







EARTH ENVIRONMENTAL & GEOTECHNICAL
A Technics Group Company

Phase 2 GeoEnvironmental Site Investigation Report

Jubilee Works

Manchester

On behalf of

PHA Architects

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EARTH ENVIRONMENTAL & GEOTECHNICAL
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PHASE 2 GEOENVIRONMENTAL

GROUND INVESTIGATION REPORT

JUBILEE WORKS, CLIFFTON STREET

MANCHESTER

FOR

PHA ARCHITECTS

Earth Environmental & Geotechnical Ltd
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1.0 INTRODUCTION

1.1 Background

A site investigation has been commissioned by PHA Architects (the Client) to examine ground conditions for a proposed new development at Jubilee Works, Clifton St, Miles Platting, Manchester.

1.2 Terms of Reference

The Client has commissioned Earth Environmental & Geotechnical Ltd (EEG) to undertake a site investigation in accordance with proposal A7738/26 dated 20th April 2026. 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 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.*

1.3 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 collected information has been used to interpret the ground conditions and to provide recommendations on geotechnical design and potential risks of ground contamination for the proposed development.

1.4 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.

2.0 SITE LOCATION & DESCRIPTION

The site (0.36 hectares) is currently unoccupied.

The approximate National Grid Reference for the centre of the site is SJ 86797 99630 (X: 386797, Y: 399630) with the nearest postcode being M40 8HN.

The site is an irregularly shaped parcel of land with maximum dimensions of approximately 69m east-west and 71m north-south.

The site comprises an open area with small patches of shrubs and trees, with small buildings present to the south of the site. The entire site is covered by concrete.

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

The site is situated in an industrial area approximately 700m north of the Co-op Live arena.

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.

Figure 2: Site Photographs

Photograph facing east, showing the site access



Photograph facing east, showing an overview of the site



2.1 Proposed Development

It is understood that the client proposes to construct a new industrial property covering the majority of the site.

The proposed development layout has not been provided at the time of reporting.

3.0 SITE INVESTIGATION

3.1 Exploratory Fieldwork

The fieldwork was carried out by EEG on the 15th June 2026 and comprised:

- 3no. window sample boreholes (designated WS1 & WS3) were sunk to a maximum depth of 8.00m below the existing ground level. 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. Windowless sampler boring is carried out with a small, track-mounted rig, which uses a chain-driven trip hammer to drive sampling tubes or penetrometers into the ground. These tools are coupled to the anvil of the hammer by solid drill rods. Sampling tubes comprise "windowless samplers", which are plain sampler tubes in which a continuous disturbed sample is recovered within a semi-rigid plastic liner. To reduce friction within the borehole, sampling tubes of progressively smaller diameter are used as the borehole depth increases. Sampler diameters generally range from between approximately 90mm to 50mm. Standard Penetration Tests (SPTs) were undertaken in the boreholes in accordance with BS EN ISO 22476-3. Groundwater observations were noted where possible. These observations relate to the time of the investigation only, and do not necessarily reflect seasonal fluctuations.

Exploratory hole logs are included in Appendix 1.

Exploratory hole locations were selected by EEG Ltd before 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
WS1 – WS3	Provide an overview of the site

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(2018), BS EN 14688-2(2018) and BS EN 14689(2018).

All sampling locations were surveyed using a handheld Trimble GeoXH GPS instrument capable of achieving sub-10 mm accuracy, depending on satellite coverage and proximity to trees and buildings.

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.

Table 2: Shear Strength Definitions

Term based on measurement	Undrained Strength (c_u) definition in kN/m² (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 3, overleaf.

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

Table 3: Summary of Exploratory Holes Undertaken

Hole/ Test	Type*	Depth (m)	Date Started	Date Finished	Easting (m)	Northing (m)	Backfill Details**
WS01	WS	8.00	15/06/26	15/06/26	386782	399613	A
WS02	WS	8.00	15/06/26	15/06/26	386797	399632	A
WS03	WS	8.00	15/06/26	15/06/26	386808	399653	A

*WS = Window Sample Borehole
**A = Arisings

Figure 3: 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. 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	6
Liquid Limit, Plastic Limit, Plasticity Index	BS1377-2:2022, Cl. 5.3/ 6	6
Sulphate content of 2:1 soil: water extract	BS1377-3:2018 + A1:2021, Cl. 7.3	4
pH value	BS1377-3:2018 + A1:2021, Cl. 12	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 through specialist chemical analysis of selected samples, scheduled by EEG and carried out by Normec DETS, a UKAS- and MCERTS-accredited laboratory.

Chemical analyses were carried out on 7no. soil samples 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 (SO_4), Sulphide, pH, Soil Organic Matter, Speciated Petroleum Hydrocarbons and Speciated Polycyclic Aromatic Hydrocarbons (PAH).

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

The complete results of the laboratory contamination tests are discussed in Section 7 and presented in Appendix 3.

4.0 GROUND CONDITIONS ENCOUNTERED

4.1 Local Recorded Geology

The BGS records indicate that superficial deposits of Devensian Till underlie the site and generally comprises of over consolidated clay, silt and sand deposits with or without boulders.

The bedrock geology beneath the site is shown to be of the Pennine Middle Coal Measures Formation in the north of the site and the Pennine Upper Coal Measures Formation under the rest of the site.

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 depth of 1.10m bgl, generally comprising:
    - Grey silty sandy angular fine to coarse GRAVEL of sandstone. Sand is fine to coarse.
    - Dark brown silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular fine to coarse of sandstone and brick.

- **Superficial Deposits** were encountered in all exploratory holes, to a maximum depth of 8.00m bgl, generally comprising:
    - Stiff becoming firm light brown silty sandy CLAY. Sand is fine to coarse.
    - Firm brown silty sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone.

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

4.3 Observable Indications of Contamination

No observable indication of visual or olfactory evidence of contamination was encountered.

4.4 Obstructions

No obstructions were encountered during the site investigation.

4.5 Groundwater

Groundwater, assumed to be perched, was encountered during the ground investigation exclusively within WS01 at 1.40m bgl.

Table 5: Summary of Ground Conditions Encountered

Hole	Depth to Stratum (m bgl)		Groundwater Strike (m bgl)
	Made Ground	Superficial	
		Clay	
WS01	GL – 1.00	1.00 – 8.00	1.40
WS02	GL – 1.10	1.10 – 8.00	DRY
WS03	GL – 0.90	0.90 – 8.00	DRY

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	pH Value	Water Soluble Sulphate SO_4 (mg/l)
WS01	1.50	CLAY	14.9	37	13	24	98	23.5	7.2	230
WS01	2.30	CLAY	15.8	34	13	21	59	12.4	-	-
WS02	1.80	CLAY	18.4	35	14	21	98	20.6	7.4	270
WS02	2.50	CLAY	18.1	34	14	20	96	19.2	7.1	180
WS03	1.10	CLAY	16.1	33	13	20	97	19.4	7.1	210
WS03	2.50	CLAY	17	35	14	21	97	20.4	-	-

5.2 Made Ground

Made Ground was encountered in all exploratory boreholes between ground level and a maximum depth of 1.10m below ground level.

Due to the material's thickness and composition, no geotechnical testing was conducted in the made ground.

5.3 Made Ground

Made Ground was encountered across the site from depths of between ground level and 2.10m bgl.

SPT tests were not carried out in the made ground.

Due to the material encountered, no laboratory geotechnical testing was carried out in the Made Ground.

5.4 Superficial Deposits

As discussed in Section 4, superficial material was encountered as variable clay in all exploratory hole locations.

5.4.1 Clay

Clay was encountered in Wall exploratory holes, below the made ground, to depths of 8.00m bgl.

SPT tests carried out in the clay resulted in **SPT N values** between 10 and 50, as shown on the SPT v Depth Plot in Figure 4 (overleaf). This result suggests the clay is firm to very stiff.

Atterberg Limit tests were carried out on 6no. samples of the clay. The test results reported liquid limit values of 33% to 37% and plastic limit values of 13% to 14%, resulting in a plasticity index of 20% to 24%.

These results suggest that the clay is of **low to intermediate plasticity**.

Results are shown on the Plasticity Chart in Figure 5, overleaf.

The **water-soluble sulphate** content of 4no. tested clay samples ranged from 180mg/l to 270mg/l SO_4, together with **pH values** of 7.1 to 7.4.

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

Table 7: Summary of Design Parameters

Depth	SPT N Value Range	Design N Value*	Equivalent Shear Strength** (kN/m²)	Coefficient of Volume Compressibility** (m²/MN)
1.20	10 – 13	12.00	62.40 (Medium Strength)	0.16 (Medium Compressibility)
2.00	16 – 31	18.25	94.90 (High Strength)	0.11 (Medium Compressibility)
3.00	15 – 28	18.00	93.60 (High Strength)	0.08 (Low Compressibility)
4.00	14 – 32	19.00	98.80 (High Strength)	0.10 (Low Compressibility)
5.00	19 – 33	21.25	110.50 (High Strength)	0.09 (Low Compressibility)
6.00	19 – 29	25.00	130.00 (High Strength))	0.08 (Low Compressibility)
7.00	28 – 40	30.00	156.00 (Very High Strength)	0.06 (Low Compressibility)
8.00	30 – 50	31.50	163.80 (Very High Strength)	0.06 (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, when assessing ultimate bearing capacities where lower values are critical, the lower quartile of N values be used. Based on the N Values in the above table, the equivalent shear strength values were between 62.40 and 163.80kN/m².

For design purposes, a plasticity index of 21% is recommended, based on the upper-quartile value of the results.

The **coefficient of volume compressibility (mv)** has been estimated using the following correlation from Stroud and Butler (1975): for a clay with a plasticity index of 21%, mv = 1/(0.520 × N-value). This correlation gives a value of the coefficient of volume compressibility of 0.16 to 0.06m²/MN, as shown in Table 7, above. The results suggest the clay has a **medium to 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:

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

I'_p = modified plasticity index,
I_p = plasticity index.

Based on the laboratory test results, the above relationship and Table 1 in NHBC Chapter 4.2, the clay samples exhibit a **low to medium volume change potential**.

The **Natural Moisture Content** (NMC) and **Liquid Limit** (LL) of the soil can 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	1.50	37	14.8	14.9	No
WS01	2.30	34	13.6	15.8	No
WS02	1.80	35	14.0	18.4	No
WS02	2.50	34	13.6	18.1	No
WS03	1.10	33	13.2	16.1	No
WS03	2.50	35	14.0	17	No

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

Figure 4: SPT v Depth Plot

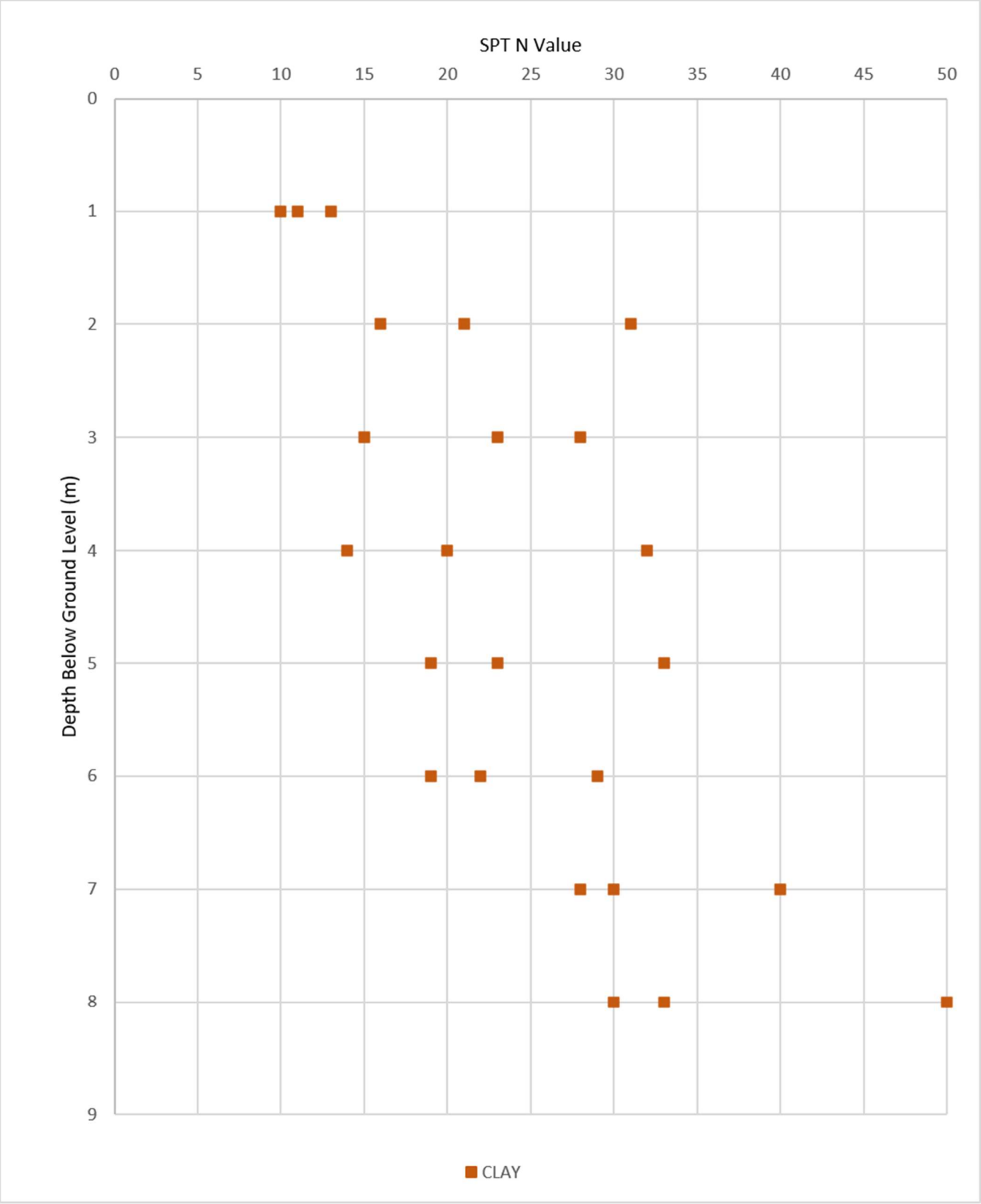
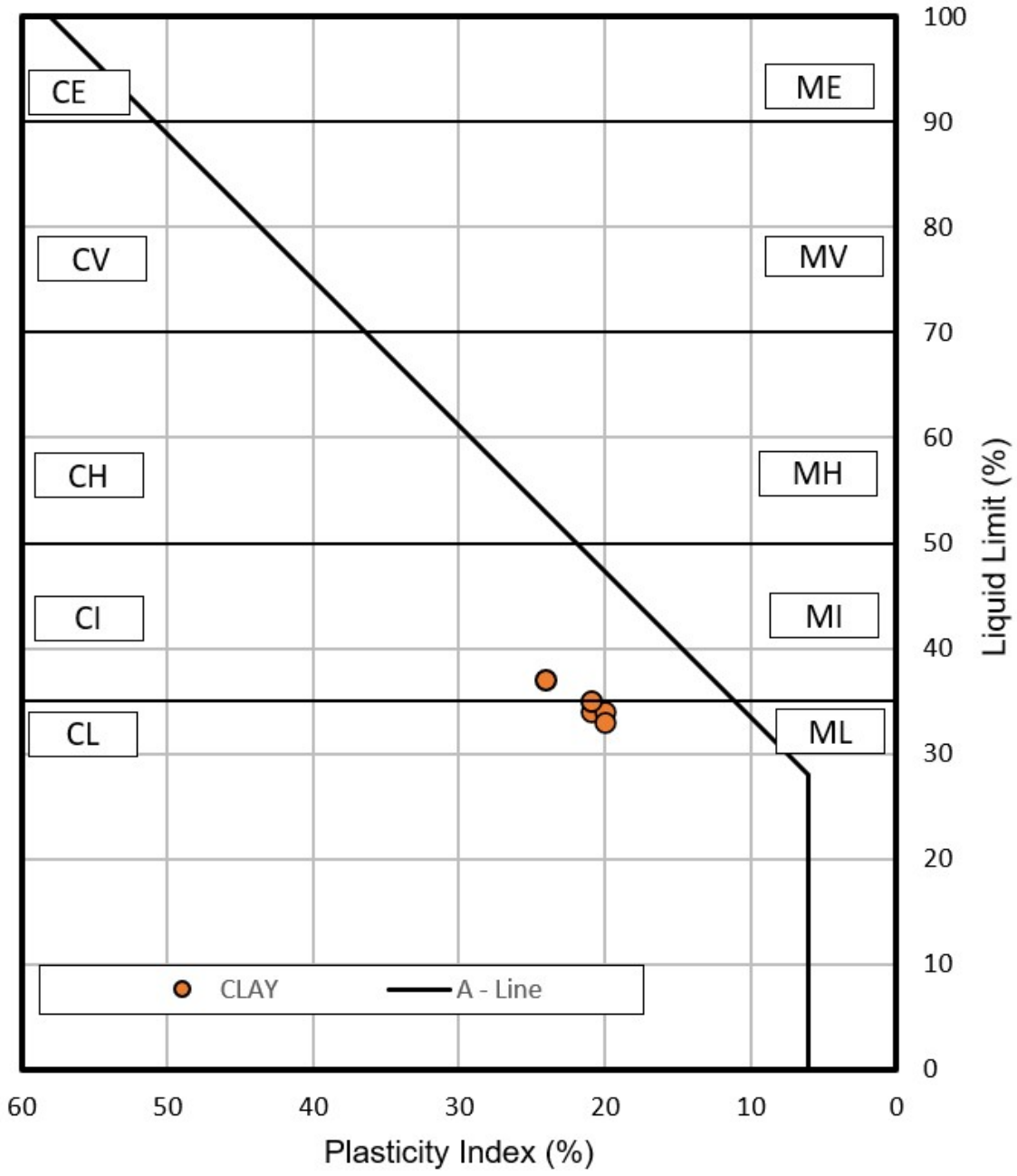


Figure 5: Plasticity Chart



6.0 GEOTECHNICAL ASSESSMENT

6.1 Proposed Development

It is understood that the client proposes to construct a new industrial property covering the majority of the site.

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 made ground between ground level and a maximum depth of 1.10m bgl, underlain by variable superficial deposits interpreted as firm to very stiff silty, sandy, gravelly CLAY, to a maximum depth of 8.00m bgl.

Groundwater was encountered during the ground investigation exclusively within WS01 at 1.40m bgl.

Given the ground conditions, the encountered water is assumed to be perched.

6.3 Foundation Considerations

Based on the ground conditions encountered, conventional shallow foundations (strip/pad or trench fill) placed in superficial deposits should be suitable for the proposed development, provided the anticipated structural loadings are relatively low and the structure is tolerant of settlement.

Should the allowable bearing pressure and settlement prove unfavourable, then alternative foundation options will need to be considered, such as ground improvement and piles.

6.3.1 Conventional Shallow-Depth Strip/Pad Foundations

Strip/pad foundations should be placed in the natural superficial deposits, below any topsoil or made ground.

If any Made Ground, particularly loose or soft material, is encountered at the foundation level, it should be excavated and replaced with suitable granular fill, or the foundation extended at least 150mm into suitable natural strata.

Foundations should be placed in materials with similar bearing and consolidation characteristics to avoid differential settlement. When foundations cross from cohesive to granular soils, nominal reinforcement should be incorporated to mitigate differential settlement.

Table 9 summarises anticipated allowable bearing pressures for strip/pad foundations placed in the superficial deposits. The bearing capacities are calculated based on Hansen's (1978) method and assuming a factor of safety against bearing capacity failure of 3.

For this calculation, groundwater is assumed to be at 1.40m bgl, based on the groundwater strike identified in WS01.

Table 9: Summary of Allowable Bearing Pressures

Foundation Strata	Design Value (Section 8)	Foundation Depth (m bgl)	Foundation Type	Foundation Size (m)	Allowable Bearing Pressure (kN/m²)
CLAY	c_u=62.40kN/m²	1.0	Strip	0.6	157
				0.9	149
			Pad	1.0 x 1.0	174
				2.0 x 2.0	157
	c_u=62.40kN/m²	1.5	Strip	0.6	167
				0.9	160
			Pad	1.0 x 1.0	187
				2.0 x 2.0	169
	c_u=94.90kN/m²	2.0	Strip	0.6	256
				0.9	248
			Pad	1.0 x 1.0	279
				2.0 x 2.0	253
	c_u=94.90kN/m²	2.5	Strip	0.6	261
				0.9	254
			Pad	1.0 x 1.0	298
				2.0 x 2.0	275

Table 10 summarises the anticipated settlements of the above foundations in cohesive and granular soils, respectively, based on the design values discussed in Section 5. Settlement in cohesive soils typically comprises a small amount of immediate settlement as loads are applied and a larger proportion of consolidation settlement, which occurs over a longer period, whereas settlement in granular soils typically comprise a large amount of immediate settlement as loads are applied with a smaller proportion of consolidation settlement, which occurs over a longer period.

Foundations within the zone of influence of trees will need to be adjusted based on soil plasticity and the type of retained/felled trees or hedges.

As the proposed foundation loading is not known, for the purposes of these calculations a foundation loading of 75kN/m² has been used, based on the know proposed development.

Table 10: Summary of Anticipated Settlement

Foundation Strata	Foundation Depth (m bgl)	Foundation Type	Foundation Size (m)	Foundation Loading (kN/m²)	Settlement (mm)		
					At Centre	At Corner	Average
CLAY	1.0	Strip	0.6	75	-	-	**8**
			0.9	75	-	-	**10**
		Pad	1.0 x 1.0	75	13	3	**10**
			2.0 x 2.0	75	20	5	**15**
	1.5	Strip	0.6	75	-	-	**7**
			0.9	75	-	-	**9**
		Pad	1.0 x 1.0	75	11	3	**9**
			2.0 x 2.0	75	18	5	**14**
	2.0	Strip	0.6	75	-	-	**6**
			0.9	75	-	-	**8**
		Pad	1.0 x 1.0	75	10	2	**7**
			2.0 x 2.0	75	16	4	**12**
	2.5	Strip	0.6	75	-	-	**6**
			0.9	75	-	-	**7**
		Pad	1.0 x 1.0	75	9	2	**7**
			2.0 x 2.0	75	15	4	**11**

Floor slabs should be designed as suspended if made ground of 600mm thickness or greater is present. Made ground is not considered an appropriate bearing stratum due to its variable nature. Floor slabs may be designed as ground-bearing when the ground is excavated and replaced with suitable granular fill.

A suitably qualified engineer should inspect all foundation excavations to confirm that the founding strata are suitable and uniform along the length of the foundation, and capable of carrying the anticipated structural loads. If foundations cross from granular to cohesive soils, nominal reinforcement should be incorporated.

6.4 Pavement Design

The ground investigation identified that the soil type at the subgrade level is typically topsoil underlain by soft clay. 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 require pavements to be constructed on variable-made ground. In this context, a flexible pavement design may be necessary.

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

Note that the construction type 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 11: 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 using equipment suitable for 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 neutral conditions. 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 in 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 earthworks specifications are reviewed by a suitably qualified engineer once prepared by the relevant parties.

Granular and natural sand may be suitable for reuse as structural fill, provided it is uncontaminated, contains no excessive clay, and its moisture content is controlled during placement. Moisture content control will be necessary, as the cohesive content of this stratum is likely sensitive to moisture variations.

6.7 Temporary Works

Formations will be susceptible to damage from both weather and traffic, 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 seepage may occur 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 12: 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	Min	Max	
pH (acid)	6 - 7	5 - 6	4 - 5	2 - 4	<2	-	-	-
pH (alkaline)	7 - 8	8 - 9	9 - 10	10 - 12	12	7.9	11.3	A – D
Arsenic	0 - 30	30 - 50	50 - 100	100 - 500	500	8.5	49	A – B
Cadmium	0 - 1	1 - 3	3 - 10	10 - 50	50	0.2	0.9	A
Chromium	0 - 100	100 - 200	200 - 500	500 - 2500	2500	15	28	A
Copper	0 - 100	100 - 200	200 - 500	500 - 2500	2500	41	910	A – D
Lead	0 - 500	500 - 1000	1000 - 2000	2000 – 1%	1.0%	36	1400	A – C
Mercury	0 - 1	1 - 3	3 - 10	10 - 50	50	<0.05	0.30	A
Nickel	0 - 20	20 - 50	50 - 200	200 - 1000	1000	17	32	A – B
Zinc	0 - 250	250 - 500	500 - 1000	1000 - 5000	5000	94	1500	A – D
Boron	0 - 2	2 - 5	5 - 50	50 - 250	250	0.4	2.1	A – B
Selenium	0 - 1	1 - 3	3 - 10	10 - 50	50	<0.5	0.6	A
Barium	0-500	500-1000	1000-2000	2000-1.0%	1.0%	140	1200	A – C
Beryllium	0 - 5	5 - 10	10 - 20	20 - 50	50	0.3	1.3	A
Vanadium	0 - 100	100 - 200	200 - 500	500 - 2500	2500	21	36	A
Sulphate	0 - 2000	2000 - 5000	5000 – 1%	1% - 5%	5.05%	120	520	A
Sulphide	0 - 10	10 - 20	20 - 100	100 - 500	500	28	56	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	8.2	A – C

Based on the above results, the soils range from uncontaminated to contaminated. Therefore, there is a **MODERATE** risk of soil contamination to construction workers, ground workers, and members of the public during construction. Appropriate measures, such as PPE, site health plans, and proper disposal of materials arising, 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 those for commercial end developments as 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 the Lowest Level of Toxicological Concern (LLTCs)). The policy companion document and supporting letter from DEFRA state that C4SLs may be used under the planning regime and 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 patterns to C4SLs have been applied. 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 considers the main risk drivers for PAHs to be benzo(a)pyrene (B(a)P) and naphthalene.

This is due to B(a)P being a carcinogen and the most toxic of the PAHs, and to naphthalene being 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 against commercial end-use criteria for 6% soil organic matter content, based on a calculated average soil organic matter from the tested samples across the site.

The soil chemical testing results are summarised in Table 13 overleaf.

Table 13: Soil Results Comparison with C4SL/S4UL Values

Determinant	C4SL/S4UL Levels Commercial SOM 6% (mg/kg)	WS01 0.50m	WS01 0.90m	WS02 0.25m	WS02 0.70m	WS02 1.00m	WS03 0.20m	WS03 0.75m	No of Exceedances
Metals									
Arsenic	640	49	8.9	12	8.5	19	9.2	19	0
Beryllium	12	0.8	1.3	0.3	0.7	0.8	0.5	0.7	0
Boron	240000	0.8	0.6	0.4	0.9	0.6	1.4	2.1	0
Cadmium	410	0.7	0.2	0.9	0.6	0.9	0.4	1.1	0
Chromium	8600	26	22	17	28	21	15	15	0
Chromium VI	49	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0
Copper	68000	490	41	68	910	190	260	140	0
Lead	2300	1400	36	120	120	150	77	130	0
Inorganic Mercury	5100	0.30	< 0.05	0.09	< 0.05	0.16	< 0.05	0.15	0
Nickel	980	31	32	19	24	28	17	25	0
Selenium	12000	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	0
Vanadium	9000	36	25	26	27	33	21	30	0
Zinc	730000	350	94	230	1500	320	680	470	0
Polycyclic Aromatic Hydrocarbons									
Naphthalene	8400	0.41	0.31	0.45	< 0.10	< 0.10	0.18	0.24	0
Acenaphthylene	100000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.17	0
Acenaphthene	100000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.58	0.15	0
Fluorene	71000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.71	0.40	0
Phenanthrene	23000	0.62	0.33	0.95	< 0.10	< 0.10	3.1	1.3	0
Anthracene	540000	1.7	1.4	1.8	< 0.10	< 0.10	0.90	0.99	0
Fluoranthene	23000	2.2	0.65	3.0	< 0.10	< 0.10	4.3	4.2	0
Pyrene	54000	2.1	0.98	3.3	< 0.10	< 0.10	4.8	4.8	0
Benzo(a)anthracene	180	0.88	< 0.10	2.0	< 0.10	< 0.10	2.5	3.4	0
Chrysene	350	0.78	0.29	1.8	< 0.10	< 0.10	3.2	3.9	0
Benzo(b)fluoranthene	45	0.53	0.34	1.1	< 0.10	< 0.10	2.5	2.7	0
Benzo(k)fluoranthene	1200	0.51	0.31	1.3	< 0.10	< 0.10	2.0	1.9	0
Benzo(a)pyrene	77	< 0.10	< 0.10	3.7	< 0.10	< 0.10	5.2	4.9	0
Indeno(1,2,3-cd)pyrene	510	< 0.10	0.43	1.1	< 0.10	< 0.10	3.0	2.7	0
Dibenz(a,h)anthracene	3.6	< 0.10	0.13	< 0.10	< 0.10	< 0.10	0.54	0.47	0
Benzo(ghi)perylene	4000	< 0.10	0.35	1.5	< 0.10	< 0.10	1.8	2.7	0
Petroleum Hydrocarbons									
Benzene	98	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Toluene	180000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Ethylbenzene	27000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
m-xylenes	31000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
p-xylenes	30000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
o-xylenes	33000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >5-6	12000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >6-8	40000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >8-10	11000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aliphatic EC >10-12	47000	1.9	< 1.5	2.8	< 1.5	< 1.5	4.8	2.9	0
Aliphatic EC >12-16	90000	< 1.2	< 1.2	1.6	< 1.2	< 1.2	6.4	< 1.2	0
Aliphatic EC >16-21	1800000	< 1.5	< 1.5	9.4	< 1.5	< 1.5	23	< 1.5	0
Aliphatic EC >21-35	1800000	17	< 3.4	160	< 3.4	< 3.4	270	26	0
Aromatic EC >5-7	86000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >7-8	180000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >8-10	17000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0
Aromatic EC >10-12	34000	3.7	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	9.7	0
Aromatic EC >12-16	38000	7.0	< 0.5	5.5	< 0.5	< 0.5	5.3	9.9	0
Aromatic EC >16-21	28000	9.1	< 0.6	12	< 0.6	< 0.6	27	14	0
Phenols									
Phenol	3200	3.7	< 0.3	1.1	8.2	< 0.3	< 0.3	0.6	0

Based on the above table, no contaminant concentrations exceed the screening criteria for a commercial end use.

Asbestos fibres were identified in 2no. of the tested samples obtained during the site investigation, all of which have been submitted for asbestos quantification analysis. Full details of the identified asbestos are presented in Table 14 below.

Table 14: Summary of Asbestos Encountered

Location	Depth (m)	Sample Matrix	Asbestos Type	Asbestos Quantification
WS02	1.00	Bundles of Fibres	Chrysotile	<0.001%
WS03	0.20	Bundles of Fibres	Chrysotile	<0.001%

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 15 below and presented in full in Appendix 4.

Table 15: Waste Classification of Soils

Location	Depth (m bgl)	WM3.1 Classification	WAC Testing Classification	Comments
WS01	0.50	Hazardous	-	-
WS01	0.90	Non-Hazardous	-	-
WS02	0.25	Non-Hazardous	-	-
WS02	0.70	Hazardous	Exceeds Hazardous	Elevated TOC, Loss on Ignition and Mineral Oil
WS02	1.00	Non-Hazardous	-	-
WS03	0.20	Non-Hazardous	-	-
WS03	0.75	Non-Hazardous	-	-

The table above shows that 2no. tested samples collected from the site have been classified as **Hazardous** in accordance with WM3.1, while the remaining 5no. samples have been classified as **Non-Hazardous**.

A total of 1no. soil sample has been submitted for Waste Acceptance Criteria (WAC) testing. The sample tested from WS02 at 0.70m bgl exceeded the acceptable Total Organic Carbon (TOC), Loss on Ignition and Mineral Oil limit for disposal at a hazardous waste landfill.

For Waste Acceptance Criteria (WAC) testing, EEG has compared solid waste and leachate values against 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.

Further WAC testing on the remaining samples may prove that the material is acceptable as inert waste.

Table 16: Summary of WAC Test Results

Determinant	Landfill Regulations Limits (mg/kg unless otherwise indicated)			WS02 0.70m (mg/kg)
	Inert Waste	Stable non-reactive hazardous waste	Hazardous Waste	
TOC (%)	3%	5%	6%	**7.8**
Loss on ignition (%)	-	-	10%	**14.0**
BTEX (mg/kg)	6	-	-	<0.04
Sum of PCBs (mg/kg)	1	-	-	<0.01
Mineral Oil (mg/kg)	500	-	-	**880.0**
Total PAH (mg/kg)	100	-	-	<1.6
pH (units)	-	< 6	-	9.0
Acid Neutralisation Capacity (mol/kg)	-	*To be evaluated*		<1.0
Arsenic	0.5	2	25	< 0.01
Barium	20	100	300	0.12
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	0.018
Chloride	800	15000	25000	< 100
Fluoride	10	150	500	3.4
Sulphate	1000	20000	50000	< 100
Total Dissolved Solids	4000	60000	100000	440
Phenol Index	1	-	-	< 1
DOC	500	800	1000	< 50

8.0 CONCEPTUAL SITE MODEL

8.1 Introduction

Following the results of the site investigation and above assessment, a Conceptual Site Model (CSM) has been developed for the site, presented in Table 19.

Table 19 provides a Conceptual Site Model (CSM) which considers the source-pathway-receptor linkages present alongside the likelihood, severity, and risk level as defined within Table 17 and Table 18 below. The assessment of probability, a modified risk table, and certain consequence definitions are based on CIRIA C552 and Land Contamination Risk Management, Environment Agency, July 2023.

Table 19 considers whether a pollution linkage is present and provides a quantitative assessment of risk based on field and laboratory data.

The CSM is based on a continued commercial end use.

Table 17: Consequence, Probability & Risk Table

Probability	Consequence,	Risk
High Likelihood- There is a pollution linkage, and an event either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution	Very High – acute risk to human health, likely to result in significant harm. Risk of severe or irreversible effects on ground/surface water quality. Catastrophic damage to buildings/property.	Very High – there is a high likelihood that the source-pathway-receptor scenarios may harm human health or the environment, and remedial action is likely required.
Likely – there is a pollution linkage, and all the elements are present, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.	High – Severe or irreversible effect on human health. Temporary severe or irreversible effect on ground/surface water quality. Reduction of water quality rendering groundwater or surface water unfit to drink and/or a substantial adverse impact on groundwater-dependent environmental receptors.	High – the source-pathway-receptor scenarios are likely to affect human health or the environment, potentially requiring remediation and/or control measures to mitigate risks.
Low likelihood– there is a pollutant linkage, and circumstances are possible for an event to occur. However, it is by no means specific that such an event would occur over a more extended period; it is less likely in the short term.	Moderate – Long-term or short-term moderate effect on human health. Moderate impact on ground/surface water quality, reversible with time. Reduced reliability of a supply at a groundwater or surface water abstraction source	Moderate – the source-pathway-receptor scenarios may affect human health or the environment; however, it is relatively unlikely that such consequences would be severe, or, if any harm were to occur, it is more likely to be mild.
Unlikely – there is a pollution linkage, but circumstances are such that it is doubtful that an event would occur even in the very long term.	Low – Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc.) Slight impact on ground/surface water quality, reversible with time. Marginal reduced reliability of a supply at a groundwater or surface water abstraction source.	Low – it is possible that harm could arise at the source; however, likely, this would at worst be mild.
		Very Low – it is unlikely that source-pathway-receptor scenarios will affect human health or the environment.

Table 18: Estimation of Level of Risk by Comparison of Consequence & Probability

		Consequence			
		High	**Moderate**	**Low**	**Very low**
Probability	**High Likelihood**	Very High	High risk	Moderate risk	Moderate to low risk
	Likely	High risk	Moderate risk	Moderate to low risk	Low risk
	Low Likelihood	Moderate risk	Moderate to low risk	Low risk	Very low risk
	Unlikely	Moderate to low risk	Low risk	Very low risk	Very low risk

Identified Sources

The following have been identified as sources of contamination at the site.

- Made Ground from demolition of historical buildings at the site.
- Asbestos present at multiple points across the site.
- Deep made ground was not encountered at the site, and therefore no significant sources of ground gas are present at this site.

Potential Pathways

The following pathways have been considered for the construction and operational stages of the proposed redevelopment

- Dermal contact, ingestion, and inhalation pathways of potentially contaminated soils.

Potential Receptors

The following receptors have been considered for the construction and operational stages of the proposed redevelopment.

- Current site users;
- Adjacent land users;
- Future land users;
- Construction workers during site development works;

Conceptual Site Model (CSM)

Following the results of the site investigation and above assessments, a conceptual site model (CSM) has been produced overleaf in Table 19.

Table 19: Revised Conceptual Site Model

Source	Pathway	Receptor	Pollutant Linkage	Probability	Consequence	Risk	Action/ Justification
Made Ground (Heavy Metals, PAH, TPH, BTEX)	Dermal contact, ingestion, and inhalation of soil dust	Current Site Users	Considered Active	Unlikely	Low	Very Low	The site is currently part of an industrial estate. There is, therefore, limited potential for direct contact between contaminated soils and receptors. The risk is therefore considered to be **VERY LOW.**
		Adjacent land users	Considered Active	Low Likelihood	Low	Low	The site is surrounded by industrial and commercial buildings. Due to the proposed site development, there is less potential for site users to be affected. The risk to off-site land users is considered to be **LOW.** Usual dust control measures should be implemented as part of good site working practices during construction to reduce dust generation.
		Future land users	Considered Active	Unlikely	Low	Very Low	There is likely limited contamination with soils on the site, given that the commercial end user of the site's contact with soil is likely limited. The risk to future site users via direct exposure is considered to be **VERY LOW.**
		Construction Workers	Considered Active	Low Likelihood	Low	Low	Construction workers may be exposed to potentially limited contaminated made ground materials during construction works; however, exposure duration will be short-term only. Assuming appropriate health and safety measures are adopted (in line with CDM and other relevant health and safety guidance), a **LOW** risk to construction workers is anticipated.
	Downward vertical migration of leachate to shallow groundwater	Groundwater within the Underlying Aquifer	Considered Active	Low Likelihood	Moderate	Low	The groundwater vulnerability on the site is low. Therefore, the risk to groundwater is considered **LOW.**

Source	Pathway	Receptor	Pollutant Linkage	Probability	Consequence	Risk	Action/ Justification
	Lateral migration in surface waters	Nearby Surface water features	Considered Active	Low Likelihood	Moderate	Low	There are surface water features near the site. However, the proven Devensian Till and lack of groundwater (perched in one location) suggest lateral migration is limited. Therefore, the risk to surface waters is considered **LOW.**
	Vertical or lateral migration of ground gas	Current Site Users	Considered Active	Unlikely	Moderate	Low	The site is currently used as an industrial area, and there are buildings on the site. However, there are no potential sources of ground gas on the site. The risk to current site users (commercial) from ground gas is therefore considered to be **LOW.**
		Adjacent land users	Considered Active	Unlikely	Moderate	Low	The risk to adjacent site users from ground gas is considered **LOW.**
		Future land users	Considered Active	Unlikely	Moderate	Low	There are no potential sources of ground gas for future site users. Therefore, the risk is considered **LOW**.
		Construction Workers	Considered Active	Low likelihood	Moderate	Low	Construction workers may be exposed to ground gas / depleted oxygen conditions in excavations; however, the duration will be short-term. The risk to construction workers from ground gas is considered **LOW.**
Asbestos Containing Material (ACM)	Ingestion and inhalation of ACM	Current Site Users	Considered Inactive	-	-	Very Low	The site is currently unoccupied; therefore, there is no receptor for the pollutant linkage.
		Adjacent land users	Considered Active	Unlikely	Moderate	Low	Chrysotile fibre bundles have been identified in 2no. locations on site within the shallow made ground. Additional quantification of this sample identified the fibre concentration to be trace. Asbestos fibres are therefore unlikely to become airborne.

Source	Pathway	Receptor	Pollutant Linkage	Probability	Consequence	Risk	Action/ Justification
		Future land users	Considered Active	Unlikely	Moderate	Low	Trace concentrations of asbestos fibres have been identified in 2no. locations on-site. No further action is considered necessary regarding asbestos.
		Construction Workers	Considered Active	Unlikely	Moderate	Low	Construction workers may be exposed to potential asbestos in soils during the construction phase. However, asbestos has only been identified in trace concentrations, and is unlikely to become airborne.

9.0 CONCLUSIONS & RECOMMENDATIONS

9.1 Soil Contamination

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

Based on the results of the chemical testing, no Contaminant concentrations, including lead and PAHs, exceeded the screening criteria for a commercial end use.

Therefore, the risk to future end users is **LOW;** therefore a remediation strategy is not required.

9.2 Asbestos in soils

Asbestos fibres were identified in 2no. of the tested samples (WS02 at 1.00m and WS03 at 0.20m) obtained during the site investigation; however, asbestos quantifications were undertaken and determined that trace asbestos was present.

9.3 Soil Disposal

Soils should be disposed of at a suitable site, registered to take the levels of contamination encountered. 2no. soil samples collected have been classified as **Hazardous** for the purpose of off-site disposal in accordance with Environment Agency guidance WM3.1, while the remaining 5no. samples have been classified as **Non-Hazardous**.

Further Waste Acceptance Criteria testing on one soil sample (WS02 at 0.70m bgl) identified Total Organic Carbon (TOC), Loss on Ignition and Mineral Oil concentrations above the acceptable limits for disposal at a hazardous waste landfill.

It is recommended that local landfill and waste-disposal facilities be consulted before disposing of any soil.

9.4 Foundations

Based on the ground conditions encountered, conventional shallow strip/pad foundations placed in the superficial deposits should be suitable for the site, provided the anticipated structural loadings are relatively low and the structure is tolerant of settlement.

Should the allowable bearing pressure and settlement prove unfavourable, then alternative foundation options will need to be considered, such as ground improvement and piles.

Foundations within the zone of influence of trees will need to be adjusted based on soil plasticity and the type of retained/felled trees or hedges.

It is recommended that for foundations and ground floor slabs in contact with the natural soils, 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-1s.

When a detailed proposed development plan for this site has been produced, EEG recommends further investigation at the specific locations of any buildings to ensure that suitable foundations are designed.

9.5 Pavement Design

Based on the site investigation findings, the soil type at the subgrade level was typically topsoil underlain by variable clay and sand. 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.

9.6 Risk to Buried (Water) Services

It is considered that, because the tested soils contain hydrocarbons, standard materials are unlikely to 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 Water Regulations Advisory Scheme (WRAS) Guidance Note No. 9-04-03(2002); however, 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).

9.7 Site Personnel

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

9.8 Other Matters

Due diligence is required during the construction period, and should any further evidence of contamination be 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: Jubilee Works		**WS1**
	Project Number: A7738	Client: PHA Architects	Sheet 1 Of 1
	GL (mAOD): 66	N Coord: 399,613.00	E Coord: 386,782.00
Date: 15/06/2026	Method: **Window Sampler**	Driller: PM Sampling	Logged By: RP

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
			65.50		0.50	MADE GROUND: Grey silty sandy angular fine to coarse GRAVEL of sandstone. Sand is fine to coarse.		
		N=10 (2,2,3,3)	65.00		1.00	MADE GROUND: Dark brown silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular fine to coarse of sandstone and brick.		
		N=16 (3,4,4,5)	64.00		2.00	Fine brown silty sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone.		
		N=28 (5,7,7,9)	63.00		3.00	Stiff light brown silty slightly sandy CLAY. Sand is fine to coarse.		
		N=32 (6,8,9,9)	62.00		4.00			
			61.70		4.30	Very stiff brown silty sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone.		
		N=33 (8,8,8,9)	61.00		5.00			
		N=29 (5,6,8,10)	60.00		6.00			
			59.75		6.25	Very stiff light brown silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subrounded fine to coarse of sandstone.		
		N=30 (6,6,8,10)	59.00		7.00			
		N=30 (6,6,9,9)	58.00		8.00			
						End Of Borehole At 8.00 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

AGS

REMARKS

1) Location was scanned using a CAT and Genny prior to drilling. 2) A hand dug pit was excavated using insulated tools to a depth of 1.20m. 3) Boehole was drilled to a maximum depth of 8.00m. 4) Upon completion borehole was backfilled with arrisings.

Scale: 1:50

Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed
14/06/2026	1.40	1.40	20		

Daily Log Of Depths

Date	Casing	Water

Chiselling

From	To	Hours

Produced by Geologs www.geologs.com

EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project Title: Jubilee Works		**WS2**
	Project Number: A7738	Client: PHA Architects	Sheet 1 Of 1
	GL (mAOD): 66	N Coord: 399,632.00	E Coord: 386,797.00
Date: 15/06/2026	Method: **Window Sampler**	Driller: PM Sampling	Logged By: RP

Depth (m)	Type	Test Result	Level	Depth (m)	Description	Water	Standpipe
			65.50	0.50	MADE GROUND: Grey silty sandy angular fine to coarse GRAVEL of sandstone. Sand is fine to coarse.		
		N=13 (3,3,3,4)	65.00	1.00	MADE GROUND: Dark brown silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular fine to coarse of sandstone and brick.		
			64.90	1.10			
		N=31 (5,9,10,7)	64.00	2.00	Firm brown silty sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone.		
			63.55	2.45			
		N=23 (5,5,6,7)	63.00	3.00	Stiff light brown silty slightly sandy CLAY. Sand is fine to coarse.		
			62.20	3.80			
		N=20 (4,5,5,6)	62.00	4.00	Stiff brown silty sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone.		
		N=19 (4,4,5,6)	61.00	5.00			
			60.50	5.50			
		N=19 (4,4,5,6)	60.00	6.00	Stiff to very stiff light brown silty slightly sandy CLAY. Sand is fine to coarse.		
		N=28 (5,6,7,10)	59.00	7.00			
		N=33 (6,7,8,12)	58.00	8.00			
					End Of Borehole At 8.00 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

AGS

REMARKS

1) Location was scanned using a CAT and Genny prior to drilling. 2) A hand dug pit was excavated using insulated tools to a depth of 1.20m. 3) Boehole was drilled to a maximum depth of 8.00m. 4) Upon completion borehole was backfilled with arrisings.

Scale: 1:50

Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed

Daily Log Of Depths

Date	Casing	Water

Chiselling

From	To	Hours

Produced by Geologs www.geologs.com

EARTH ENVIRONMENTAL & GEOTECHNICAL
A Technics Group Company

	Project Title: Jubilee Works		**WS3**
	Project Number: A7738	Client: PHA Architects	Sheet 1 Of 1
	GL (mAOD): 67	N Coord: 399,653.00	E Coord: 386,808.00
Date: 15/06/2026	Method: **Window Sampler**	Driller: PM Sampling	Logged By: RP

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
			66.55		0.45	MADE GROUND: Grey silty sandy angular fine to coarse GRAVEL of sandstone. Sand is fine to coarse.		
			66.10		0.90			
		N=11 (2,2,3,4)	66.00		1.00	MADE GROUND: Dark brown silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular fine to coarse of sandstone and brick.		
		N=21 (4,5,6,6)	65.00		2.00	Firm brown silty sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of sandstone.		
			64.90		2.10			
		N=15 (3,4,4,4)	64.00		3.00	Stiff becoming firm light brown silty sandy CLAY. Sand is fine to coarse.		
		N=14 (3,3,4,4)	63.00		4.00			
			62.60		4.40			
		N=23 (4,5,6,8)	62.00		5.00	Firm to stiff brown silty sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone.		
		N=22 (5,5,6,6)	61.00		6.00	Stiff to very stiff light brown silty sandy CLAY. Sand is fine to coarse.		
		N=40 (5,6,10,19)	60.00		7.00			
		pp 50/210mm	59.00		8.00	End Of Borehole At 8.00 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

AGS

REMARKS

1) Location was scanned using a CAT and Genny prior to drilling. 2) A hand dug pit was excavated using insulated tools to a depth of 1.20m. 3) Boehole was drilled to a maximum depth of 8.00m. 4) Upon completion borehole was backfilled with arrisings.

Scale: 1:50

Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed

Daily Log Of Depths

Date	Casing	Water

Chiselling

From	To	Hours

Produced by Geologs www.geologs.com

APPENDIX 2

GEOTECHNICAL TESTING RESULTS

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract Jubilee Works

Job Number MRN 26043/51
Date of Issue 15 July 2026

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.

7 Decision Rule Basis: For a test performed in accordance with the published validated method as noted on the individual test certificates, with repeatability and bias consistent with the published method values, and no additional influences being identified, further risks associated with uncertainty do not need to be considered.

MURRAY RIX

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

UKAS TESTING 1580

TEST CERTIFICATE

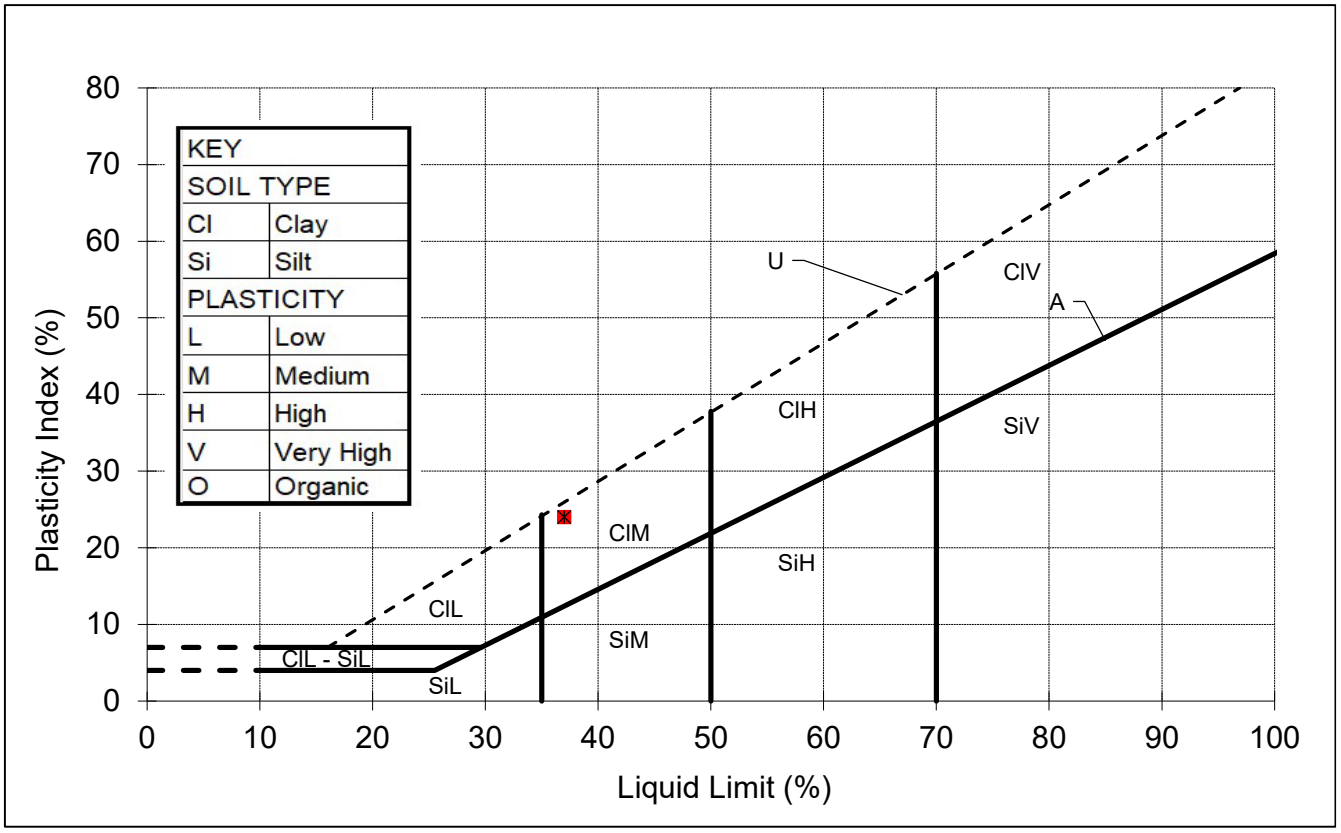
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS01 1.5m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133601	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.9	37	13	24	98



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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

UKAS TESTING 1580

TEST CERTIFICATE

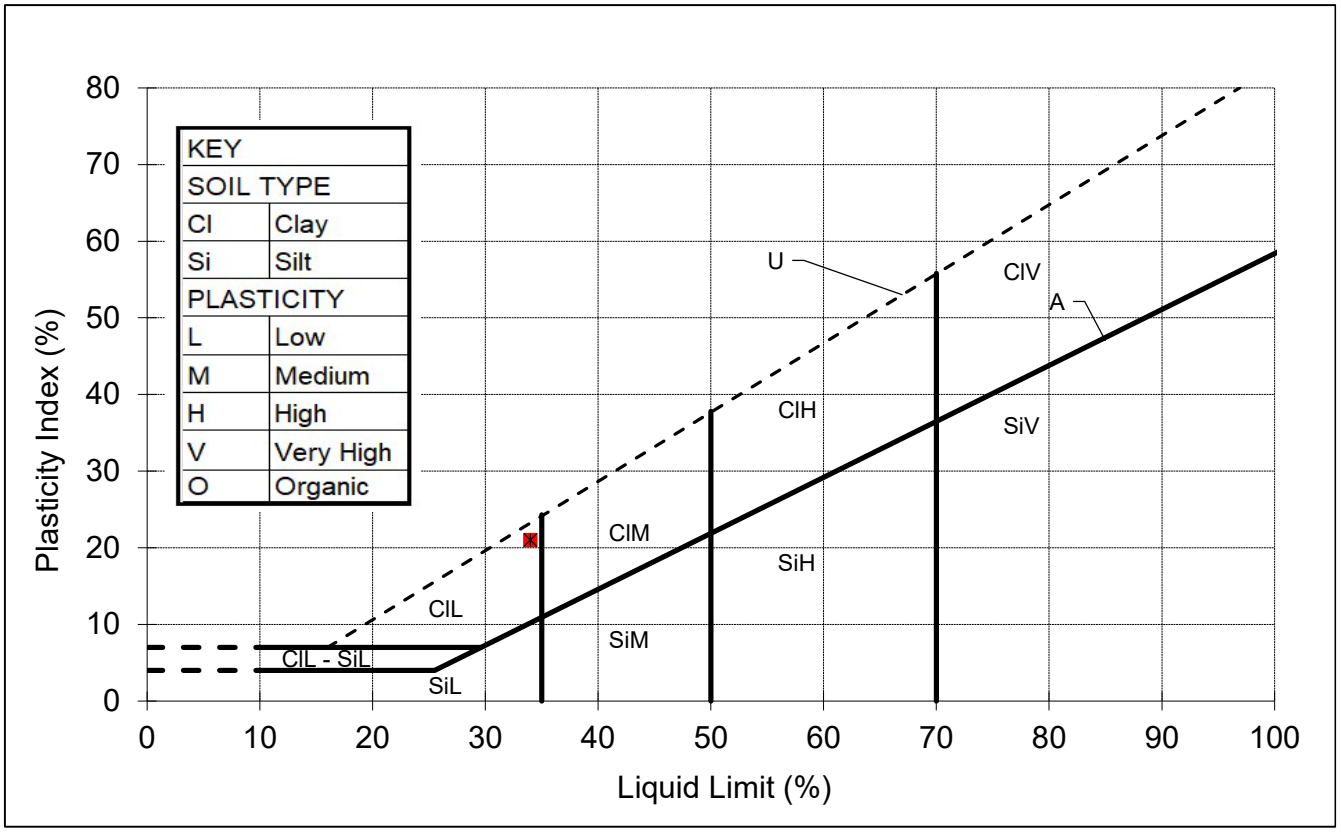
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS01 2.3m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133602	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15.8	34	13	21	59



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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

UKAS TESTING 1580

TEST CERTIFICATE

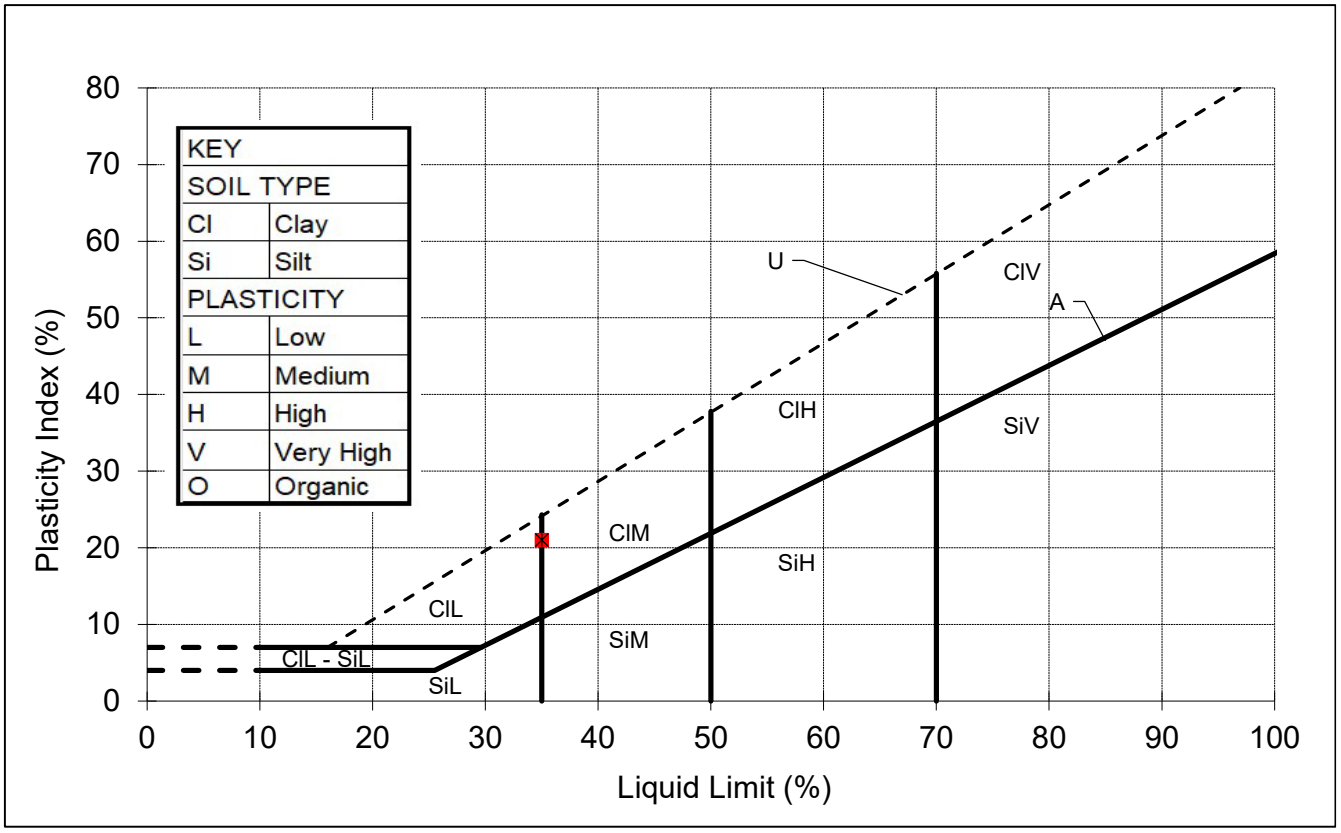
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS02 1.8m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133603	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.4	35	14	21	98



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

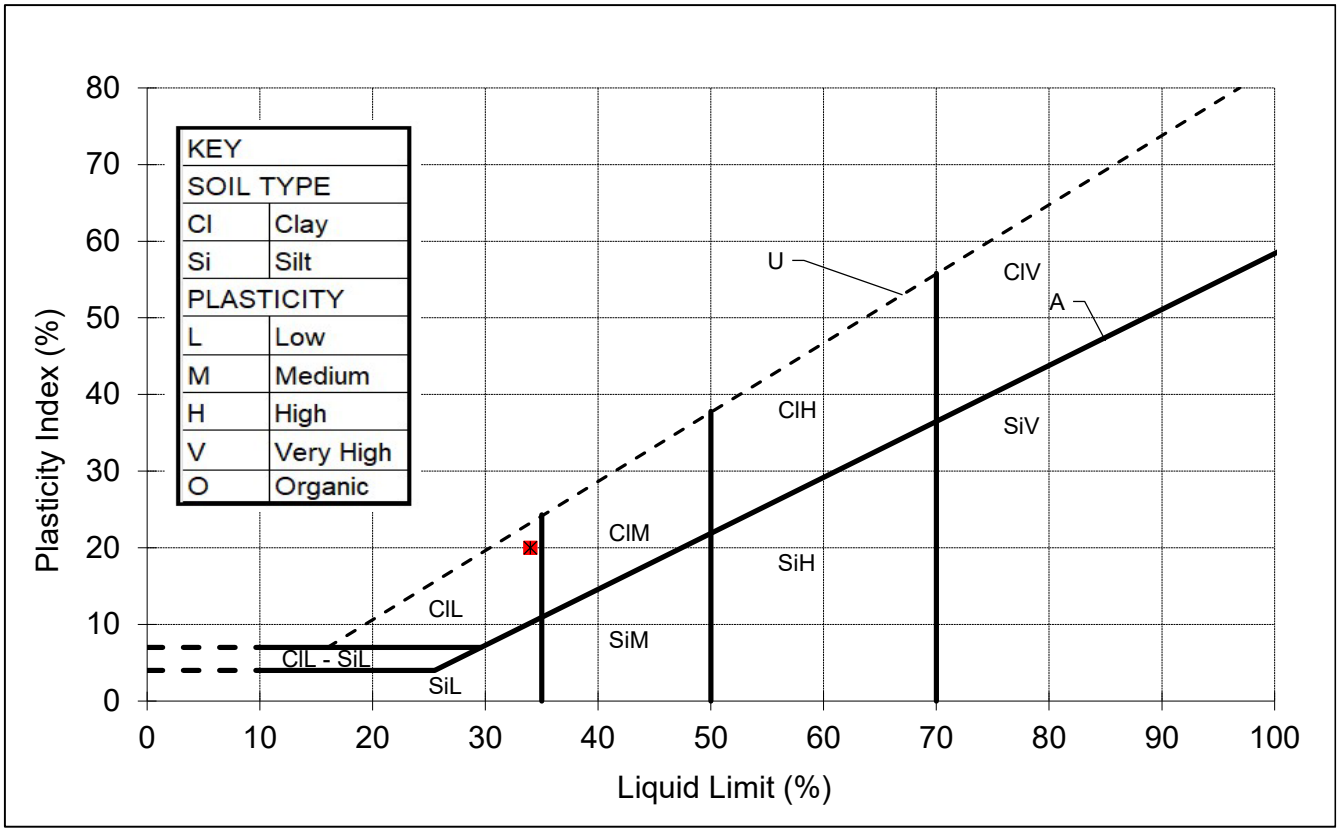
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS02 2.5m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133604	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.1	34	14	20	96



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

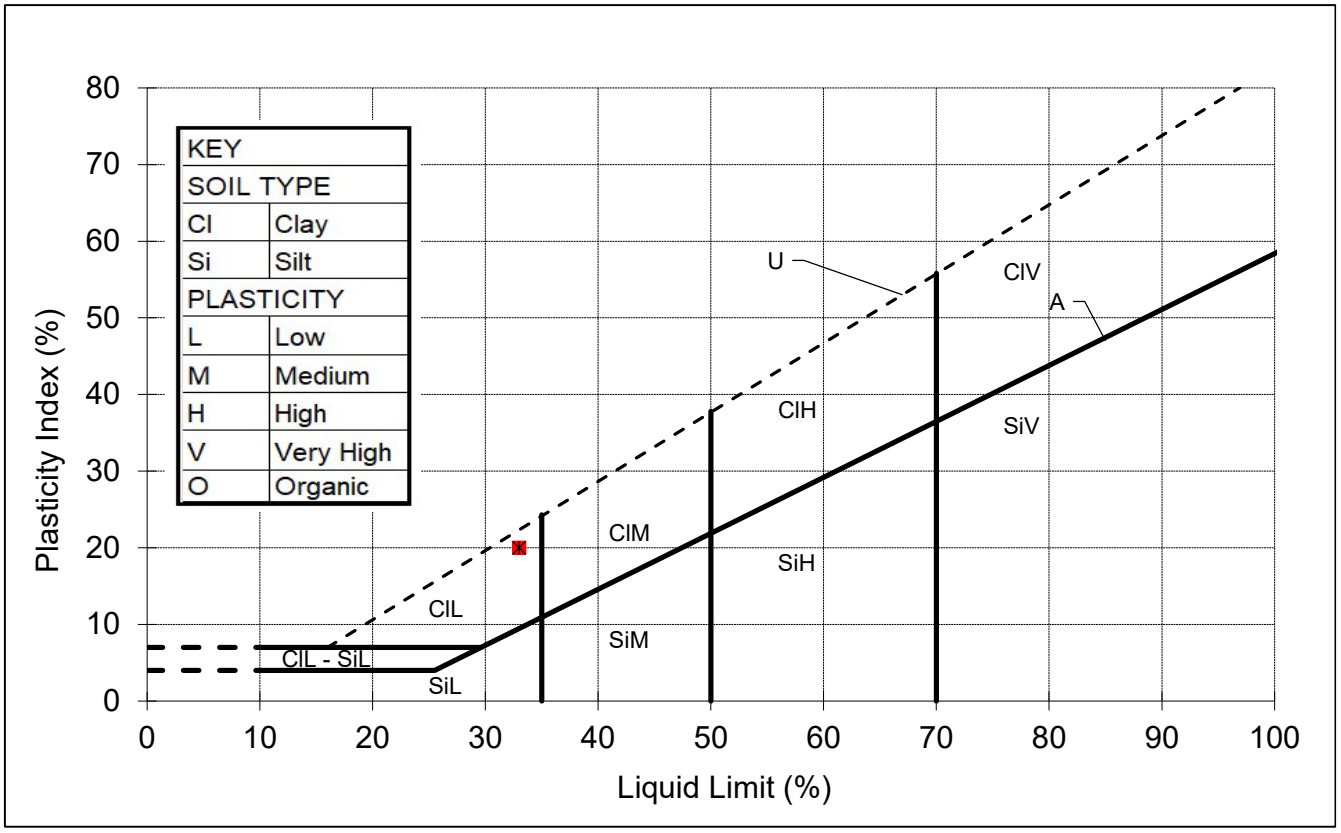
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS03 1.1m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133605	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16.1	33	13	20	97



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

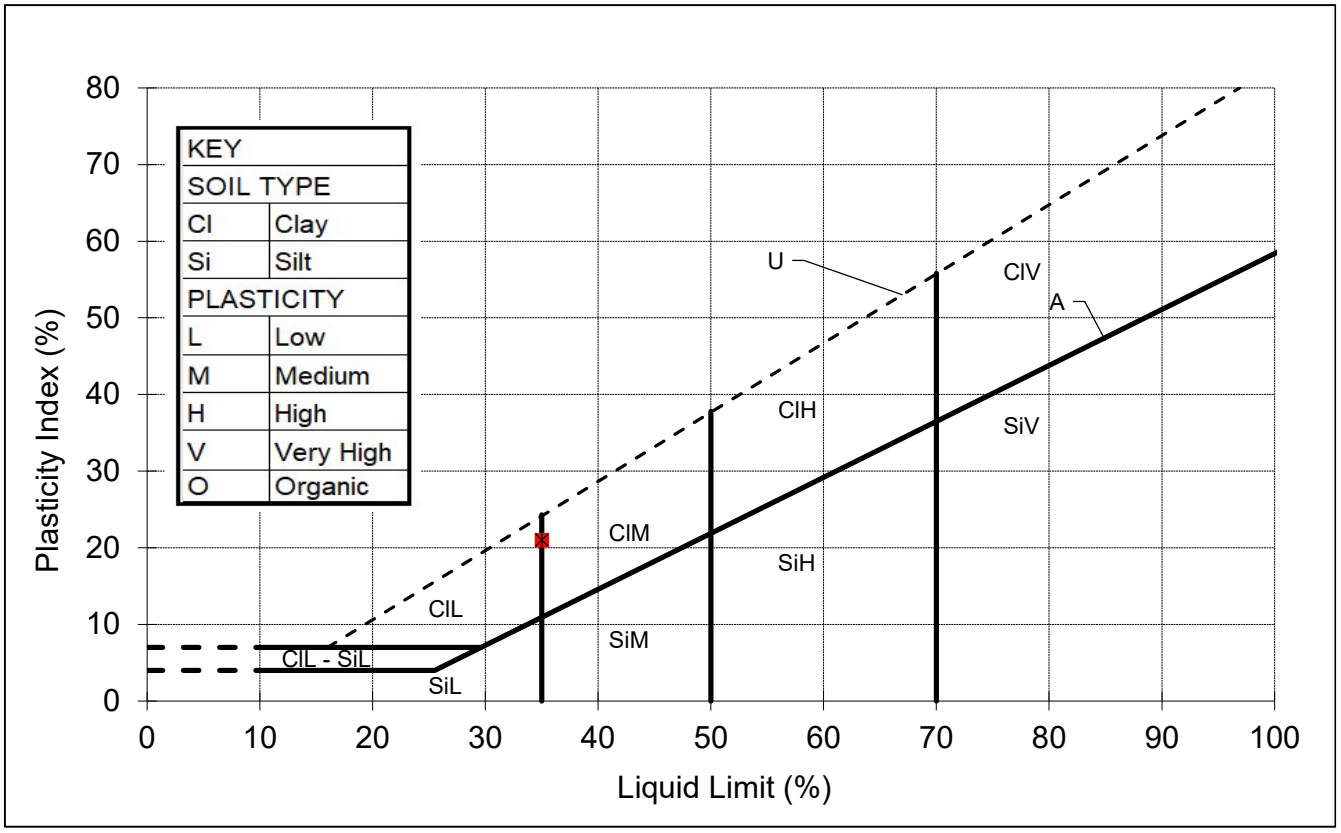
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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

SAMPLE LABEL	WS03 2.5m	DATE SAMPLED	15-Jun-26
SAMPLE No.	6133606	DATE RECEIVED	17-Jun-26
DATE TESTED	25-Jun-26	SAMPLED BY	Client

MATERIAL	Grey brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	Air dried	% RET. 425um BY	Wet sieved

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17	35	14	21	97



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

MURRAY RIX

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

TEST CERTIFICATE

DETERMINATION OF WATER-SOLUBLE SULPHATE IN SOIL
& DETERMINATION OF THE pH VALUE
BS 1377-3:2018+A1:2021, Cl. 7.3 & Cl. 12

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Jubilee Works
JOB NUMBER	MRN 26043/51

DATE TESTED	25-Jun-26	DATE SAMPLED	15-Jun-26
SAMPLED BY	Client	DATE RECEIVED	17-Jun-26
PRE-TREATMENT	Air Dried	ADVISED SOURCE	Site Investigation Sample

Sample Number	Sample Label	Material	% Ret. 2mm	pH Value	Water Soluble Sulphate as SO_4 (mg/l)
6133601	WS01 1.5m	Grey brown silty slightly sandy slightly gravelly CLAY	1	7.2	230
6133603	WS02 1.8m	Grey brown silty slightly sandy slightly gravelly CLAY	2	7.4	270
6133604	WS02 2.5m	Grey brown silty slightly sandy slightly gravelly CLAY	1	7.1	180
6133605	WS03 1.1m	Grey brown silty slightly sandy slightly gravelly CLAY	1	7.1	210

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Director) DATE 15-Jul-26

APPENDIX 3

SOIL CHEMICAL TESTING RESULTS

Certificate of Analysis

Certificate Number	26-15509	*Issued:*	12-Aug-26

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

Our Reference	26-15509
Client Reference ~	A7738
Order No ~	A7738/RP/01
Contract Title ~	Jubilee Works
Description	7 Soil samples, 2 Leachate prepared by DETS samples.
Date Received	25-Jun-26
Date Started	25-Jun-26
Date Completed	12-Aug-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

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Matrix Descriptions

Our Ref 26-15509
Client Ref ~ A7738
Contract Title ~ Jubilee Works

Sample ID	Depth	Lab No	Completed	Matrix Description
WS01	0.5	2708264	10/07/2026	Brown gravelly, sandy CLAY (Possible made ground - brick)
WS01	0.9	2708265	10/07/2026	Brown sandy CLAY
WS02	0.25	2708266	10/07/2026	Brown very gravelly, sandy CLAY
WS02	0.7	2708267	10/07/2026	Brown gravelly, sandy CLAY (Possible made ground - brick)
WS02	1	2708268	10/07/2026	Brown gravelly, sandy CLAY
WS03	0.2	2708269	10/07/2026	Brown gravelly, sandy CLAY
WS03	0.75	2708270	10/07/2026	Brown gravelly, sandy CLAY

Summary of Chemical Analysis
Soil Samples

Our Ref 26-15509
Client Ref ~ A7738
Contract Title ~ Jubilee Works

	Lab No	2708264	2708265	2708266	2708267	2708268	2708269	2708270
	Sample ID ~	WS01	WS01	WS02	WS02	WS02	WS03	WS03
	Depth ~	0.50	0.90	0.25	0.70	1.00	0.20	0.75
	Other ID ~							
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	15	13	18	20	18	7.4	13
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg	49	8.9	12	8.5	19	9.2	19
Barium	DETSC 2301#	1.5	mg/kg	1200	140	340	310	290	170	300
Beryllium	DETSC 2301#	0.2	mg/kg	0.8	1.3	0.3	0.7	0.8	0.5	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.8	0.6	0.4	0.9	0.6	1.4	2.1
Cadmium	DETSC 2301#	0.1	mg/kg	0.7	0.2	0.9	0.6	0.9	0.4	1.1
Chromium	DETSC 2301#	0.15	mg/kg	26	22	17	28	21	15	15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	490	41	68	910	190	260	140
Lead	DETSC 2301#	0.3	mg/kg	1400	36	120	120	150	77	130
Mercury	DETSC 2325#	0.05	mg/kg	0.30	< 0.05	0.09	< 0.05	0.16	< 0.05	0.15
Nickel	DETSC 2301#	1	mg/kg	31	32	19	24	28	17	25
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	36	25	26	27	33	21	30
Zinc	DETSC 2301#	1	mg/kg	350	94	230	1500	320	680	470
Inorganics								
pH	DETSC 2008#		pH	8.3	7.9	11.3	9.0	10.2	8.5	8.9
Cyanide, Total	DETSC 2130#	0.1	mg/kg	1.6	0.1	0.6	0.2	0.3	0.2	0.3
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide, Complex	DETSC 2130*	0.2	mg/kg	1.5	< 0.2	0.5	0.2	0.3	< 0.2	0.2
Organic matter	DETSC 2002#	0.1	%	3.0	2.1	5.4	4.9	4.7	< 0.1	4.4
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	180	520	120	270	210	280	250
Sulphide	DETSC 2024*	10	mg/kg	56	28	44	52	48	28	32
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.22	0.11	0.11	0.17	0.11	0.16	0.10
Petroleum Hydrocarbons								
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	1.9	< 1.5	2.8	< 1.5	< 1.5	4.8	2.9
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	1.6	< 1.2	< 1.2	6.4	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	9.4	< 1.5	< 1.5	23	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	17	< 3.4	160	< 3.4	< 3.4	270	26
Aliphatic C5-C35: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	19	< 10	170	< 10	< 10	300	29
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	3.7	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	9.7
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	7.0	< 0.5	5.5	< 0.5	< 0.5	5.3	9.9
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	9.1	< 0.6	12	< 0.6	< 0.6	27	14
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	40	< 1.4	260	< 1.4	< 1.4	490	96

Summary of Chemical Analysis
Soil Samples

Our Ref 26-15509
Client Ref ~ A7738
Contract Title ~ Jubilee Works

			Lab No	2708264	2708265	2708266	2708267	2708268	2708269	2708270
			Sample ID ~	WS01	WS01	WS02	WS02	WS02	WS03	WS03
			Depth ~	0.50	0.90	0.25	0.70	1.00	0.20	0.75
			Other ID ~							
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026	17/06/2026
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Aromatic C5-C35: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	60	< 10	280	< 10	< 10	530	130
TPH Ali/Aro Total C5-C35: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	79	< 10	450	< 10	< 10	830	160
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 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	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 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	< 0.01
o Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 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	< 0.01
PAHs										
Naphthalene	DETSC 3301	0.1	mg/kg	0.41	0.31	0.45	< 0.10	< 0.10	0.18	0.24
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.17
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.58	0.15
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.71	0.40
Phenanthrene	DETSC 3301	0.1	mg/kg	0.62	0.33	0.95	< 0.10	< 0.10	3.1	1.3
Anthracene	DETSC 3301	0.1	mg/kg	1.7	1.4	1.8	< 0.10	< 0.10	0.90	0.99
Fluoranthene	DETSC 3301	0.1	mg/kg	2.2	0.65	3.0	< 0.10	< 0.10	4.3	4.2
Pyrene	DETSC 3301	0.1	mg/kg	2.1	0.98	3.3	< 0.10	< 0.10	4.8	4.8
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.88	< 0.10	2.0	< 0.10	< 0.10	2.5	3.4
Chrysene	DETSC 3301	0.1	mg/kg	0.78	0.29	1.8	< 0.10	< 0.10	3.2	3.9
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.53	0.34	1.1	< 0.10	< 0.10	2.5	2.7
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.51	0.31	1.3	< 0.10	< 0.10	2.0	1.9
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	3.7	< 0.10	< 0.10	5.2	4.9
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	0.43	1.1	< 0.10	< 0.10	3.0	2.7
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	0.13	< 0.10	< 0.10	< 0.10	0.54	0.47
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10	0.35	1.5	< 0.10	< 0.10	1.8	2.7
PAH 16 Total	DETSC 3301	1.6	mg/kg	8.3	4.9	18	< 1.6	< 1.6	33	30
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	3.7	< 0.3	1.1	8.2	< 0.3	< 0.3	0.6

Summary of Asbestos Analysis
Soil Samples

Our Ref 26-15509
Client Ref ~ A7738
Contract Title ~ Jubilee Works

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2708264	WS01 0.50	SOIL	NAD	none	Jason Barsby
2708265	WS01 0.90	SOIL	NAD	none	Jason Barsby
2708266	WS02 0.25	SOIL	NAD	none	Jason Barsby
2708267	WS02 0.70	SOIL	NAD	none	Jason Barsby
2708268	WS02 1.00	SOIL	Chrysotile	Chrysotile present as fibre bundles	Jason Barsby
2708269	WS03 0.20	SOIL	Chrysotile	Chrysotile present as fibre bundles	Jason Barsby
2708270	WS03 0.75	SOIL	NAD	none	Jason Barsby

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
v20.26.05.07

Our Ref 26-15509
Client Ref A7738
Contract Title Jubilee Works
Sample Id WS02 0.70

Sample Numbers 2708267 2708271 2708272
Date Analysed 10/07/2026

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	7.8	3	5	6
DETSC 2003# Loss On Ignition	%	14.0	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	880.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	9.0	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

Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg		WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
	2:1	8:1	LS2	LS10			
DETSC 2306 Arsenic as As	0.8224	0.5741	< 0.002	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	21.51	11.81	0.04	0.12	20	100	300
DETSC 2306 Cadmium as Cd	< 0.0300	< 0.0300	< 0.004	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.4609	2.557	< 0.02	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	5.989	1.325	0.012	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.0100	< 0.0100	< 0.0004	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.10	< 1.10	< 0.02	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.5000	< 0.5000	< 0.02	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.104	0.1851	< 0.01	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	3.516	0.2335	< 0.01	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.2500	< 0.2500	< 0.006	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	12.94	1.31	0.026	0.018	4	50	200
DETSC 2055 Chloride as Cl	1100	1100	< 20	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	330	340	0.66	3.4	10	150	500
DETSC 2055 Sulphate as SO4	7100	7000	< 20	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	44000	44000	88	440	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 100	< 0.2	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3100	2800	< 10	< 50	500	800	1000

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

Additional Information

DETSC 2008 pH	6.8	6.8
DETSC 2009 Conductivity uS/cm	62.7	63.0
* Temperature*	19.0	19.0

Mass of Sample Kg	0.219
Mass of dry Sample Kg	0.175

Stage 1

Volume of Leachant L2	0.306
Volume of Eluate VE1	0.08

Stage 2

Volume of Leachant L8	1.4
Volume of Eluate VE2	0.6

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.*

V.2.07

Information in Support of the Analytical Results

Our Ref 26-15509
Client Ref ~ A7738
Contract ~ Jubilee Works

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2708264	WS01 0.50 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708265	WS01 0.90 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708266	WS02 0.25 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708267	WS02 0.70 SOIL	17/06/26	GJ 250ml x2, PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708268	WS02 1.00 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708269	WS03 0.20 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708270	WS03 0.75 SOIL	17/06/26	GJ 250ml x2, PT 1L	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)	
2708271	WS02 0.70 LEACHATE	17/06/26	GJ 250ml x2, PT 1L x2	pH/Cond (1 days)	
2708272	WS02 0.70 LEACHATE	17/06/26	GJ 250ml x2, PT 1L x2	pH/Cond (1 days)	

Lab No	Sample ID	Comments
2708271	WS02 0.70 LEACH	Insufficient sample 800.6g (<2kg) Sample received
2708272	WS02 0.70 LEACH	Insufficient sample 800.6g (<2kg) Sample received

Key: G-Glass P-Plastic J-Jar T-Tub

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.

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

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
Aliphatic C5-C6	HS_1D_AL

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO4	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO4	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 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

Certificate of Analysis

Certificate Number 26-17227 *Issued:* 20-Jul-26

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

Our Reference 26-17227

Client Reference ~ A7738

Order No ~ A7738/RP/01

Contract Title ~ Jubilee Works

Description 2 Soil samples.

Date Received 25-Jun-26

Date Started 14-Jul-26

Date Completed 20-Jul-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

Reyhan Irfan
Operations Manager

2139

Summary of Asbestos Analysis

Samples

Our Ref 26-17227
Client Ref ~ A7738
Contract Title ~ Jubilee Works

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

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.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 26-17227
Client Ref ~ A7738
Contract Title ~ Jubilee Works

Lab No	2717265	2717266
Sample ID ~	WS02	WS03
Depth ~	1.00	0.20
Other ID ~		
Sample Type ~		
Sampling Date ~	17/06/2026	17/06/2026
Sampling Time ~		

Test	Method	LOQ	Units		
Total Mass% Asbestos (a+b+c)	DETSC 1102	< 0.001	Mass %	**< 0.001**	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	< 0.001	Mass %	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	< 0.001	Mass %	<0.001	<0.001
Quantification by PCOM (c)	DETSC 1102	< 0.001	Mass %	na	na
Potentially Respirable Fibres (d)	DETSC 1102	< 0.001	Fibres/g	na	na
Breakdown of Gravimetric Analysis (a)					
Mass of Sample			g	452.59	528.90
ACMs present*			type		
Mass of ACM in sample			g		
% ACM by mass			%		
% asbestos in ACM			%		
% asbestos in sample			%		
Breakdown of Detailed Gravimetric Analysis (b)					
% Amphibole bundles in sample			Mass %	na	na
% Chrysotile bundles in sample			Mass %	<0.001	<0.001
Breakdown of PCOM Analysis (c)					
% Amphibole fibres in sample			Mass %	na	na
% Chrysotile fibres in sample			Mass %	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)					
Amphibole fibres			Fibres/g	na	na
Chrysotile fibres			Fibres/g	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample
The results are based on dry weight.

Information in Support of the Analytical Results

Our Ref 26-17227
Client Ref ~ A7738
Contract ~ Jubilee Works

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2717265	WS02 1.00 SOIL	17/06/26	GJ 250ml x2, PT 1L		
2717266	WS03 0.20 SOIL	17/06/26	GJ 250ml x2, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub
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 26.05.23

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:

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

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

PLXXW-TERWA-O7G4A

Report is invalid if pages are removed.

Job name

A7738 Jubilee Works, Manchester

Description/Comments

Project

A7738

Site

Jubilee Works, Manchester

Classified by

Name:
Luke Glover
Company:
Earth Environmental & Geotechnical Ltd
Date:
17 Aug 2026 09:49 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	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Jubilee Works, Clifton St, Miles Platting, Manchester **Post Code** M40 8HN

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	0.50	Hazardous	HP 7	3
2	WS01[2]	0.90	Non Hazardous		6
3	WS02	0.25	Non Hazardous		9
4	WS02[2]	0.70	Hazardous	HP 14	12
5	WS02[3]	1.00	Non Hazardous		15
6	WS03	0.20	Non Hazardous		18
7	WS03[2]	0.75	Non Hazardous		21

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: 17 Aug 2026 09:49 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	24
Appendix B: Rationale for selection of metal species	25
Appendix C: Version	26

Classification of sample: WS01

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
WS01
Sample Depth:
0.50 m
Moisture content:
15%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which may induce cancer or increase its incidence."

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case) (Note 1 conc.: 0.122%)

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos fibres detected (Yes/No)			ACM_FIBRES		No					
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				49 mg/kg	1.895	80.723 mg/kg	0.00807 %	✓	
3	barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		1200 mg/kg	1.437	1499.455 mg/kg	0.15 %	✓	
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.8 mg/kg	8.868	6.169 mg/kg	0.000617 %	✓	
5	boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.8 mg/kg	5.719	3.979 mg/kg	0.000398 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.7 mg/kg	1.855	1.129 mg/kg	0.000113 %	✓	
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	33.044 mg/kg	0.0033 %	✓	
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		**<LOD**
9	copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		490 mg/kg	1.74	741.303 mg/kg	0.0741 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
10		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	1400	mg/kg		1217.391	mg/kg	0.122 %	✓	
11		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.3	mg/kg	1.353	0.353	mg/kg	0.0000353 %	✓	
12		nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		31	mg/kg	5.358	144.442	mg/kg	0.0144 %	✓	
13		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
14		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		36	mg/kg	1.785	55.884	mg/kg	0.00559 %	✓	
15		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		350	mg/kg	1.245	378.826	mg/kg	0.0379 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		79	mg/kg		68.696	mg/kg	0.00687 %	✓	
17		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
18		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
23		pH			PH		8.3	pH		8.3	pH	8.3 pH		
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.41	mg/kg		0.357	mg/kg	0.0000357 %	✓	
25		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		phenanthrene		201-581-5	85-01-8		0.62	mg/kg		0.539	mg/kg	0.0000539 %	✓	
29		anthracene		204-371-1	120-12-7		1.7	mg/kg		1.478	mg/kg	0.000148 %	✓	
30		fluoranthene		205-912-4	206-44-0		2.2	mg/kg		1.913	mg/kg	0.000191 %	✓	
31		pyrene		204-927-3	129-00-0		2.1	mg/kg		1.826	mg/kg	0.000183 %	✓	
32		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.88	mg/kg		0.765	mg/kg	0.0000765 %	✓	
33		chrysene	601-048-00-0	205-923-4	218-01-9		0.78	mg/kg		0.678	mg/kg	0.0000678 %	✓	
34		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.53	mg/kg		0.461	mg/kg	0.0000461 %	✓	
35		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.51	mg/kg		0.443	mg/kg	0.0000443 %	✓	
36		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		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									
37	●	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			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				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
40		phenol				3.7	mg/kg		3.217	mg/kg	0.000322 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.424 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00687%)

Classification of sample: WS01[2]

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

Sample details

Sample name:
WS01[2]
Sample Depth:
0.90 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos fibres detected (Yes/No)			ACM_FIBRES		No					
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.9 mg/kg	1.895	14.921 mg/kg	0.00149 %	✓	
3	barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		140 mg/kg	1.437	178.033 mg/kg	0.0178 %	✓	
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				1.3 mg/kg	8.868	10.202 mg/kg	0.00102 %	✓	
5	boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.6 mg/kg	5.719	3.037 mg/kg	0.000304 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.2 mg/kg	1.855	0.328 mg/kg	0.0000328 %	✓	
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		22 mg/kg	1.462	28.455 mg/kg	0.00285 %	✓	
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
9	copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		41 mg/kg	1.74	63.125 mg/kg	0.00631 %	✓	
10	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	36 mg/kg		31.858 mg/kg	0.00319 %	✓	
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
12	nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		32 mg/kg	5.358	151.74 mg/kg	0.0152 %	✓	
13	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		25	mg/kg	1.785	39.495	mg/kg	0.00395 %	✓	
15		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		94	mg/kg	1.245	103.543	mg/kg	0.0104 %	✓	
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	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
18		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
23		pH			PH		7.9	pH		7.9	pH	7.9 pH		
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.31	mg/kg		0.274	mg/kg	0.0000274 %	✓	
25		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		phenanthrene		201-581-5	85-01-8		0.33	mg/kg		0.292	mg/kg	0.0000292 %	✓	
29		anthracene		204-371-1	120-12-7		1.4	mg/kg		1.239	mg/kg	0.000124 %	✓	
30		fluoranthene		205-912-4	206-44-0		0.65	mg/kg		0.575	mg/kg	0.0000575 %	✓	
31		pyrene		204-927-3	129-00-0		0.98	mg/kg		0.867	mg/kg	0.0000867 %	✓	
32		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		chrysene	601-048-00-0	205-923-4	218-01-9		0.29	mg/kg		0.257	mg/kg	0.0000257 %	✓	
34		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.34	mg/kg		0.301	mg/kg	0.0000301 %	✓	
35		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.31	mg/kg		0.274	mg/kg	0.0000274 %	✓	
36		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
37		indeno[123-cd]pyrene		205-893-2	193-39-5		0.43	mg/kg		0.381	mg/kg	0.0000381 %	✓	
38		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.13	mg/kg		0.115	mg/kg	0.0000115 %	✓	
39		benzo[ghi]perylene		205-883-8	191-24-2		0.35	mg/kg		0.31	mg/kg	0.000031 %	✓	
40		phenol	604-001-00-2	203-632-7	108-95-2		<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
											Total:	0.063 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

Classification of sample: WS02

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

Sample details

Sample name:
WS02
Sample Depth:
0.25 m
Moisture content:
18%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos fibres detected (Yes/No)			ACM_FIBRES		No					
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				12 mg/kg	1.895	19.266 mg/kg	0.00193 %	✓	
3	barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		340 mg/kg	1.437	414.045 mg/kg	0.0414 %	✓	
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.3 mg/kg	8.868	2.255 mg/kg	0.000225 %	✓	
5	boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4 mg/kg	5.719	1.939 mg/kg	0.000194 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.9 mg/kg	1.855	1.414 mg/kg	0.000141 %	✓	
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17 mg/kg	1.462	21.056 mg/kg	0.00211 %	✓	
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
9	copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		68 mg/kg	1.74	100.259 mg/kg	0.01 %	✓	
10	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	120 mg/kg		101.695 mg/kg	0.0102 %	✓	
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.09 mg/kg	1.353	0.103 mg/kg	0.0000103 %	✓	
12	nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		19 mg/kg	5.358	86.278 mg/kg	0.00863 %	✓	
13	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**

#		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 }				26	mg/kg	1.785	39.335	mg/kg	0.00393 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
15		zinc { zinc oxide }				230	mg/kg	1.245	242.614	mg/kg	0.0243 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
16		TPH (C6 to C40) petroleum group				450	mg/kg		381.356	mg/kg	0.0381 %	✓	
				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	215-535-7	1330-20-7									
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 }				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
		006-007-00-5											
23		pH				11.3	pH		11.3	pH	11.3 pH		
				PH									
24		naphthalene				0.45	mg/kg		0.381	mg/kg	0.0000381 %	✓	
		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				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
28		phenanthrene				0.95	mg/kg		0.805	mg/kg	0.0000805 %	✓	
			201-581-5	85-01-8									
29		anthracene				1.8	mg/kg		1.525	mg/kg	0.000153 %	✓	
			204-371-1	120-12-7									
30		fluoranthene				3	mg/kg		2.542	mg/kg	0.000254 %	✓	
			205-912-4	206-44-0									
31		pyrene				3.3	mg/kg		2.797	mg/kg	0.00028 %	✓	
			204-927-3	129-00-0									
32		benzo[a]anthracene				2	mg/kg		1.695	mg/kg	0.000169 %	✓	
		601-033-00-9	200-280-6	56-55-3									
33		chrysene				1.8	mg/kg		1.525	mg/kg	0.000153 %	✓	
		601-048-00-0	205-923-4	218-01-9									
34		benzo[b]fluoranthene				1.1	mg/kg		0.932	mg/kg	0.0000932 %	✓	
		601-034-00-4	205-911-9	205-99-2									
35		benzo[k]fluoranthene				1.3	mg/kg		1.102	mg/kg	0.00011 %	✓	
		601-036-00-5	205-916-6	207-08-9									
36		benzo[a]pyrene; benzo[def]chrysene				3.7	mg/kg		3.136	mg/kg	0.000314 %	✓	
		601-032-00-3	200-028-5	50-32-8									
37		indeno[123-cd]pyrene				1.1	mg/kg		0.932	mg/kg	0.0000932 %	✓	
			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				1.5	mg/kg		1.271	mg/kg	0.000127 %	✓	
			205-883-8	191-24-2									
40		phenol				1.1	mg/kg		0.932	mg/kg	0.0000932 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.143 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0381%)

Classification of sample: WS02[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
WS02[2]
Sample Depth:
0.70 m
Moisture content:
20%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment."

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

copper(II) carbonate – copper(II) hydroxide (1:1) (compound conc.: 0.132%)
zinc oxide (compound conc.: 0.156%)

Determinands

Moisture content: 20% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos fibres detected (Yes/No)			ACM_FIBRES		No					
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.5 mg/kg	1.895	13.42 mg/kg	0.00134 %	✓	
3	barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		310 mg/kg	1.437	371.219 mg/kg	0.0371 %	✓	
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.7 mg/kg	8.868	5.173 mg/kg	0.000517 %	✓	
5	boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.9 mg/kg	5.719	4.289 mg/kg	0.000429 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.6 mg/kg	1.855	0.927 mg/kg	0.0000927 %	✓	
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		28 mg/kg	1.462	34.103 mg/kg	0.00341 %	✓	
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
9	copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		910 mg/kg	1.74	1319.343 mg/kg	0.132 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
10		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	120	mg/kg		100	mg/kg	0.01 %	✓	
11		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
12		nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		24	mg/kg	5.358	107.166	mg/kg	0.0107 %	✓	
13		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
14		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		27	mg/kg	1.785	40.167	mg/kg	0.00402 %	✓	
15		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		1500	mg/kg	1.245	1555.892	mg/kg	0.156 %	✓	
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	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
18		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
23		pH			PH		9	pH		9	pH	9pH		
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
36		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		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									
37		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			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				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
40		phenol				8.2	mg/kg		6.833	mg/kg	0.000683 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.356 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

Classification of sample: WS02[3]

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

Sample details

Sample name:
WS02[3]
Sample Depth:
1.00 m
Moisture content:
18%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 %		<0.001 %	<0.001 %		**<LOD**
2		asbestos fibres detected (Yes/No)			ACM_FIBRES		Yes					
3		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				19 mg/kg	1.895	30.505 mg/kg	0.00305 %	✓	
4		barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		290 mg/kg	1.437	353.156 mg/kg	0.0353 %	✓	
5		beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.8 mg/kg	8.868	6.012 mg/kg	0.000601 %	✓	
6		boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.6 mg/kg	5.719	2.908 mg/kg	0.000291 %	✓	
7		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.9 mg/kg	1.855	1.414 mg/kg	0.000141 %	✓	
8		chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21 mg/kg	1.462	26.011 mg/kg	0.0026 %	✓	
9		chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		**<LOD**
10		copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		190 mg/kg	1.74	280.136 mg/kg	0.028 %	✓	
11		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	150 mg/kg		127.119 mg/kg	0.0127 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
12		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.16	mg/kg	1.353	0.184	mg/kg	0.0000184 %	✓	
13		nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		28	mg/kg	5.358	127.146	mg/kg	0.0127 %	✓	
14		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.6	mg/kg	2.554	1.299	mg/kg	0.00013 %	✓	
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		33	mg/kg	1.785	49.925	mg/kg	0.00499 %	✓	
16		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		320	mg/kg	1.245	337.55	mg/kg	0.0338 %	✓	
17		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
24		pH			PH		10.2	pH		10.2	pH	10.2 pH		
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
36		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
37		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
38		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		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									
39		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									
40		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
41		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.134 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

Classification of sample: WS03

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

Sample details

Sample name:
WS03
Sample Depth:
0.20 m
Moisture content:
7.4%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.4% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 %		<0.001 %	<0.001 %		<**LOD**
2		asbestos fibres detected (Yes/No)			ACM_FIBRES		Yes					
3		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				9.2 mg/kg	1.895	16.229 mg/kg	0.00162 %	✓	
4		barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		170 mg/kg	1.437	227.455 mg/kg	0.0227 %	✓	
5		beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.5 mg/kg	8.868	4.128 mg/kg	0.000413 %	✓	
6		boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		1.4 mg/kg	5.719	7.455 mg/kg	0.000746 %	✓	
7		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.4 mg/kg	1.855	0.691 mg/kg	0.0000691 %	✓	
8		chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		15 mg/kg	1.462	20.413 mg/kg	0.00204 %	✓	
9		chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
10		copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		260 mg/kg	1.74	421.179 mg/kg	0.0421 %	✓	
11		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	77 mg/kg		71.695 mg/kg	0.00717 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
12		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
13		nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		17	mg/kg	5.358	84.815	mg/kg	0.00848 %	✓	
14		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		21	mg/kg	1.785	34.906	mg/kg	0.00349 %	✓	
16		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		680	mg/kg	1.245	788.087	mg/kg	0.0788 %	✓	
17		TPH (C6 to C40) petroleum group			TPH		830	mg/kg		772.812	mg/kg	0.0773 %	✓	
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<LOD
24		pH			PH		8.5	pH		8.5	pH	8.5 pH		
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.18	mg/kg		0.168	mg/kg	0.0000168 %	✓	
26		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		acenaphthene		201-469-6	83-32-9		0.58	mg/kg		0.54	mg/kg	0.000054 %	✓	
28		fluorene		201-695-5	86-73-7		0.71	mg/kg		0.661	mg/kg	0.0000661 %	✓	
29		phenanthrene		201-581-5	85-01-8		3.1	mg/kg		2.886	mg/kg	0.000289 %	✓	
30		anthracene		204-371-1	120-12-7		0.9	mg/kg		0.838	mg/kg	0.0000838 %	✓	
31		fluoranthene		205-912-4	206-44-0		4.3	mg/kg		4.004	mg/kg	0.0004 %	✓	
32		pyrene		204-927-3	129-00-0		4.8	mg/kg		4.469	mg/kg	0.000447 %	✓	
33		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.5	mg/kg		2.328	mg/kg	0.000233 %	✓	
34		chrysene	601-048-00-0	205-923-4	218-01-9		3.2	mg/kg		2.98	mg/kg	0.000298 %	✓	
35		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		2.5	mg/kg		2.328	mg/kg	0.000233 %	✓	
36		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		2	mg/kg		1.862	mg/kg	0.000186 %	✓	
37		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		5.2	mg/kg		4.842	mg/kg	0.000484 %	✓	
38		indeno[123-cd]pyrene		205-893-2	193-39-5		3	mg/kg		2.793	mg/kg	0.000279 %	✓	

#		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									
39		dibenz[a,h]anthracene				0.54	mg/kg		0.503	mg/kg	0.0000503 %	✓	
		601-041-00-2	200-181-8	53-70-3									
40		benzo[ghi]perylene				1.8	mg/kg		1.676	mg/kg	0.000168 %	✓	
			205-883-8	191-24-2									
41		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.248 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0773%)

Classification of sample: WS03[2]

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

Sample details

Sample name:
WS03[2]
Sample Depth:
0.75 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos fibres detected (Yes/No)			ACM_FIBRES		No					
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				19 mg/kg	1.895	31.855 mg/kg	0.00319 %	✓	
3	barium { barium carbonate }	056-003-00-2	208-167-3	513-77-9		300 mg/kg	1.437	381.499 mg/kg	0.0381 %	✓	
4	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }	004-002-00-2				0.7 mg/kg	8.868	5.493 mg/kg	0.000549 %	✓	
5	boron { boric acid; [1] boric acid; [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		2.1 mg/kg	5.719	10.629 mg/kg	0.00106 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		1.1 mg/kg	1.855	1.805 mg/kg	0.000181 %	✓	
7	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		15 mg/kg	1.462	19.401 mg/kg	0.00194 %	✓	
8	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
9	copper { copper(II) carbonate – copper(II) hydroxide (1:1) }	029-020-00-8	235-113-6	12069-69-1		140 mg/kg	1.74	215.55 mg/kg	0.0216 %	✓	
10	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	130 mg/kg		115.044 mg/kg	0.0115 %	✓	
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.15 mg/kg	1.353	0.18 mg/kg	0.000018 %	✓	
12	nickel { nickel dibromate }	028-053-00-5	238-596-1	14550-87-9		25 mg/kg	5.358	118.547 mg/kg	0.0119 %	✓	
13	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		30	mg/kg	1.785	47.394	mg/kg	0.00474 %	✓	
15		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		470	mg/kg	1.245	517.713	mg/kg	0.0518 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		160	mg/kg		141.593	mg/kg	0.0142 %	✓	
17		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
18		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		xylene	601-022-00-9	215-535-7	1330-20-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
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 }	006-007-00-5				<0.01	mg/kg	1.884	<0.0188	mg/kg	<0.00000188 %		<**LOD**
23		pH			PH		8.9	pH		8.9	pH	8.9 pH		
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.24	mg/kg		0.212	mg/kg	0.0000212 %	✓	
25		acenaphthylene		205-917-1	208-96-8		0.17	mg/kg		0.15	mg/kg	0.000015 %	✓	
26		acenaphthene		201-469-6	83-32-9		0.15	mg/kg		0.133	mg/kg	0.0000133 %	✓	
27		fluorene		201-695-5	86-73-7		0.4	mg/kg		0.354	mg/kg	0.0000354 %	✓	
28		phenanthrene		201-581-5	85-01-8		1.3	mg/kg		1.15	mg/kg	0.000115 %	✓	
29		anthracene		204-371-1	120-12-7		0.99	mg/kg		0.876	mg/kg	0.0000876 %	✓	
30		fluoranthene		205-912-4	206-44-0		4.2	mg/kg		3.717	mg/kg	0.000372 %	✓	
31		pyrene		204-927-3	129-00-0		4.8	mg/kg		4.248	mg/kg	0.000425 %	✓	
32		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		3.4	mg/kg		3.009	mg/kg	0.000301 %	✓	
33		chrysene	601-048-00-0	205-923-4	218-01-9		3.9	mg/kg		3.451	mg/kg	0.000345 %	✓	
34		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		2.7	mg/kg		2.389	mg/kg	0.000239 %	✓	
35		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.9	mg/kg		1.681	mg/kg	0.000168 %	✓	
36		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		4.9	mg/kg		4.336	mg/kg	0.000434 %	✓	
37		indeno[123-cd]pyrene		205-893-2	193-39-5		2.7	mg/kg		2.389	mg/kg	0.000239 %	✓	
38		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.47	mg/kg		0.416	mg/kg	0.0000416 %	✓	
39		benzo[ghi]perylene		205-883-8	191-24-2		2.7	mg/kg		2.389	mg/kg	0.000239 %	✓	
40		phenol	604-001-00-2	203-632-7	108-95-2		0.6	mg/kg		0.531	mg/kg	0.0000531 %	✓	
											Total:	0.164 %		

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 Deteminand - 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0142%)

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 ECHACHEM; notifications <1% & outliers (H360, H413) ignored
Data source: https://chem.echa.europa.eu/100.013.783/overview
Data source date: 16 Mar 2026
Hazard Statements: Acute Tox. 4; H302 , Skin Sens. 1; H317 , Eye Irrit. 2; H319 , Resp. Sens. 1; H334

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from:: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

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

Description/Comments: Unknown Oil
Hazard statements taken from WM3 version 1.1.NI and 1.2.GB 2021
Data source: WM3 version 1.1.NI and 1.2.GB 2021
Data source date: 30 Jan 2021
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: IARC considers ethylbenzene Group 2B; Possibly carcinogenic to humans;
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
03 Jun 2026 - 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 version 1.1.NI and 1.2.GB 2021
Data source date: 30 Jan 2021
Hazard Statements: None.

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

Description/Comments: Data from ECHACHEM; CLP submissions;
SDS Sigma Aldrich v6.7 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.005.380/overview
https://www.sigmaaldrich.com/GB/en/sds/aldrich/416703
Data source date: 02 Mar 2026
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H310 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 1; H330 , STOT SE 3; H335

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

Description/Comments: Data from ECHACHEM; CLP submissions;
SDS Sigma Aldrich v6.8 dated 12/12/2025
Data source: https://chem.echa.europa.eu/100.001.336/industry/113817?searchText=83-32-9
https://www.sigmaaldrich.com/GB/en/sds/aldrich/215376
Data source date: 02 Mar 2026
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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

Description/Comments: Data from ECHACHEM; CLP submissions;
SDS Sigma Aldrich v6.6 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.001.541/overview
https://www.sigmaaldrich.com/GB/en/sds/aldrich/128333
Data source date: 02 Mar 2026
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 ECHACHEM; CLP submissions;
SDS Sigma Aldrich v7.2 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.001.437/overview
https://www.sigmaaldrich.com/GB/en/sds/supelco/48569
Data source date: 02 Mar 2026
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , EUH441

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

Description/Comments: Data from ECHACHEM; CLP submissions
SDS Sigma Aldrich v9.3 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.003.974/overview
https://www.sigmaaldrich.com/GB/en/sds/supelco/48567
Data source date: 03 Mar 2026
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PBT; EUH440

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

Description/Comments: Data from ECHACHEM; CLP submissions
SDS Sigma Aldrich v7.2 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.005.376/overview
https://www.sigmaaldrich.com/GB/en/sds/aldrich/f807
Data source date: 03 Mar 2026
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PBT; EUH440 , EUH441

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

Description/Comments: Data from ECHACHEM; CLP submissions
SDS Sigma Aldrich v7.2 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.004.481/overview
https://www.sigmaaldrich.com/GB/en/sds/aldrich/185515
Data source date: 03 Mar 2026
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , PBT; EUH440 , EUH441

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

Description/Comments: Data from ECHACHEM database; CLP submissions
SDS Sigma Aldrich v6.8 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.005.359/overview
https://www.sigmaaldrich.com/GB/en/sds/supelco/48499
Data source date: 03 Mar 2026
Hazard Statements: Carc. 2; H351 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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

Description/Comments: Data from ECHACHEM; CLP submissions; Sigma Aldrich SDS v7.1 dated 25/12/2025
Data source: https://chem.echa.europa.eu/100.005.350/overview
https://www.sigmaaldrich.com/GB/en/sds/aldrich/b9009
Data source date: 18 May 2026
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , vPvB; EUH441 , PBT; EUH440

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(II) carbonate – copper(II) hydroxide (1:1)}

Most likely compound given site history.

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

No chromium (VI) detected.

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 oxide}

No chromium (VI) detected.

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: 2026.223.7324.7700c83 (11 Aug 2026)
HazWasteOnline Database: 2026.223.7324.7700c83 (11 Aug 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

REPORT LIMITATIONS

REPORT LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd under a defined programme, scope of works, and terms and conditions agreed with the client. This report was compiled with all reasonable skill and care, taking into account the project objectives, the agreed scope of works, the prevailing site conditions, the budget, and the 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, 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's 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 investigation or assessment should be conducted if there is any significant delay in acting on the findings of this report. The passage of time may result in changes to site conditions, regulatory or other legal provisions, technology, or economic conditions that 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 from 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 explicitly 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's observations of existing physical conditions at the site, gained from a walkover survey of the site, together with Earth Environmental & Geotechnical Ltd's 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 of that information, it has 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, they have been restricted to the level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable, and investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered that differ from those considered in this report. The extent of the limited area depends on soil and groundwater conditions, the positions of any current structures and underground facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited set of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd], based on the available operational and historical information, and it should not be inferred that other chemical species are absent.

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 vary seasonally and with local drainage conditions, and higher levels may occur at other times of the year than those recorded during this investigation.

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