged By: LJ

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.50	ES		51.78		0.22	MADE GROUND: Black ASPHALT		
0.90	ES	S N=4 (1,1,1,1)	51.2		0.80	MADE GROUND: Grey CONCRETE		
			51.00		1.00	MADE GROUND: Light grey gravelly SAND. Gravel is subangular fine to coarse of sandstone.		
		S N=6 (1,2,2,1)	50.00		2.00	MADE GROUND: Dark brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick, concrete and sandstone.		
						MADE GROUND: Dark brown clayey sandy GRAVEL. Gravel is angular to subrounded fine to coarse of wood, brick and clinker.		
		S N=9 (2,3,2,2)	49.00		3.00	MADE GROUND: Light brown and red clayey gravelly SAND. Gravel is angular to subangular fine to coarse of brick, concrete and sandstone.		
						2.00 - 3.00 20% Recovery		
		S N=11 (3,3,2,3)	48.00		4.00	MADE GROUND: Light brown locally red slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick, concrete and mudstone.		
						3.00 - 4.00 50% Recovery		
		S N=11 (3,3,2,3)	48.00		4.00			
						4.00 - 5.00 50% Recovery		
		S N=8 (1,2,3,2)	47.00		5.00			
		S N=14 (3,3,4,4)	46.00		6.00			
						End Of Borehole At 6.00 m		

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane kPa
▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

1. Position cleared with CAT + GENNY 2. Hand dug pit to a depth of 1.00mbgl 3. No waterstrike encountered 4. WS terminated at 6.00m due to achieving target depth

Scale: 1:40

Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed
03/12/2025	5		0		

Daily Log Of Depths

Chiselling					
Date	Casing	Water	From	To	Hours

Printed By GeoLogs (www.GeoLogs.com)

APPENDIX 2

GEOTECHNICAL TESTING RESULTS

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

Address Houldsworth Mill Business & Arts Centre
Houldsworth Mill
Reddish
Stockport
SK5 6DA

Contract A6542 -
Derby Street, Cheetham Hill

Job Number MRN 25001/97
Date of Issue 18 December 2025
Page 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

Murray Rix is the trading name of Murray Rix (Northern) Limited. Registered in England 2878361

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

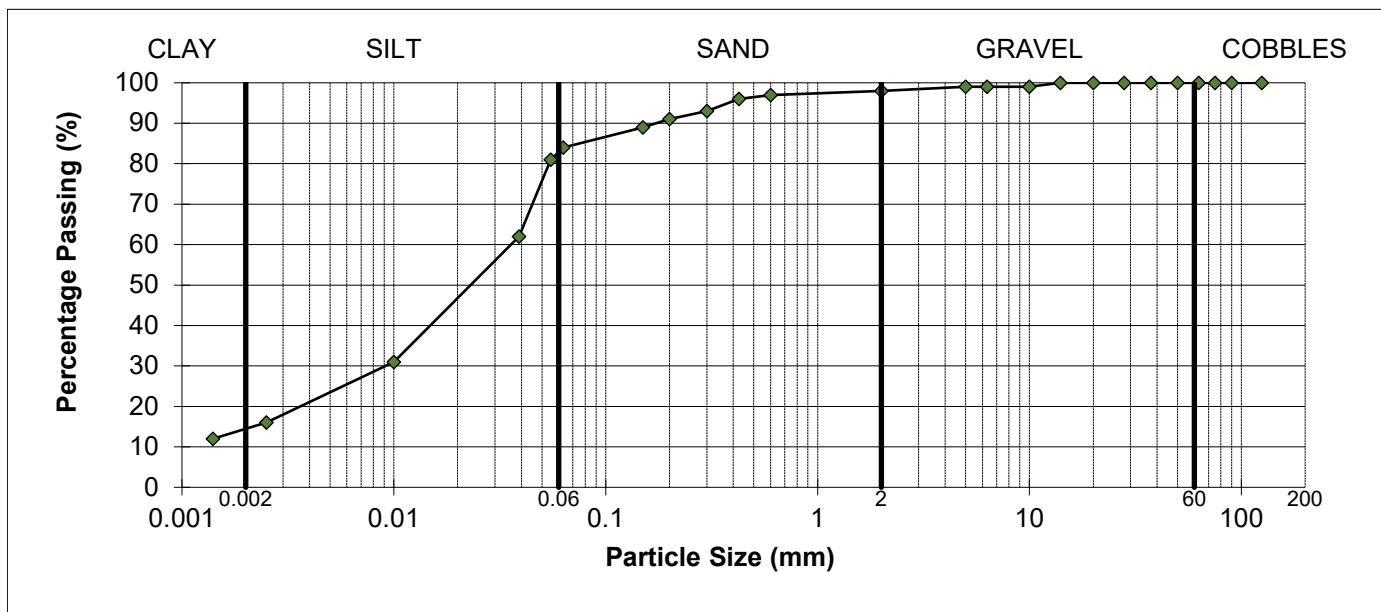
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A6542 - Derby Street, Cheetham Hill
JOB NUMBER	MRN 25001/97

SAMPLE LABEL	WS01 2.8m	DATE SAMPLED	03-Dec-25
LAB SAMPLE No	5239402	DATE RECEIVED	04-Dec-25
DATE TESTED	08-Dec-25	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	98	
90	100		0.6	97	
75	100		0.425	96	
63	100		0.3	93	
50	100		0.2	91	
37.5	100		0.15	89	
28	100		0.063	84	
20	100		0.055	81	
14	100		0.039	62	
10	99		0.01	31	
6.3	99		0.0025	16	
5	99		0.0014	12	



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE

18-Dec-25

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

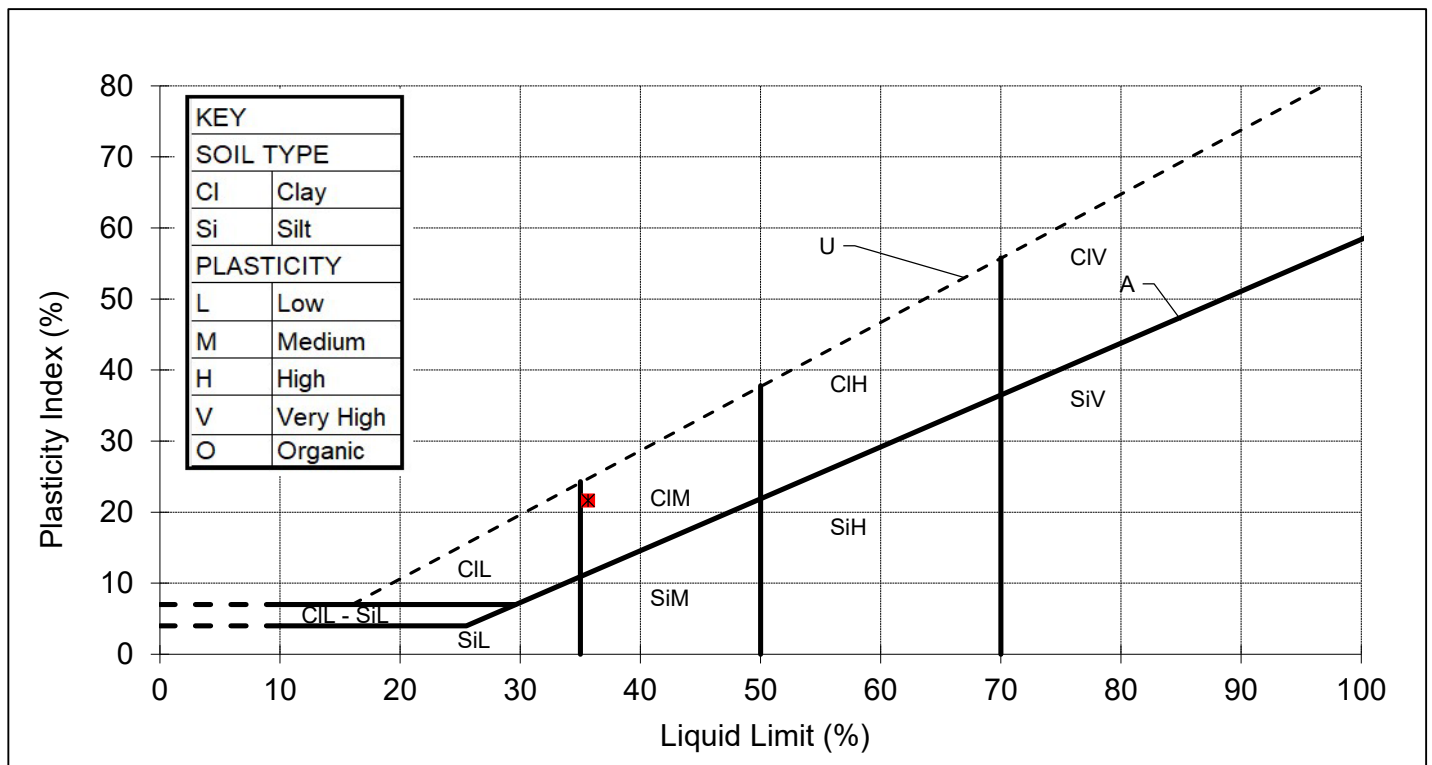
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A6542 - Derby Street, Cheetham Hill
JOB NUMBER	MRN 25001/97

SAMPLE LABEL	WS01 2.4m	DATE SAMPLED	03-Dec-25
SAMPLE No.	5239401	DATE RECEIVED	04-Dec-25
DATE TESTED	08-Dec-25	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.2	36.9	0.967	
Determination 2 (avg)	22.0	36.8		

Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21.5	36	14	22	98



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE

18-Dec-25

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

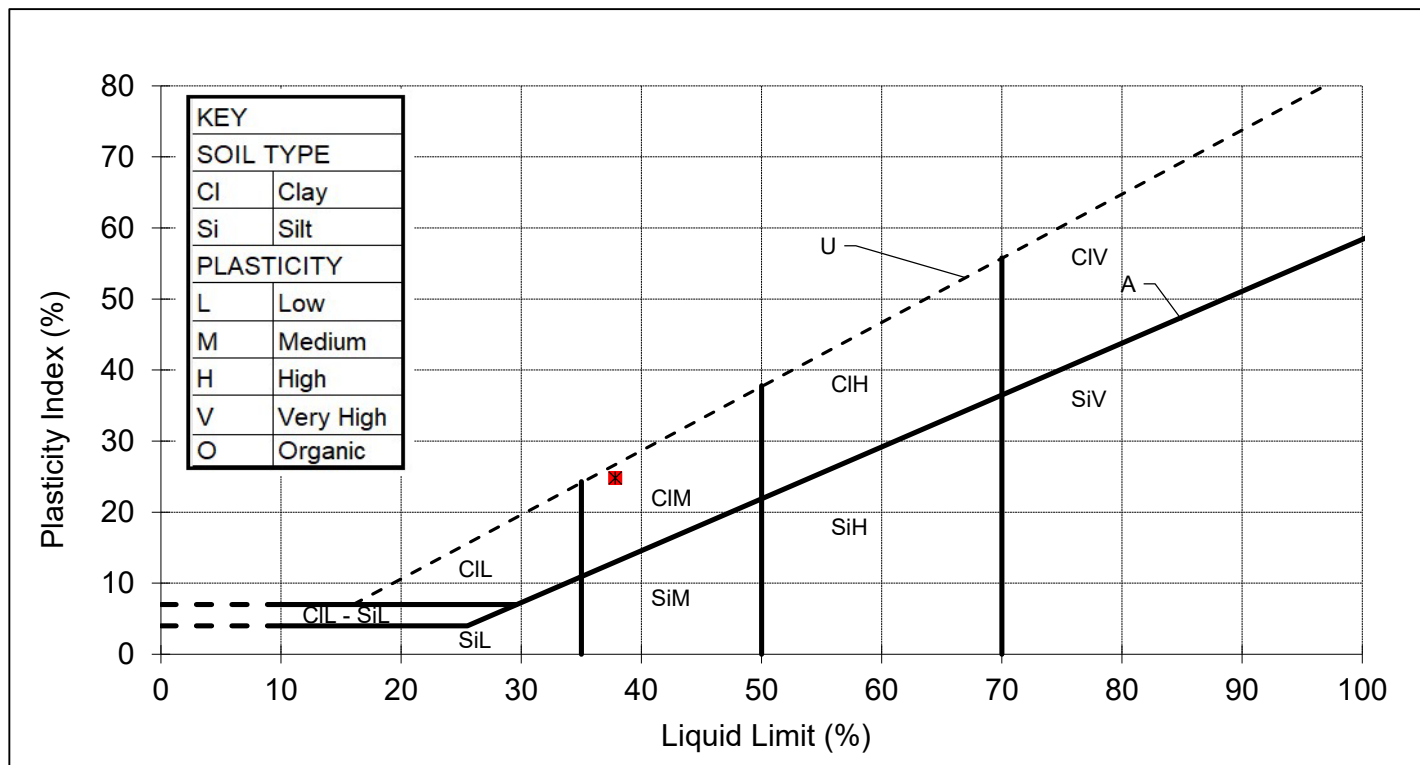
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A6542 - Derby Street, Cheetham Hill
JOB NUMBER	MRN 25001/97

SAMPLE LABEL	WS01 2.8m	DATE SAMPLED	03-Dec-25
SAMPLE No.	5239402	DATE RECEIVED	04-Dec-25
DATE TESTED	08-Dec-25	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.5	38.1	0.994	
Determination 2 (avg)	20.3	38.0		

Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.5	38	13	25	96



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE

18-Dec-25

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

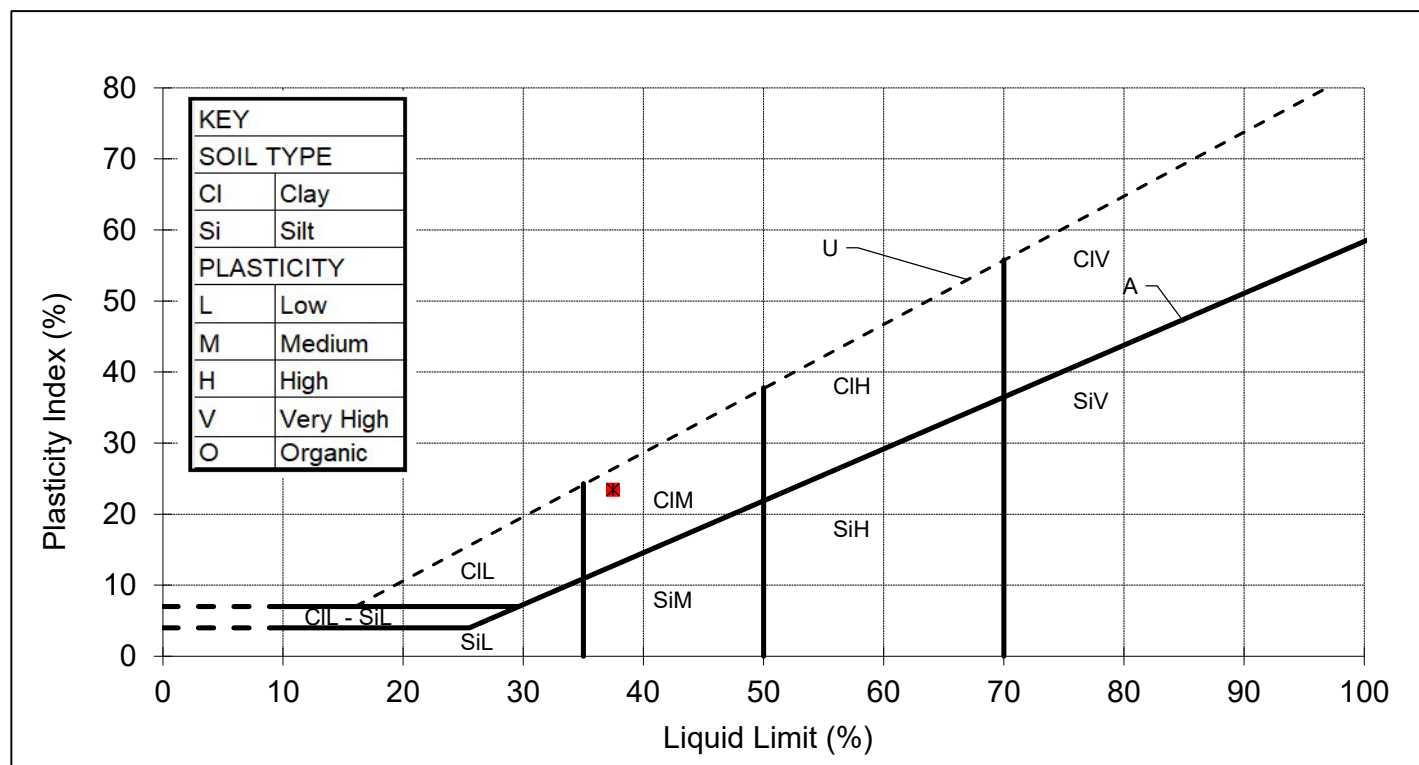
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A6542 - Derby Street, Cheetham Hill
JOB NUMBER	MRN 25001/97

SAMPLE LABEL	WS01 3.6m	DATE SAMPLED	03-Dec-25
SAMPLE No.	5239403	DATE RECEIVED	04-Dec-25
DATE TESTED	08-Dec-25	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)	Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.6	37.2	
Determination 2 (avg)	19.8	37.3	

Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15.9	37	14	23	96



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE

18-Dec-25

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/14312
Issue Number: 1

Date: 18 December, 2025

Client: Murray Rix (Northern) Ltd
Andrew House
Hadfield Street
Dukinfield
SK16 4QX

Project Manager: Enquires/Owain Davies
Project Name: Derby Street, Cheetham Hill
Project Ref: A6542
Order No: 25/567
Date Samples Received: 08/12/25
Date Instructions Received: 08/12/25
Date Analysis Completed: 18/12/25

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 25/14312

Client Project Name: Derby Street, Cheetham Hill

Client Project Ref: A6542

Lab Sample ID	25/14312/1	25/14312/2	25/14312/3	25/14312/4				Units	Limit of Detection	Method ref
Client Sample No	5239401	5239404	5239405	5239406						
Client Sample ID	WS01	WS02	WS03	WS04						
Depth to Top	2.40	2.10	3.10	4.10						
Depth To Bottom										
Date Sampled	03-Dec-25	03-Dec-25	03-Dec-25	03-Dec-25						
Sample Type	SOIL - B	SOIL - B	SOIL - B	SOIL - B						
Sample Matrix Code	6A	5A	5A	5A						
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH BRE _D ^{M#}	7.89	8.19	7.90	7.93				pH	0.01	A-T-031s
Ammonium NH4 BRE (water sol 2:1) _D	3.45	1.93	1.30	1.18				mg/l	1	A-T-033s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	<7	<7	<7	<7				mg/l	7	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	<0.4	3.6	0.7	<0.4				mg/l	0.4	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	21	33	19	25				mg/l	10	A-T-026s
Sulphate BRE (acid sol) _D ^{M#}	<0.02	0.07	0.04	0.04				% w/w	0.02	A-T-028s
Sulphur BRE (total) _D	<0.01	0.04	0.03	0.03				% w/w	0.01	A-T-024s
Magnesium BRE (water sol 2:1) _D	4.7	2.5	2.9	2.7				mg/l	1	A-T-SOLMETS

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- 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 within the same delivery, will be disposed of **four weeks** after the 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 our scope of accreditation.
- A deviating sample 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.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: 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

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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 by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Murray Rix (Northern) Ltd, Andrew House , Hadfield Street, Dukinfield, SK16 4QX Project: Derby Street, Cheetham Hill Clients Project No: A6542	Project No: 25/14312 Date Received: 08/12/2025 (am) Cool Box Temperatures (°C): 14.8
---	---

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	25/14312/1	25/14312/2	25/14312/3	25/14312/4
Client Sample No	5239401	5239404	5239405	5239406
Client Sample ID/Depth	WS01 2.40m	WS02 2.10m	WS03 3.10m	WS04 4.10m
Date Sampled	03/12/25	03/12/25	03/12/25	03/12/25
A-T-024s	18/12/2025	18/12/2025	18/12/2025	18/12/2025
A-T-026s	17/12/2025	17/12/2025	17/12/2025	17/12/2025
A-T-028s	16/12/2025	16/12/2025	16/12/2025	16/12/2025
A-T-031s	17/12/2025	17/12/2025	17/12/2025	17/12/2025
A-T-033s	16/12/2025	16/12/2025	16/12/2025	16/12/2025
A-T-044	17/12/2025	17/12/2025	17/12/2025	17/12/2025
A-T-SOLMETS	17/12/2025	17/12/2025	17/12/2025	17/12/2025

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 3

SOIL CHEMICAL TESTING RESULTS

Certificate of Analysis

Certificate Number 25-28543

Issued: 23-Dec-25

Client Earth Environmental & Geotechnical Ltd
Ashbourne House
334 Wellington Road North
Stockport
Cheshire
SK4 5DA

Our Reference 25-28543

Client Reference ~ A6542

Order No ~ A6542/LJ/01

Contract Title ~ Derby Street Cheetham Hill

Description 6 Soil samples, 1 Leachate prepared by DETS sample.

Date Received 05-Dec-25

Date Started 05-Dec-25

Date Completed 23-Dec-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Reyhan Irfan
Operations Manager



Normec DETS Limited

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 25-28543

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Sample ID	Depth	Lab No	Completed	Matrix Description
WS01	0.35	2611098	23/12/2025	Dark brown sandy GRAVEL (Possible made ground - brick,slag) (sample matrix outside MCERTS scope of accreditation)
WS01	1.2	2611099	23/12/2025	Dark brown slightly gravelly, sandy CLAY
WS02	2.5	2611100	23/12/2025	Dark brown gravelly, very sandy CLAY (Possible made ground - brick)
WS03	0.8	2611101	23/12/2025	Dark brown slightly gravelly, sandy CLAY (Possible made ground - brick)
WS04	0.5	2611102	23/12/2025	Dark brown slightly gravelly, sandy CLAY (Possible made ground - brick)
WS04	0.9	2611103	23/12/2025	Dark brown clayey, sandy GRAVEL (sample matrix outside MCERTS scope of accreditation)

Summary of Chemical Analysis

Soil Samples

Our Ref 25-28543

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Lab No	2611098	2611099	2611100	2611101	2611102	2611103
Sample ID ~	WS01	WS01	WS02	WS03	WS04	WS04
Depth ~	0.35	1.20	2.50	0.80	0.50	0.90
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	03/12/2025	03/12/2025	03/12/2025	03/12/2025	03/12/2025	03/12/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Moisture Content	DETSC 1004	0.1	%	10	22	12	24	16	4.7
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.1	26	11	31	20	16
Barium	DETSC 2301#	1.5	mg/kg	110	140	150	190	150	90
Beryllium	DETSC 2301#	0.2	mg/kg	0.5	1.2	0.7	1.6	0.6	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.8	0.4	0.6	0.8	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.2	0.6	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	16	20	14	23	12	19
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	51	62	71	78	53	63
Lead	DETSC 2301#	0.3	mg/kg	55	110	150	150	110	120
Mercury	DETSC 2325#	0.05	mg/kg	0.10	0.24	0.45	0.20	0.37	0.43
Nickel	DETSC 2301#	1	mg/kg	12	24	18	35	14	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	29	38	21	43	23	28
Zinc	DETSC 2301#	1	mg/kg	66	76	59	210	47	85
Inorganics									
pH	DETSC 2008#		pH	12.4	8.0	9.2	7.8	8.2	9.1
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.3
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide, Complex	DETSC 2130*	0.2	mg/kg	< 0.2	0.2	< 0.2	< 0.2	< 0.2	0.3
Organic matter	DETSC 2002#	0.1	%	2.3	3.2	2.3	3.4	8.9	7.7
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	20	66	43	45	56	89
Sulphide	DETSC 2024*	10	mg/kg	20	32	28	< 10	36	48
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.25	0.25	0.08	0.04	0.08	0.12
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >EC10-EC12 Cleanup	DETSC 3521*	1.5	mg/kg	< 1.50	< 1.50	1.84	< 1.50	< 1.50	< 1.50
Aliphatic >EC12-EC16 Cleanup	DETSC 3521*	1.2	mg/kg	< 1.20	< 1.20	1.44	< 1.20	< 1.20	< 1.20
Aliphatic >EC16-EC21 Cleanup	DETSC 3521*	1.5	mg/kg	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50
Aliphatic >EC21-EC35 Cleanup	DETSC 3521*	3.4	mg/kg	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40
Aliphatic C5-C35 Cleanup	DETSC 3521*	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >EC10-EC12 Cleanup	DETSC 3521*	0.9	mg/kg	< 0.90	< 0.90	< 0.90	< 0.90	36.85	5.22
Aromatic >EC12-EC16 Cleanup	DETSC 3521*	0.5	mg/kg	0.80	1.58	< 0.50	< 0.50	54.63	46.14
Aromatic >EC16-EC21 Cleanup	DETSC 3521*	0.6	mg/kg	7.19	4.45	1.68	2.24	122.9	116.5
Aromatic >EC21-EC35 Cleanup	DETSC 3521*	1.4	mg/kg	21.98	< 1.40	< 1.40	< 1.40	92.90	76.69

Summary of Chemical Analysis

Soil Samples

Our Ref 25-28543

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Lab No	2611098	2611099	2611100	2611101	2611102	2611103
Sample ID ~	WS01	WS01	WS02	WS03	WS04	WS04
Depth ~	0.35	1.20	2.50	0.80	0.50	0.90
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	03/12/2025	03/12/2025	03/12/2025	03/12/2025	03/12/2025	03/12/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Aromatic C5-C35 Cleanup	DETSC 3521*	10	mg/kg	29.96	< 10.00	< 10.00	< 10.00	307.3	244.5
TPH Ali/Aro Total C5-C35 Cleanup	DETSC 3521*	10	mg/kg	29.96	< 10.00	< 10.00	< 10.00	307.3	244.5
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	0.36	0.49	0.10	0.19	32	23
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.27	< 0.10	< 0.10	0.15	5.0	< 2.00
Acenaphthene	DETSC 3301	0.1	mg/kg	1.2	1.9	< 0.10	0.32	5.0	67
Fluorene	DETSC 3301	0.1	mg/kg	1.6	1.6	0.15	0.50	13	94
Phenanthrene	DETSC 3301	0.1	mg/kg	10	9.8	0.46	4.3	69	370
Anthracene	DETSC 3301	0.1	mg/kg	2.8	2.4	0.64	1.1	14	72
Fluoranthene	DETSC 3301	0.1	mg/kg	11	7.6	0.90	6.5	48	270
Pyrene	DETSC 3301	0.1	mg/kg	13	8.7	1.6	7.2	54	270
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	4.5	3.5	0.51	3.5	23	110
Chrysene	DETSC 3301	0.1	mg/kg	4.8	3.9	0.50	3.7	26	120
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	3.6	2.3	0.40	2.7	14	73
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	2.0	1.4	0.24	1.6	8.8	42
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	5.4	3.8	0.65	3.9	22	100
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	3.1	2.1	0.37	2.4	13	61
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.30	0.25	< 0.10	0.34	1.8	7.0
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	2.9	1.9	0.32	1.9	10	45
PAH 16 Total	DETSC 3301	1.6	mg/kg	68	52	6.7	31	310	1700
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	0.5	9.6

Summary of Asbestos Analysis

Soil Samples

Our Ref 25-28543

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2611098	WS01 0.35	SOIL	NAD	none	Josh Best
2611099	WS01 1.20	SOIL	NAD	none	Josh Best
2611100	WS02 2.50	SOIL	NAD	none	Josh Best
2611101	WS03 0.80	SOIL	NAD	none	Josh Best
2611102	WS04 0.50	SOIL	NAD	none	Josh Best
2611103	WS04 0.90	SOIL	NAD	none	Josh Best

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-28543

Client Ref A6542

Contract Title Derby Street Cheetham Hill

Sample Id WS04 0.50

Sample Numbers 2611102 2611104

Date Analysed 23/12/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.3	3	5	6
DETSC 2003# Loss On Ignition	%	10.0	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	25000.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	310.0	100	n/a	n/a
DETSC 2008# pH	pH Units	8.2	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	3	0.03	0.5	2	25
DETSC 2306 Barium as Ba	7.4	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.5	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.5	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.85	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.68	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.4	0.01	4	50	200
DETSC 2055 Chloride as Cl	730	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	5600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	21000	210	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3700	< 50	500	800	1000

Additional Information	
DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	30.1
* Temperature*	17.0

Mass of Sample Kg	0.094
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.896
Volume of Eluate VE1	0.813

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions.
Values are correct at time of issue.

Information in Support of the Analytical Results

Our Ref 25-28543
 Client Ref ~ A6542
 Contract ~ Derby Street Cheetham Hill

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2611098	WS01 0.35 SOIL	03/12/25	GJ 250ml, PT 1L		
2611099	WS01 1.20 SOIL	03/12/25	GJ 250ml, PT 1L x2		
2611100	WS02 2.50 SOIL	03/12/25	GJ 250ml, PT 1L		
2611101	WS03 0.80 SOIL	03/12/25	GJ 250ml, PT 1L		
2611102	WS04 0.50 SOIL	03/12/25	GJ 250ml, PT 1L x2		
2611103	WS04 0.90 SOIL	03/12/25	GJ 250ml x2, PT 1L x2		
2611104	WS04 0.50 LEACHATE	03/12/25	GJ 250ml, PT 1L x2		

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
--------	-----------	-------	--------------------	--------------------	----------------	------	--------

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

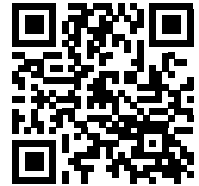
APPENDIX 4

SOIL WASTE ASSESSMENT

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



TWHS4-VVT6P-IISUZ

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Report is invalid if pages are removed.

Job name

A6542 54 Derby Street, Cheetham Hill

Description/Comments

Project

A6542

Site

54 Derby Street, Cheetham Hill

Classified by

Name: **Luke Glover** Company: **Earth Environmental & Geotechnical Ltd**
Date: **21 Jan 2026 15:53 GMT**
Telephone:

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

2 - Material Characterisation

Address of the waste

54 Derby Street, Cheetham Hill, Manchester

Post Code **M4 6DH**

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Existing material on site.

Description of the specific process, sub-process and/or activity that created the waste

Site investigation.

Description of the waste

Made ground.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01	0.35	Hazardous	HP 8	3
2	WS01[2]	1.20	Non Hazardous		6
3	WS02	2.50	Non Hazardous		9
4	WS03	0.80	Non Hazardous		12
5	WS04	0.50	Non Hazardous		15
6	WS04[2]	0.90	Non Hazardous		18

Related documents

#	Name	Description
1	Example worst case waste stream template: 17 05 04 or 17 05 03 *	waste stream template used to create this Job

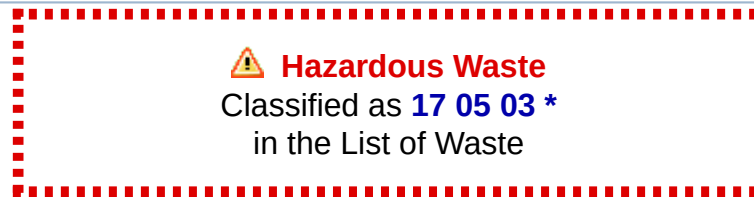
Report

Created by: Luke Glover

Created date: 21 Jan 2026 15:53 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	21
Appendix B: Rationale for selection of metal species	22
Appendix C: Version	23

Classification of sample: WS01



Sample details

Sample name:	LoW Code:
WS01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.35 m	
Moisture content:	
10%	
(dry weight correction)	

Hazard properties

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH (conc.: 12.4 pH)

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	asbestos fibres detected (Yes/No)				No							
			ACM_FIBRES									
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				8.1	mg/kg	1.895	13.951	mg/kg	0.0014 %	✓	
	033-005-00-1											
3	barium { barium carbonate }				110	mg/kg	1.437	143.698	mg/kg	0.0144 %	✓	
	056-003-00-2	208-167-3	513-77-9									
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.5	mg/kg	8.868	4.031	mg/kg	0.000403 %	✓	
	004-002-00-2											
5	boron { boric acid; [1] boric acid; [2] }				0.5	mg/kg	5.719	2.6	mg/kg	0.00026 %	✓	
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]									
6	cadmium { cadmium sulfate }				0.2	mg/kg	1.855	0.337	mg/kg	0.0000337 %	✓	
	048-009-00-9	233-331-6	10124-36-4									
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				16	mg/kg	1.462	21.259	mg/kg	0.00213 %	✓	
		215-160-9	1308-38-9									
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
9	copper { copper sulphate pentahydrate }				51	mg/kg	3.929	182.165	mg/kg	0.0182 %	✓	
	029-023-00-4	231-847-6	7758-99-8									
10	lead { lead chromate }			1	55	mg/kg	1.56	77.991	mg/kg	0.005 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
11	mercury { mercury dichloride }				0.1	mg/kg	1.353	0.123	mg/kg	0.0000123 %	✓	
	080-010-00-X	231-299-8	7487-94-7									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
12	nickel { nickel dibromate }				12 mg/kg	5.358	58.454 mg/kg	0.00585 %	✓		
	028-053-00-5	238-596-1	14550-87-9								
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				29 mg/kg	1.785	47.064 mg/kg	0.00471 %	✓		
	023-001-00-8	215-239-8	1314-62-1								
15	zinc { zinc chromate }				66 mg/kg	2.774	166.449 mg/kg	0.0166 %	✓		
	024-007-00-3	236-878-9	13530-65-9								
16	TPH (C6 to C40) petroleum group				29.96 mg/kg		27.236 mg/kg	0.00272 %	✓		
			TPH								
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
18	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
19	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
20	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
21	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %			<LOD
	006-007-00-5										
23	pH				12.4 pH		12.4 pH	12.4 pH			
			PH								
24	naphthalene				0.36 mg/kg		0.327 mg/kg	0.0000327 %	✓		
	601-052-00-2	202-049-5	91-20-3								
25	acenaphthylene				0.27 mg/kg		0.245 mg/kg	0.0000245 %	✓		
		205-917-1	208-96-8								
26	acenaphthene				1.2 mg/kg		1.091 mg/kg	0.000109 %	✓		
		201-469-6	83-32-9								
27	fluorene				1.6 mg/kg		1.455 mg/kg	0.000145 %	✓		
		201-695-5	86-73-7								
28	phenanthrene				10 mg/kg		9.091 mg/kg	0.000909 %	✓		
		201-581-5	85-01-8								
29	anthracene				2.8 mg/kg		2.545 mg/kg	0.000255 %	✓		
		204-371-1	120-12-7								
30	fluoranthene				11 mg/kg		10 mg/kg	0.001 %	✓		
		205-912-4	206-44-0								
31	pyrene				13 mg/kg		11.818 mg/kg	0.00118 %	✓		
		204-927-3	129-00-0								
32	benzo[a]anthracene				4.5 mg/kg		4.091 mg/kg	0.000409 %	✓		
	601-033-00-9	200-280-6	56-55-3								
33	chrysene				4.8 mg/kg		4.364 mg/kg	0.000436 %	✓		
	601-048-00-0	205-923-4	218-01-9								
34	benzo[b]fluoranthene				3.6 mg/kg		3.273 mg/kg	0.000327 %	✓		
	601-034-00-4	205-911-9	205-99-2								
35	benzo[k]fluoranthene				2 mg/kg		1.818 mg/kg	0.000182 %	✓		
	601-036-00-5	205-916-6	207-08-9								
36	benzo[a]pyrene; benzo[def]chrysene				5.4 mg/kg		4.909 mg/kg	0.000491 %	✓		
	601-032-00-3	200-028-5	50-32-8								
37	indeno[123-cd]pyrene				3.1 mg/kg		2.818 mg/kg	0.000282 %	✓		
		205-893-2	193-39-5								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
38	dibenz[a,h]anthracene				0.3 mg/kg		0.273 mg/kg	0.0000273 %	✓	
	601-041-00-2	200-181-8	53-70-3							
39	benzo[ghi]perylene				2.9 mg/kg		2.636 mg/kg	0.000264 %	✓	
		205-883-8	191-24-2							
40	phenol				<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.0778 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 5000 mg/kg (0.5%) because: No free phase product.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00272%)



Classification of sample: WS01[2]



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS01[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				26 mg/kg	1.895	40.375 mg/kg	0.00404 %	✓	
	033-005-00-1									
3	barium { barium carbonate }				140 mg/kg	1.437	164.899 mg/kg	0.0165 %	✓	
	056-003-00-2	208-167-3	513-77-9							
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				1.2 mg/kg	8.868	8.723 mg/kg	0.000872 %	✓	
	004-002-00-2									
5	boron { boric acid; [1] boric acid; [2] }				0.8 mg/kg	5.719	3.75 mg/kg	0.000375 %	✓	
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
6	cadmium { cadmium sulfate }				0.2 mg/kg	1.855	0.304 mg/kg	0.0000304 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				20 mg/kg	1.462	23.96 mg/kg	0.0024 %	✓	
		215-160-9	1308-38-9							
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
9	copper { copper sulphate pentahydrate }				62 mg/kg	3.929	199.673 mg/kg	0.02 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
10	lead { lead chromate }			1	110 mg/kg	1.56	140.639 mg/kg	0.00902 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
11	mercury { mercury dichloride }				0.24 mg/kg	1.353	0.266 mg/kg	0.0000266 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
12	nickel { nickel dibromate }				24 mg/kg	5.358	105.41 mg/kg	0.0105 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				38	mg/kg	1.785	55.604	mg/kg	0.00556 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
15	zinc { zinc chromate }				76	mg/kg	2.774	172.816	mg/kg	0.0173 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
16	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH									
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
18	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
19	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
20	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
21	xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
	006-007-00-5											
23	pH				8	pH		8	pH	8pH		
			PH									
24	naphthalene				0.49	mg/kg		0.402	mg/kg	0.0000402 %	✓	
	601-052-00-2	202-049-5	91-20-3									
25	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
26	acenaphthene				1.9	mg/kg		1.557	mg/kg	0.000156 %	✓	
		201-469-6	83-32-9									
27	fluorene				1.6	mg/kg		1.311	mg/kg	0.000131 %	✓	
		201-695-5	86-73-7									
28	phenanthrene				9.8	mg/kg		8.033	mg/kg	0.000803 %	✓	
		201-581-5	85-01-8									
29	anthracene				2.4	mg/kg		1.967	mg/kg	0.000197 %	✓	
		204-371-1	120-12-7									
30	fluoranthene				7.6	mg/kg		6.23	mg/kg	0.000623 %	✓	
		205-912-4	206-44-0									
31	pyrene				8.7	mg/kg		7.131	mg/kg	0.000713 %	✓	
		204-927-3	129-00-0									
32	benzo[a]anthracene				3.5	mg/kg		2.869	mg/kg	0.000287 %	✓	
	601-033-00-9	200-280-6	56-55-3									
33	chrysene				3.9	mg/kg		3.197	mg/kg	0.00032 %	✓	
	601-048-00-0	205-923-4	218-01-9									
34	benzo[b]fluoranthene				2.3	mg/kg		1.885	mg/kg	0.000189 %	✓	
	601-034-00-4	205-911-9	205-99-2									
35	benzo[k]fluoranthene				1.4	mg/kg		1.148	mg/kg	0.000115 %	✓	
	601-036-00-5	205-916-6	207-08-9									
36	benzo[a]pyrene; benzo[def]chrysene				3.8	mg/kg		3.115	mg/kg	0.000311 %	✓	
	601-032-00-3	200-028-5	50-32-8									
37	indeno[123-cd]pyrene				2.1	mg/kg		1.721	mg/kg	0.000172 %	✓	
		205-893-2	193-39-5									
38	dibenz[a,h]anthracene				0.25	mg/kg		0.205	mg/kg	0.0000205 %	✓	
	601-041-00-2	200-181-8	53-70-3									
39	benzo[ghi]perylene				1.9	mg/kg		1.557	mg/kg	0.000156 %	✓	
		205-883-8	191-24-2									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
40	phenol									
	604-001-00-2	203-632-7	108-95-2		<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<LOD
Total:								0.0908 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: WS02

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.50 m	
Moisture content:	
12%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	asbestos fibres detected (Yes/No)				No						
			ACM_FIBRES								
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				11 mg/kg	1.895	18.607 mg/kg	0.00186 %	✓		
	033-005-00-1										
3	barium { barium carbonate }				150 mg/kg	1.437	192.452 mg/kg	0.0192 %	✓		
	056-003-00-2	208-167-3	513-77-9								
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.7 mg/kg	8.868	5.542 mg/kg	0.000554 %	✓		
	004-002-00-2										
5	boron { boric acid; [1] boric acid; [2] }				0.4 mg/kg	5.719	2.043 mg/kg	0.000204 %	✓		
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
6	cadmium { cadmium sulfate }				0.2 mg/kg	1.855	0.331 mg/kg	0.0000331 %	✓		
	048-009-00-9	233-331-6	10124-36-4								
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				14 mg/kg	1.462	18.269 mg/kg	0.00183 %	✓		
		215-160-9	1308-38-9								
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %			<LOD
	024-017-00-8										
9	copper { copper sulphate pentahydrate }				71 mg/kg	3.929	249.074 mg/kg	0.0249 %	✓		
	029-023-00-4	231-847-6	7758-99-8								
10	lead { lead chromate }			1	150 mg/kg	1.56	208.904 mg/kg	0.0134 %	✓		
	082-004-00-2	231-846-0	7758-97-6								
11	mercury { mercury dichloride }				0.45 mg/kg	1.353	0.544 mg/kg	0.0000544 %	✓		
	080-010-00-X	231-299-8	7487-94-7								
12	nickel { nickel dibromate }				18 mg/kg	5.358	86.116 mg/kg	0.00861 %	✓		
	028-053-00-5	238-596-1	14550-87-9								
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				21	mg/kg	1.785	33.472	mg/kg	0.00335 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
15	zinc { zinc chromate }				59	mg/kg	2.774	146.138	mg/kg	0.0146 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
16	TPH (C6 to C40) petroleum group		TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
18	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
19	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
20	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
21	xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
	006-007-00-5											
23	pH		PH		9.2	pH		9.2	pH	9.2 pH		
24	naphthalene				0.1	mg/kg		0.0893	mg/kg	0.00000893 %	✓	
	601-052-00-2	202-049-5	91-20-3									
25	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
26	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									
27	fluorene				0.15	mg/kg		0.134	mg/kg	0.0000134 %	✓	
		201-695-5	86-73-7									
28	phenanthrene				0.46	mg/kg		0.411	mg/kg	0.0000411 %	✓	
		201-581-5	85-01-8									
29	anthracene				0.64	mg/kg		0.571	mg/kg	0.0000571 %	✓	
		204-371-1	120-12-7									
30	fluoranthene				0.9	mg/kg		0.804	mg/kg	0.0000804 %	✓	
		205-912-4	206-44-0									
31	pyrene				1.6	mg/kg		1.429	mg/kg	0.000143 %	✓	
		204-927-3	129-00-0									
32	benzo[a]anthracene				0.51	mg/kg		0.455	mg/kg	0.0000455 %	✓	
	601-033-00-9	200-280-6	56-55-3									
33	chrysene				0.5	mg/kg		0.446	mg/kg	0.0000446 %	✓	
	601-048-00-0	205-923-4	218-01-9									
34	benzo[b]fluoranthene				0.4	mg/kg		0.357	mg/kg	0.0000357 %	✓	
	601-034-00-4	205-911-9	205-99-2									
35	benzo[k]fluoranthene				0.24	mg/kg		0.214	mg/kg	0.0000214 %	✓	
	601-036-00-5	205-916-6	207-08-9									
36	benzo[a]pyrene; benzo[def]chrysene				0.65	mg/kg		0.58	mg/kg	0.000058 %	✓	
	601-032-00-3	200-028-5	50-32-8									
37	indeno[123-cd]pyrene				0.37	mg/kg		0.33	mg/kg	0.000033 %	✓	
		205-893-2	193-39-5									
38	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
39	benzo[ghi]perylene				0.32	mg/kg		0.286	mg/kg	0.0000286 %	✓	
		205-883-8	191-24-2									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
40	phenol				<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.0893 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS03

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS03	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.80 m	
Moisture content:	
24%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 24% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				31 mg/kg	1.895	47.363 mg/kg	0.00474 %	✓	
	033-005-00-1									
3	barium { barium carbonate }				190 mg/kg	1.437	220.182 mg/kg	0.022 %	✓	
	056-003-00-2	208-167-3	513-77-9							
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				1.6 mg/kg	8.868	11.443 mg/kg	0.00114 %	✓	
	004-002-00-2									
5	boron { boric acid; [1] boric acid; [2] }				0.6 mg/kg	5.719	2.767 mg/kg	0.000277 %	✓	
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
6	cadmium { cadmium sulfate }				0.6 mg/kg	1.855	0.897 mg/kg	0.0000897 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				23 mg/kg	1.462	27.11 mg/kg	0.00271 %	✓	
		215-160-9	1308-38-9							
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
9	copper { copper sulphate pentahydrate }				78 mg/kg	3.929	247.15 mg/kg	0.0247 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
10	lead { lead chromate }			1	150 mg/kg	1.56	188.687 mg/kg	0.0121 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
11	mercury { mercury dichloride }				0.2 mg/kg	1.353	0.218 mg/kg	0.0000218 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
12	nickel { nickel dibromate }				35 mg/kg	5.358	151.243 mg/kg	0.0151 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				43 mg/kg	1.785	61.906	mg/kg	0.00619 %	✓	
	023-001-00-8	215-239-8	1314-62-1								
15	zinc { zinc chromate }				210 mg/kg	2.774	469.815	mg/kg	0.047 %	✓	
	024-007-00-3	236-878-9	13530-65-9								
16	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
18	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
19	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
20	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
21	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1 mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
	006-007-00-5										
23	pH				7.8 pH		7.8	pH	7.8 pH		
			PH								
24	naphthalene				0.19 mg/kg		0.153	mg/kg	0.0000153 %	✓	
	601-052-00-2	202-049-5	91-20-3								
25	acenaphthylene				0.15 mg/kg		0.121	mg/kg	0.0000121 %	✓	
		205-917-1	208-96-8								
26	acenaphthene				0.32 mg/kg		0.258	mg/kg	0.0000258 %	✓	
		201-469-6	83-32-9								
27	fluorene				0.5 mg/kg		0.403	mg/kg	0.0000403 %	✓	
		201-695-5	86-73-7								
28	phenanthrene				4.3 mg/kg		3.468	mg/kg	0.000347 %	✓	
		201-581-5	85-01-8								
29	anthracene				1.1 mg/kg		0.887	mg/kg	0.0000887 %	✓	
		204-371-1	120-12-7								
30	fluoranthene				6.5 mg/kg		5.242	mg/kg	0.000524 %	✓	
		205-912-4	206-44-0								
31	pyrene				7.2 mg/kg		5.806	mg/kg	0.000581 %	✓	
		204-927-3	129-00-0								
32	benzo[a]anthracene				3.5 mg/kg		2.823	mg/kg	0.000282 %	✓	
	601-033-00-9	200-280-6	56-55-3								
33	chrysene				3.7 mg/kg		2.984	mg/kg	0.000298 %	✓	
	601-048-00-0	205-923-4	218-01-9								
34	benzo[b]fluoranthene				2.7 mg/kg		2.177	mg/kg	0.000218 %	✓	
	601-034-00-4	205-911-9	205-99-2								
35	benzo[k]fluoranthene				1.6 mg/kg		1.29	mg/kg	0.000129 %	✓	
	601-036-00-5	205-916-6	207-08-9								
36	benzo[a]pyrene; benzo[def]chrysene				3.9 mg/kg		3.145	mg/kg	0.000315 %	✓	
	601-032-00-3	200-028-5	50-32-8								
37	indeno[123-cd]pyrene				2.4 mg/kg		1.935	mg/kg	0.000194 %	✓	
		205-893-2	193-39-5								
38	dibenz[a,h]anthracene				0.34 mg/kg		0.274	mg/kg	0.0000274 %	✓	
	601-041-00-2	200-181-8	53-70-3								
39	benzo[ghi]perylene				1.9 mg/kg		1.532	mg/kg	0.000153 %	✓	
		205-883-8	191-24-2								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
40	phenol				<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.139 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: WS04

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m	
Moisture content:	
16%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				20 mg/kg	1.895	32.664 mg/kg	0.00327 %	✓	
	033-005-00-1									
3	barium { barium carbonate }				150 mg/kg	1.437	185.816 mg/kg	0.0186 %	✓	
	056-003-00-2	208-167-3	513-77-9							
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.6 mg/kg	8.868	4.587 mg/kg	0.000459 %	✓	
	004-002-00-2									
5	boron { boric acid; [1] boric acid; [2] }				0.8 mg/kg	5.719	3.944 mg/kg	0.000394 %	✓	
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
6	cadmium { cadmium sulfate }				0.2 mg/kg	1.855	0.32 mg/kg	0.000032 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				12 mg/kg	1.462	15.12 mg/kg	0.00151 %	✓	
		215-160-9	1308-38-9							
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
9	copper { copper sulphate pentahydrate }				53 mg/kg	3.929	179.517 mg/kg	0.018 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
10	lead { lead chromate }			1	110 mg/kg	1.56	147.914 mg/kg	0.00948 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
11	mercury { mercury dichloride }				0.37 mg/kg	1.353	0.432 mg/kg	0.0000432 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
12	nickel { nickel dibromate }				14 mg/kg	5.358	64.669 mg/kg	0.00647 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				23	mg/kg	1.785	35.396	mg/kg	0.00354 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
15	zinc { zinc chromate }				47	mg/kg	2.774	112.401	mg/kg	0.0112 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
16	TPH (C6 to C40) petroleum group		TPH		307.3	mg/kg		264.914	mg/kg	0.0265 %	✓	
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
18	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
19	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
20	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
21	xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
	006-007-00-5											
23	pH		PH		8.2	pH		8.2	pH	8.2 pH		
24	naphthalene				32	mg/kg		27.586	mg/kg	0.00276 %	✓	
	601-052-00-2	202-049-5	91-20-3									
25	acenaphthylene				5	mg/kg		4.31	mg/kg	0.000431 %	✓	
		205-917-1	208-96-8									
26	acenaphthene				5	mg/kg		4.31	mg/kg	0.000431 %	✓	
		201-469-6	83-32-9									
27	fluorene				13	mg/kg		11.207	mg/kg	0.00112 %	✓	
		201-695-5	86-73-7									
28	phenanthrene				69	mg/kg		59.483	mg/kg	0.00595 %	✓	
		201-581-5	85-01-8									
29	anthracene				14	mg/kg		12.069	mg/kg	0.00121 %	✓	
		204-371-1	120-12-7									
30	fluoranthene				48	mg/kg		41.379	mg/kg	0.00414 %	✓	
		205-912-4	206-44-0									
31	pyrene				54	mg/kg		46.552	mg/kg	0.00466 %	✓	
		204-927-3	129-00-0									
32	benzo[a]anthracene				23	mg/kg		19.828	mg/kg	0.00198 %	✓	
	601-033-00-9	200-280-6	56-55-3									
33	chrysene				26	mg/kg		22.414	mg/kg	0.00224 %	✓	
	601-048-00-0	205-923-4	218-01-9									
34	benzo[b]fluoranthene				14	mg/kg		12.069	mg/kg	0.00121 %	✓	
	601-034-00-4	205-911-9	205-99-2									
35	benzo[k]fluoranthene				8.8	mg/kg		7.586	mg/kg	0.000759 %	✓	
	601-036-00-5	205-916-6	207-08-9									
36	benzo[a]pyrene; benzo[def]chrysene				22	mg/kg		18.966	mg/kg	0.0019 %	✓	
	601-032-00-3	200-028-5	50-32-8									
37	indeno[123-cd]pyrene				13	mg/kg		11.207	mg/kg	0.00112 %	✓	
		205-893-2	193-39-5									
38	dibenz[a,h]anthracene				1.8	mg/kg		1.552	mg/kg	0.000155 %	✓	
	601-041-00-2	200-181-8	53-70-3									
39	benzo[ghi]perylene				10	mg/kg		8.621	mg/kg	0.000862 %	✓	
		205-883-8	191-24-2									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
40	phenol				0.5 mg/kg		0.431 mg/kg	0.0000431 %	✓	
	604-001-00-2	203-632-7	108-95-2							
Total:								0.13 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 5000 mg/kg (0.5%) because: No free phase product.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0265%)

Classification of sample: WS04[2]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS04[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.90 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
4.7%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 4.7% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				16 mg/kg	1.895	28.952 mg/kg	0.0029 %	✓	
	033-005-00-1									
3	barium { barium carbonate }				90 mg/kg	1.437	123.522 mg/kg	0.0124 %	✓	
	056-003-00-2	208-167-3	513-77-9							
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.7 mg/kg	8.868	5.929 mg/kg	0.000593 %	✓	
	004-002-00-2									
5	boron { boric acid; [1] boric acid; [2] }				0.3 mg/kg	5.719	1.639 mg/kg	0.000164 %	✓	
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
6	cadmium { cadmium sulfate }				0.2 mg/kg	1.855	0.354 mg/kg	0.0000354 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				19 mg/kg	1.462	26.523 mg/kg	0.00265 %	✓	
		215-160-9	1308-38-9							
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
9	copper { copper sulphate pentahydrate }				63 mg/kg	3.929	236.419 mg/kg	0.0236 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
10	lead { lead chromate }			1	120 mg/kg	1.56	178.775 mg/kg	0.0115 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
11	mercury { mercury dichloride }				0.43 mg/kg	1.353	0.556 mg/kg	0.0000556 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
12	nickel { nickel dibromate }				23 mg/kg	5.358	117.709 mg/kg	0.0118 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
13	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
14	vanadium { divanadium pentaoxide; vanadium pentoxide }				28	mg/kg	1.785	47.741	mg/kg	0.00477 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
15	zinc { zinc chromate }				85	mg/kg	2.774	225.217	mg/kg	0.0225 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
16	TPH (C6 to C40) petroleum group				244.5	mg/kg		233.524	mg/kg	0.0234 %	✓	
			TPH									
17	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
18	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
19	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
20	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
21	xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
22	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
	006-007-00-5											
23	pH				9.1	pH		9.1	pH	9.1 pH		
			PH									
24	naphthalene				23	mg/kg		21.968	mg/kg	0.0022 %	✓	
	601-052-00-2	202-049-5	91-20-3									
25	acenaphthylene				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
		205-917-1	208-96-8									
26	acenaphthene				67	mg/kg		63.992	mg/kg	0.0064 %	✓	
		201-469-6	83-32-9									
27	fluorene				94	mg/kg		89.78	mg/kg	0.00898 %	✓	
		201-695-5	86-73-7									
28	phenanthrene				370	mg/kg		353.391	mg/kg	0.0353 %	✓	
		201-581-5	85-01-8									
29	anthracene				72	mg/kg		68.768	mg/kg	0.00688 %	✓	
		204-371-1	120-12-7									
30	fluoranthene				270	mg/kg		257.88	mg/kg	0.0258 %	✓	
		205-912-4	206-44-0									
31	pyrene				270	mg/kg		257.88	mg/kg	0.0258 %	✓	
		204-927-3	129-00-0									
32	benzo[a]anthracene				110	mg/kg		105.062	mg/kg	0.0105 %	✓	
	601-033-00-9	200-280-6	56-55-3									
33	chrysene				120	mg/kg		114.613	mg/kg	0.0115 %	✓	
	601-048-00-0	205-923-4	218-01-9									
34	benzo[b]fluoranthene				73	mg/kg		69.723	mg/kg	0.00697 %	✓	
	601-034-00-4	205-911-9	205-99-2									
35	benzo[k]fluoranthene				42	mg/kg		40.115	mg/kg	0.00401 %	✓	
	601-036-00-5	205-916-6	207-08-9									
36	benzo[a]pyrene; benzo[def]chrysene				100	mg/kg		95.511	mg/kg	0.00955 %	✓	
	601-032-00-3	200-028-5	50-32-8									
37	indeno[123-cd]pyrene				61	mg/kg		58.262	mg/kg	0.00583 %	✓	
		205-893-2	193-39-5									
38	dibenz[a,h]anthracene				7	mg/kg		6.686	mg/kg	0.000669 %	✓	
	601-041-00-2	200-181-8	53-70-3									
39	benzo[ghi]perylene				45	mg/kg		42.98	mg/kg	0.0043 %	✓	
		205-883-8	191-24-2									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
40	phenol									
	604-001-00-2	203-632-7	108-95-2		9.6 mg/kg		9.169 mg/kg	0.000917 %	✓	
Total:								0.282 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 5000 mg/kg (0.5%) because: No free phase product.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0234%)

Appendix A: Classifier defined and non GB MCL determinands

▀ **asbestos fibres detected (Yes/No)** (CAS Number: ACM_FIBRES)

Description/Comments: not classified, information only

Data source: N/A

Data source date: 15 Jan 2020

Hazard Statements: None.

▀ **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▀ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

▀ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from:: IARC Group 2B (77) 2000

▀ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from:: WM3, Table C12.2

▀ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

▀ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

▀ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

▀ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for arsenic acid H₃AsO₄. (edit as required)

barium {barium carbonate}

No chromium (VI) detected.

beryllium {beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for beryllium chloride. (edit as required)

boron {boric acid; [1] boric acid; [2]}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming water is or has been present. (edit as required)

cadmium {cadmium sulfate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

chromium in Cr(III) compounds {chromium(III) oxide (worst case)}

No chromium (VI) detected.

chromium in Cr(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {copper sulphate pentahydrate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming no evidence for the use of explosives. (edit as required)

nickel {nickel dibromate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2026.19.6953.12548 (20 Jan 2026)

HazWasteOnline Database: 2026.19.6953.12548 (20 Jan 2026)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

GB MCL List v7.0 - version 7.0 of 23rd September 2025

APPENDIX 5

GROUNDWATER CHEMICAL TESTING RESULTS

Certificate of Analysis

Certificate Number 26-00195

Issued: 16-Jan-26

Client Earth Environmental & Geotechnical Ltd
Ashbourne House
334 Wellington Road North
Stockport
Cheshire
SK4 5DA

Our Reference 26-00195

Client Reference ~ A6542

Order No ~ A6542/RS/01

Contract Title ~ Derby Street Cheetham Hill

Description 2 Groundwater samples.

Date Received 07-Jan-26

Date Started 07-Jan-26

Date Completed 16-Jan-26

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Louise Cook
Contracts Manager



2139

Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info-dets@normecgroup.com • normecdets.com

Summary of Chemical Analysis

Water Samples

Our Ref 26-00195

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Lab No	2622390	2622391
Sample ID ~	WS02	WS04
Depth ~	4.98	4.43
Other ID ~		
Sample Type ~	GROUND WATER	GROUND WATER
Sampling Date ~	05/01/2026	05/01/2026
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Metals					
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	4.69	2.53
Barium, Dissolved	DETSC 2306	0.26	ug/l	188.6	112.2
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.10	< 0.10
Boron, Dissolved	DETSC 2306*	12	ug/l	131.9	99.66
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.94	1.75
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.88	0.83
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.98	2.92
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.32	3.48
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.55	2.78
Zinc, Dissolved	DETSC 2306	1.3	ug/l	74.25	61.98
Inorganics					
pH	DETSC 2008		pH	7.1	7.1
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.7	3.5
Cyanide, Free Low Level	DETSC 2131	0.1	ug/l	0.1	< 0.1
Cyanide, Complex Low Level	DETSC 2131	0.1	ug/l	0.5	3.5
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	< 1.5	< 1.5
Sulphate as SO4	DETSC 2055	0.1	mg/l	41	57
Sulphide	DETSC 2208	0.01	mg/l	< 0.01	< 0.01
Total Organic Carbon	DETSC 2085	1	mg/l	3.4	3.1
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10

Summary of Chemical Analysis

Water Samples

Our Ref 26-00195

Client Ref ~ A6542

Contract Title ~ Derby Street Cheetham Hill

Lab No	2622390	2622391
Sample ID ~	WS02	WS04
Depth ~	4.98	4.43
Other ID ~		
Sample Type ~	GROUND WATER	GROUND WATER
Sampling Date ~	05/01/2026	05/01/2026
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Benzene	DETSC 3322	1	ug/l	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0	< 1.0
Xylene	DETSC 3322	1	ug/l	< 1.0	< 1.0
MTBE	DETSC 3322	1	ug/l	< 1.0	< 1.0
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	15	61
Acenaphthylene	DETSC 3304	0.01	ug/l	11	4.6
Acenaphthene	DETSC 3304	0.01	ug/l	23	51
Fluorene	DETSC 3304	0.01	ug/l	16	52
Phenanthrene	DETSC 3304	0.01	ug/l	87	240
Anthracene	DETSC 3304	0.01	ug/l	25	58
Fluoranthene	DETSC 3304	0.01	ug/l	170	210
Pyrene	DETSC 3304	0.01	ug/l	220	230
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	65	110
Chrysene	DETSC 3304	0.01	ug/l	60	93
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	67	100
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	25	40
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	53	94
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	34	55
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	7.1	8.5
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	36	55
PAH Total	DETSC 3304	0.2	ug/l	910	1500

Information in Support of the Analytical Results

Our Ref 26-00195
 Client Ref ~ A6542
 Contract ~ Derby Street Cheetham Hill

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date		Containers Received	Holding time exceeded for tests	Incorrect container for tests
		Sampled ~				
2622390	WS02 4.98 GROUND WATER	05/01/26		GB 1L x2, GV x2, PB 1L	pH/Cond (1 days)	
2622391	WS04 4.43 GROUND WATER	05/01/26		GB 1L x2, GV x2, PB 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results
 * -not accredited.
 # -MCERTS (accreditation only applies if report carries the MCERTS logo).
 \$ -subcontracted.
 n/s -not supplied.
 I/S -insufficient sample.
 U/S -unsuitable sample.
 t/f -to follow.
 nd -not detected.

End of Report Ver 25.10.03

APPENDIX 6

GROUND GAS MONITORING DATA

GAS MONITORING RECORD SHEET

JOB DETAILS

Site: 54 Derby St, Cheetham Hill	Job No: A6542
Date: 12/12/2025	Engineer: RS
Time: 13:20	Client:

METEOROLOGICAL & SITE INFORMATION

State of ground:	Dry	Moist	Wet <input checked="" type="text"/>		
Wind:	Calm <input checked="" type="text"/>	Light	Moderate	Strong	
Cloud cover:	None <input checked="" type="text"/>	Slight	Cloudy	Overcast	
Precipitation:	None <input checked="" type="text"/>	Slight	Moderate	Heavy	
Barometric pressure (mb):	1,007		Local pressure system*:	Steady	
			Air temperature (°C):	9	

Well No.	Time (s)	Flow (l/hr)	CH ₄ (% vol. in air)	CO ₂ (% vol. in air)	O ₂ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Total Depth (mbgl)	Comments
WS02	0	0.0	0.0	1.0	13.2		4.28	5.50	H2S: 0 CO: 0
	15	0.0	0.0	2.1	13.2				
	30	0.0	0.0	2.2	13.2				
	45	0.0	0.0	2.2	13.2				
	60	0.0	0.0	2.2	13.2				
	120	0.0	0.0	2.1	13.2				
	180	0.0	0.0	2.1	13.3				
	240	0.0	0.0	2.2	13.3				
	300	0.0	0.0	2.3	13.2				
WS04	0	0.0	0.0	0.2	14.7		3.75	5.85	H2S: 0 CO: 0
	15	0.0	0.0	4.0	13.3				
	30	0.0	0.0	10.2	11.8				
	45	0.0	0.0	9.2	10.4				
	60	0.0	0.0	8.2	9.0				
	120	0.0	0.0	8.3	6.5				
	180	0.0	0.0	8.3	5.9				
	240	0.0	0.0	7.2	5.8				
	300	0.0	0.0	6.8	5.7				

Notes: TOC = top of casing

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
 * With reference to the Met Office rolling weather archive

	Flow (l/hr)	CH ₄	CO ₂	O ₂
MIN	0.0	0.0	0.2	5.7
MAX	0.0	0.0	10.2	14.7
GSV		0	0	

GAS MONITORING RECORD SHEET

JOB DETAILS

Site: 54 Derby St, Cheetham Hill	Job No: A6542
Date: 22/12/2025	Engineer: RS
Time: 14:10	Client:

METEOROLOGICAL & SITE INFORMATION

State of ground:	Dry	Moist	Wet <input checked="" type="text"/>	
Wind:	Calm	Light <input checked="" type="text"/>	Moderate	Strong
Cloud cover:	None	Slight	Cloudy	Overcast <input checked="" type="text"/>
Precipitation:	None <input checked="" type="text"/>	Slight	Moderate	Heavy
Barometric pressure (mb):	1001-1000		Local pressure system*:	Falling
Air temperature (°C): 11				

Well No.	Time (s)	Flow (l/hr)	CH ₄ (% vol. in air)	CO ₂ (% vol. in air)	O ₂ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Total Depth (mbgl)	Comments
WS02	0	0.0	0.0	0.5	13.9		4.04	5.50	H2S: 0 CO: 0
	15	0.0	0.0	4.5	12.8				
	30	0.0	0.0	5.2	12.0				
	45	0.0	0.0	5.5	11.7				
	60	0.0	0.0	5.9	10.8				
	120	0.0	0.0	4.8	9.7				
	180	0.0	0.0	4.6	9.7				
	240	0.0	0.0	6.3	9.5				
	300	0.0	0.0	5.6	9.2				
WS04	0	0.0	0.0	0.5	14.2		3.66	5.85	H2S: 0 CO: 0
	15	0.0	0.0	6.7	13.4				
	30	0.0	0.0	7.8	11.4				
	45	0.0	0.0	7.3	10.2				
	60	0.0	0.0	8.2	9.3				
	120	0.0	0.0	8.8	7.2				
	180	0.0	0.0	8.4	6.4				
	240	0.0	0.0	8.1	6.4				
	300	0.0	0.0	8.2	6.4				

Notes: TOC = top of casing

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
 * With reference to the Met Office rolling weather archive

	Flow (l/hr)	CH ₄	CO ₂	O ₂
MIN	0.0	0.0	0.5	6.4
MAX	0.0	0.0	8.8	14.2
GSV		0	0	

GAS MONITORING RECORD SHEET

JOB DETAILS

Site: 54 Derby St, Cheetham Hill
 Date: 05/01/2026
 Time: 13:45

Job No: A6542
 Engineer: RS
 Client:

METEOROLOGICAL & SITE INFORMATION

State of ground: Dry ☐ Moist ☐ Wet ☒
 Wind: Calm ☒ Light ☐ Moderate ☐ Strong ☐
 Cloud cover: None ☒ Slight ☐ Cloudy ☐ Overcast ☐
 Precipitation: None ☒ Slight ☐ Moderate ☐ Heavy ☐
 Barometric pressure (mb): 1,004 Local pressure system*: Steady Air temperature (°C): 2

Well No.	Time (s)	Flow (l/hr)	CH ₄ (% vol. in air)	CO ₂ (% vol. in air)	O ₂ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Total Depth (mbgl)	Comments
WS02	0	0.0	0.0	0.4	14.4		4.98	5.50	H2S: 0 CO: 0
	15	0.0	0.0	1.8	14.2				Water Samples
	30	0.0	0.0	2.0	13.9				0.92 mg/l
	45	0.0	0.0	2.0	13.6				11.8C
	60	0.0	0.0	2.0	13.4				8.3% SAT
	120	0.0	0.0	2.0	13.0				24 ppm
	180	0.0	0.0	2.0	12.9				6.99 ph
	240	0.0	0.0	2.0	12.8				-61 mV
	300	0.0	0.0	2.0	12.8				48 us
WS04	0	0.0	0.0	0.2	14.6		4.43	5.85	H2S: 0 CO: 0
	15	0.0	0.0	1.8	14.5				Water Samples
	30	0.0	0.0	2.2	14.0				9.04 mg/l
	45	0.0	0.0	2.3	13.7				11.9C
	60	0.0	0.0	2.3	13.4				82.6% SAT
	120	0.0	0.0	2.5	12.7				25 ppm
	180	0.0	0.0	2.6	12.7				6.74 ph
	240	0.0	0.0	2.6	12.3				194 mV
	300	0.0	0.0	2.9	11.8				50 us

Notes: TOC = top of casing

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
 * With reference to the Met Office rolling weather archive

	Flow (l/hr)	CH ₄	CO ₂	O ₂
MIN	0.0	0.0	0.2	11.8
MAX	0.0	0.0	2.9	14.6
GSV		0	0	

GAS MONITORING RECORD SHEET

JOB DETAILS

Site: 54 Derby St, Cheetham Hill	Job No: A6542
Date: 20/01/2026	Engineer: RS
Time: 13:16	Client:

METEOROLOGICAL & SITE INFORMATION

State of ground:	Dry	Moist	Wet <input checked="" type="text"/>	
Wind:	Calm	Light	Moderate <input checked="" type="text"/>	Strong
Cloud cover:	None	Slight <input checked="" type="text"/>	Cloudy	Overcast
Precipitation:	None <input checked="" type="text"/>	Slight	Moderate	Heavy
Barometric pressure (mb): 995-994		Local pressure system*: Falling		Air temperature (°C): 10

Well No.	Time (s)	Flow (l/hr)	CH ₄ (% vol. in air)	CO ₂ (% vol. in air)	O ₂ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Total Depth (mbgl)	Comments
WS02	0	0.0	0.0	0.3	14.3		4.42	5.50	H2S: 0 CO: 0
	15	0.0	0.0	4.5	13.2				
	30	0.0	0.0	8.1	11.0				
	45	0.0	0.0	8.1	9.6				
	60	0.0	0.0	8.2	8.2				
	120	0.0	0.0	8.5	5.6				
	180	0.0	0.0	8.9	4.3				
	240	0.0	0.0	9.3	3.5				
	300	0.0	0.0	9.4	3.1				
WS04	0	0.0	0.0	0.1	14.4		4.05	5.85	H2S: 0 CO: 0
	15	0.0	0.0	4.5	13.4				
	30	0.0	0.0	7.2	12.1				
	45	0.0	0.0	7.4	10.7				
	60	0.0	0.0	7.8	9.8				
	120	0.0	0.0	7.4	7.9				
	180	0.0	0.0	8.1	7.2				
	240	0.0	0.0	7.8	7.3				
	300	0.0	0.0	8.1	7.1				

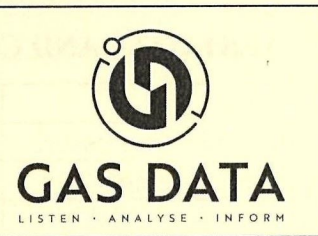
Notes: TOC = top of casing

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
 * With reference to the Met Office rolling weather archive

	Flow (l/hr)	CH ₄	CO ₂	O ₂
MIN	0.0	0.0	0.1	3.1
MAX	0.0	0.0	9.4	14.4
GSV		0	0	

TEST DATE AND CONDITIONS	
Date	29/01/25
Atmospheric pressure	967mb
Ambient Temp	22.7°C
Enviroics Serial No.	2633

GAS DATA LTD
Unit D,
Earlplace Business Park,
Coventry,
CV4 9XL, UK
+44 (0) 24 7630 3311



GFM436-1 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

INSTRUMENT DETAILS	
Serial No	Customer
14264	Ribble Enviro Ltd

INSTRUMENT CHECKS			
Keyboard	✓	Pump Flow	500cc/min
Display Contrast	✓	Pump Flow @ -200mB	300cc/min
Clock Set / Running	✓	S/W Version	G436.0029/0011
Labels Fitted	✓	Recalibration Date	29/01/26

GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+/-0.1
CH4	5%	4.9	+/-0.3	0.0	0.0	0.0	+/-0.1
	60%	59.4	+/-3.0	0.0	0.0	0.0	+/-0.1
CO2	5%	0.0	0.0	5.0	+/-0.3	0.0	+/-0.1
	40%	0.0	0.0	39.9	+/-3.0	0.0	+/-0.1
O2	20.9%	0.0	0.0	0.1	+0.1	21.0	+/-0.5

OPTIONAL GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	Label	H2S	CO		Hexane	tol. (% vol.)
		Range	5000ppm	2000ppm		2.00%	
N2	100%		0	0		0.000	0.0
H2S	1500ppm		1500	0			+/- 5.0
CO	1000ppm		80	998			+/- 5.0
Hexane	2.00%					2.073	+/- 10.0

PRESSURE CHECKS							
Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)				
All Ports	Current Atmospheric	968	+/-2.0				
Ap Port (Internal)	+800mB(a)	800	+/-5.0				
	+1200mB(a)	1199	+/-5.0				

TEST DATE AND CONDITIONS	
Date	29/01/25
Atmospheric pressure	967mb
Ambient Temp	22.7°C
Envionics Serial No.	2633

GAS DATA LTD	 GAS DATA LISTEN • ANALYSE • INFORM
Unit D,	
Earlplace Business Park,	
Coventry,	
CV4 9XL, UK	
+44 (0) 24 7630 3311	

GFM436-1 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

FLOW CHECKS					
Calibration Flow		Instrument Flow Channels Read			
Applied Flow (l/hour)	Applied Pressure (Pa)	Flow [Flow] (l/hour)	tol. (l/hour)	Differential Pressure [Dp] (Pa)	tol. (Pa)
-30.0	-415	-29.8	+/-3.0	-426	+/-50
-3.0	-20	-3.0	+/-1.0	-20	+/-6
0.0	0	0.0	0.0	0	0.0
+3.0	16	3.0	+/-0.5	16	+/-3
+30.0	352	29.7	+/-3.0	349	+/-50
+60.0	1076	59.6	+/-6.0	1068	+/-130
+90.0	2147	91.3	+/-9.0	2217	+/-250

TEMPERATURE CHECK		
Calibration Temperature	Instrument Temperature Channel Read	
Applied Equivalent Temperature (°C)	Temperature [Temp] (°C)	tol. (°C)
-10.0	-10.0	+/- 2.0
0.0	0.0	+/- 1.0
30.0	30.0	+/- 1.0
60.0	60.0	+/- 1.0
100.0	100.0	+/- 1.0

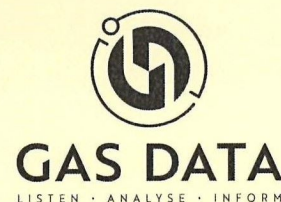
Notes:

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO 14001:2015 and BS EN ISO 45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to: BS EN ISO 9001:2015
 BS EN ISO 14001:2015
 BS EN ISO 45001:2018

TEST DATE AND CONDITIONS	
Date	31/01/25
Atmospheric pressure	1007 mb
Ambient Temp	22.1 °C
Enviroics Serial No.	3268

GAS DATA LTD
Unit D,
Earlplace Business Park,
Coventry,
CV4 9XL, UK
+44 (0) 24 7630 3311



GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS					
SO Number	Instrument Banner	Instrument Serial Number + SW Version	Job Number(s)		
341184	GFM436	14264 V29.11	29648	—	—

Calibration Technician

DATE

29/11/25

Inspection Technician

DATE

31/01/25

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable(NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All keys)	P	Leather Case		✓
	Backlight Test	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mb)	N/A	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe		✓
	Service Date set to?	29/01/26	Hard Carry Case		✓
Channel Tests	Data Logging Enabled?	P	Spares Pot		✓
	Verify CH4/LEL/Hexane/PID	P	Allen Key		✓
	Verify CO2	P	Flow Sample Pipe		✓
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		✓
	Verify LEL	P	USB Memory Stick		X
	Verify 1st Option gas	N/A	SM V5 Software	Ver	X
	Verify atmospheric pressure	P	Internal Filter Pack	Qty	X
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	EX Safety Flier		✓
	Verify vane anemometer input	P	Extra Items:		
DataBase Checks	Jobcard(s) completed and signed	P			
	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	N/A			
Label Checks	No. of Calibration label fitted	12927	Comments		
	MCERTS label not displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from SO	5000 ppm			
	H2S Range from cal cert	5000 ppm			
	Over-range value correct?	P			

APPENDIX 7

REPORT LIMITATIONS

REPORT LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with all reasonable skill, and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget, and staff resources allocated to the project.

Other than that, expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2026 and should be read in light of any subsequent changes in legislation, statutory requirements, and industry best practices. Ground conditions can also change over time and further investigations, or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice of Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.

Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas or other radioactive materials.

The services are based upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth Environmental & Geotechnical Ltd interpretation of information including documentation, obtained

from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy and that it has been provided in full of those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site.