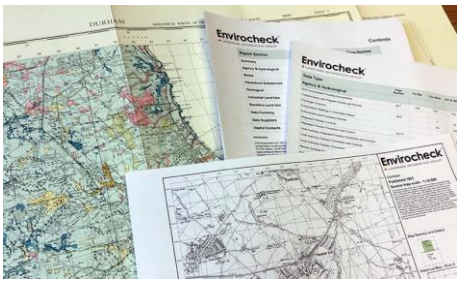



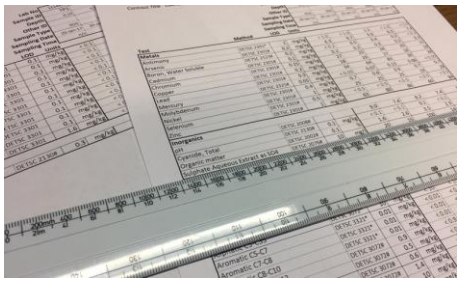

Phase 2: Site Investigation

Milnsbridge, Huddersfield

Dempsey & Gannon

S240420

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PHASE 2 SITE INVESTIGATION REPORT

MILNSBRIDGE, HUDDERSFIELD

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APPENDICES

Revision	Date	Prepared by	Signed
Final	June 2024	S. Donald *Geotechnical Engineer*	
		Checked by	
		L Cassidy *Principal Environmental Engineer*	
		Approved by	
		R Woods *Principal Geotechnical Engineer*	

1 EXECUTIVE SUMMARY

Site Address	• Royal Terrace, Milnsbridge, Huddersfield, HD3 4PL
Proposed Development	• The site is outlined for the construction of multiple industrial units, access roads, parking, and open green spaces.
Fieldwork	• 5no small percussive boreholes (BH01 to BH05) drilled to a maximum of 2.00mbgl with 3no. monitoring pipes in BH02, BH03 and BH05. • 7no machine excavated trial pits (TP01 to TP04) to a maximum depth of 3.50mbgl.
Ground Conditions	• Made ground was encountered to depths of between 0.30mbgl in BH01 and 3.50mbgl in TP04. • In the western area (BH01, BH02, BH03, TP01, TP02 & TP03) granular made ground between 0.30 and 1.30m thickness overlies a suspected sandstone bedrock. • In the centre (BH03 and TP04) deep made ground comprising gravelly slightly clayey sand with high cobble content proven to a depth >3.50mbgl. • In the northern area (BH04, BH05, TP05, TP06 & TP07) granular made ground between 0.30 to 0.70m thickness overlies a suspected sandstone bedrock. • No groundwater was recorded during the fieldwork.
Contamination Analysis	• Given the site's proposed commercial land use the levels of contamination recorded on site are unlikely to pose a risk to the current and future users of the site. • If any zones of odorous, brightly coloured or suspected contaminated ground or groundwater are encountered then work should cease in that area until the material has been investigated. The results of the investigation will therefore determine whether remediation will be required. • PPE for workers. Damping down of site during dry windy conditions. • Controlled waters unlikely to be at risk. • With respect to utilities pH was elevated; as a minimum all services should be laid in clean trenches and polyethylene, copper and steel wrapped pipes should be avoided. • Sub surface concrete should be designed to DS-1 ACEC (Class AC-1s).
Geotechnical Analysis & Foundation Recommendations	• Bearing capacity of 250kN/m^2 at minimum depth of 0.45mbgl on 0.60m wide strips. • Locally deepening of foundations & possible mini-piles in the central areas due to made ground depths. • Settlements within 25mm. • Normal earthworks plant for excavations. • Mining risk assessed to be low.

2 INTRODUCTION

2.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of Dempsey & Gannon, on land located at Royal Terrace, Milnsbridge, Huddersfield, HD3 4PL (Figure 1).

Sources of information, including previous work undertaken at the site, are detailed below:

- *Solmek Phase 1 Desk Study (S240420) May 2024.*

Reference should be made to the above reports for details of the site's history and environmental setting.

2.2 Scope of Works

The site is expected to be developed with multiple industrial units, access roads, parking, and open green spaces. The proposed layout is shown as Figure 3.

The following steps may be required in the investigation and remediation of potentially contaminated land:

- Phase 1: Desk Study
- Phase 2: Intrusive Investigation
- Phase 3: Remediation Statement
- Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages.

A geotechnical and environmental (Phase 2) investigation including a ground gas risk assessment was requested. The fieldwork and testing was generally carried out according to:

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- BS 10175:2011+A1:2013 Investigation of Potentially Contaminated Sites – Code of Practice.
- CIRIA C665:2007 Assessing Risks Posed by Hazardous Ground Gas to Buildings
- BS 8485:2015+A1:2019 Code of Practice for the Characterization and Remediation from Ground Gas in Affected Developments
- Rock and soil descriptions shall be in accordance with BS EN ISO 14689-1:2003, BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004

This report forms part of a Stage 1 Risk Assessment (Generic Quantitative Risk Assessment) with respect to the Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*.

The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities. There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Solmek reserve the right to alter conclusions and recommendations should further information be available or provided. Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

3 SITE DESCRIPTION

A site inspection, as recommended in BS 5930 and BS 10175, was undertaken on Monday 7th May 2024.

The site is centred at Ordnance Survey Co-ordinates 411300E, 416100N and covers approximately 0.68Ha.

The site is generally flat but divided into three levels. Slopes are present to connect one level to another and are wide enough to provide vehicular access to the upper level.

Lower level: Site surface consists of made ground. Brick walls present in the northwest, relating to the historic coal drops. Vertical slope is present west on the site. From entrance to brick wall, a gravelled road is present. Wood waste is present in the northwest and south of the site. Other residential and commercial waste materials present south on the site.

Intermediate level: A small wood structure is present with wood cutting machine. (No structures are proposed within this area)

Upper level: Cut tree trunk and wood pieces present in the south of the site. Mature trees are present on the site, but these are currently being cut down for future construction. The trees are in the valley east of the site.

Rocks, bricks, railway line, steel pipes, possible fuel leakages, residential and industrial waste noticed on the site.

The railway line is present north of the site. Railway bridge noted northeast corner of the site. A residential and commercial area is present south of the site. The land use immediately to the west is industrial in nature, with a garage with road access present to the west of the site.

4 FIELDWORK

The fieldwork was carried out on 9th May 2024. The extent of the investigation was:

- 5no small percussive boreholes (BH01 to BH05 inclusive) to a maximum depth of 2.00m below ground level (bgl).
  - The boreholes were evenly spread around the site to achieve maximum site coverage.
- Gas monitoring wells were installed in BH's 02, 03 & 05.
  - The wells were spaced at <25m centres evenly around the site in accordance with CIRIA C665.
- 7no machine excavated trial pits (TP01 to TP07) were dug to a maximum depth of 3.50mbgl.
  - The trial pits were spaced to locate potential deeper areas of made ground from historic railway as well as relict foundations and other potential obstructions.
- In-situ testing in the exploratory positions as Standard Penetration Tests (SPTs).
- Retrieval of samples for geotechnical and chemical testing.

The boreholes were backfilled with bentonite/grout and/or monitoring installations upon completion. Trial pits were backfilled in layers with arisings. Selected plates of the trial pits are presented in Appendix A.

A plan showing the location of the boreholes and trial pits can be found in Appendix A (Figure 2).

5 GROUND CONDITIONS

A summary of the ground conditions encountered is given below. The exploratory hole logs are presented in Appendix B.

5.1 Made Ground

Made ground can be slip into two distinct groups on-site. Generally Made Ground was noted as comprising of gravelly slightly clayey Sand with low cobble content, present from surface to between 0.30 to 0.70mbgl.

Towards the centre of the site along the southern boundary, made ground was noted from surface to between 1.30 and 3.50m in thickness with composition akin to landfill. Within BH03 and TP04, the base of the made ground was not proven, with these positions terminating at 1.60 and 3.50mbgl, respectively.

5.2 Obstructions

Within TP04 multiple large obstructions were encountered including, but not limited to: Tyres, Concrete Boulders >1.00m diameter, Concrete Sidings, Paving Slabs >0.50m diameter, Metal Rebar >2.00m in length and Wooden Doors >1.50m in length. Similar obstructions were also encountered in the Made Ground in TP03, but sizes did not exceed 0.30m in diameter.

Apart from TP04 & TP03, obstructions in the Made Ground were encountered in BH03, resulting in the termination of the exploratory position, as summarised below:

- BH03 (concrete obstruction at 1.60mbgl)

Apart from TP03, all exploratory locations were terminated due to obstructions encountered in natural deposits, suspected to be the Sandstone Bedrock.

5.3 Natural Deposits

No superficial natural drift deposits were encountered in any location.

5.4 Solid Geology

Inferred sandstone rockhead was encountered at depths between 0.30 and 1.30mbgl within the small percussive boreholes and trail pits, however bedrock was not proven via rotary drilling methods.

5.5 Groundwater

No groundwater strikes were encountered during the investigation. It should be noted the rapid rate of advancement of the exploratory holes may mask minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including season, rainfall, dewatering and pumping activities.

6 CONTAMINATION TESTING RESULTS

The proposed development of the site is to involve the construction of industrial units, parking and access roads. The chemical samples were generally retrieved in line with BS ISO 18400-105:2017 *Soil Quality. Sampling*. The chemical results are presented in Appendix C.

6.1 Site Characterisation

Within the Solmek Phase 1 Desk Study, a preliminary conceptual model was formed based on the information obtained. The initial risk was based on the site history which recorded generally open land throughout the site's history.

An overall low to moderate risk was provided for various receptors:

- Human Health – Moderate
- Controlled Water – Moderate
- Current Site Users (on-site workers/visitors) – Moderate
- Vegetation – Very Low
- Construction Materials – Moderate

6.2 Contamination Testing and Rationale

To provide information upon the possibility of ground contamination, six samples of made ground were selected for shallow contamination testing. A moderate overall contamination risk was highlighted in the Phase 1 Desk Study due to previous land uses. This coupled with the end use being industrial means that six samples are considered appropriate for testing. The samples selected are detailed below:

- TP01 – 0.40-0.50m (Made Ground – granular)
- TP02 – 0.10-0.20m (Made Ground – granular)
- TP03 – 1.00-1.10m (Made Ground – granular)

- TP04 – 0.90-1.00m (Made Ground – granular)
- TP06 – 0.10-0.20m (Made Ground – granular)
- TP07 – 0.40-0.50m (Made Ground – granular)

The samples selected are considered to provide coverage of both the made ground and shallow natural strata from across the site that would be most likely to be exposed during future site works. The samples were tested for the following contaminant suites:

- 6no Metals, semi-metals, non-metals, inorganic determinants
- 6no Asbestos identification screenings
- 6no Speciated Polyaromatic Hydrocarbons (PAHs)
- 6no Total Petroleum Hydrocarbon Criteria Working Group fractions (TPHCWG)

6.3 Test Results

Based on the proposed development at the site, the test results have been compared to a series of Land Quality Management (LQM) Suitable for Use Levels (S4UL) based on commercial land use. These are the most up to date thresholds published in December 2014.

The value for lead has been compared with the Category 4 Screening Level (March 2014) developed by Contaminated Land: Applications In Real Environments (CL:AIRE).

The test results are presented in Appendix C, and a summary is provided below in Tables 1 & 2

TABLE 1: SUMMARY OF INORGANIC CONTAMINATION TESTING RESULTS (COMMERCIAL)

Determinand	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	Commercial Threshold Value	Number of Results Exceeding Threshold Value
Metals						
Cadmium	mg/kg	4	<0.1	0.3	190	0
Chromium	mg/kg	6	<1	410	8600	0
Copper	mg/kg	6	<0.5	820	68000	0
Lead	mg/kg	6	<0.5	150	2300*	0
Mercury	mg/kg	1	<0.1	0.23	1100	0
Nickel	mg/kg	6	<0.5	2000	980	1
Zinc	mg/kg	6	<0.5	270	730000	0
Semi metals and non metals						
Arsenic	mg/kg	6	<1	29	640**	0
Boron	mg/kg	6	0.4	2.2	240000	0
Selenium	mg/kg	1	<0.2	1.1	12000	0
Inorganic chemicals						
Cyanide (Total)	mg/kg	0	<0.1	<0.1	1580**	0
Sulphate (2:1 Water Soluble)	mg/l	6	61	410	2000^	0
Other						
pH	pH	-	5.2	10.8	5.5^	1

* Category 4 Screening Levels, March 2014
** CLEA Software Version 1.06 (pH7 and 1%SOM)
^ EA Threshold Values

6.4 Metals, Semi Metals and Non Metals

Significantly elevated concentrations of Nickel were encountered in TP03 (1.00-1.10m), in the centre of the site. No other samples indicated significant raised levels of contamination above the S4UL threshold values, based on the six samples tested.

6.5 Inorganic Chemicals

Soluble sulphates (potentially aggressive to foundation concrete) were recorded between 61 and 410mg/l.

None of the samples were elevated above levels affecting human health or the BRE Special Digest 1 500mg/l limit for the sulphate classification of concrete.

The results of the pH testing were between 5.2 and 10.8. These pH levels are consistent with acidic to alkaline conditions.

6.6 Organic Chemicals

The organic thresholds vary depending on the levels of soil organic matter (SOM).

The average SOM recorded across the site was 4.10% therefore a SOM of 2.50% has been used to determine the S4UL thresholds. Table 2, below, summarises the results.

TABLE 2: SUMMARY OF ORGANIC CONTAMINATION TESTING RESULTS (COMMERCIAL)

Determinand	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	Commercial Threshold Value at 2.5% SOM	Number of Results Exceeding Threshold Value
TPH Aliphatic Fractions						
Aliphatic (C5-C6)	mg/kg	0	<0.01	<0.01	5900	0
Aliphatic (C6-C8)	mg/kg	0	<0.01	<0.01	17000	0
Aliphatic (C8-C10)	mg/kg	0	<1.5	<1.5	4800	0
Aliphatic (C10-C12)	mg/kg	0	<1.2	<1.2	23000	0
Aliphatic (C12-C16)	mg/kg	1	<1.5	6.6	82000	0
Aliphatic (C16-C21)	mg/kg	1	<1.5	17	1700000	0
Aliphatic (C21-C35)	mg/kg	1	<3.4	150	5900	0
Aliphatic (C35-C44)	mg/kg	0	<3.4	<3.4	17000	0
TPH Aromatic Fractions						
Aromatic (C5-C7)	mg/kg	0	<0.01	<0.01	46000	0
Aromatic (C7-C8)	mg/kg	0	<0.01	<0.01	110000	0
Aromatic (C8-C10)	mg/kg	0	<0.01	<0.01	8100	0
Aromatic (C10-C12)	mg/kg	0	<0.9	<0.9	28000	0
Aromatic (C12-C16)	mg/kg	1	<0.5	4.1	37000	0
Aromatic (C16-C21)	mg/kg	2	<0.6	65	28000	0
Aromatic (C21-C35)	mg/kg	2	<1.4	470	28000	0
Aromatic (C35-C44)	mg/kg	2	<1.4	<1.4	46000	0
Speciated PAH						
Naphthalene	mg/kg	3	<0.1	1.2	460	0
Acenaphthylene	mg/kg	0	<0.1	0.1	97000	0
Acenaphthene	mg/kg	5	<0.1	29	97000	0
Fluorene	mg/kg	5	<0.1	26	68000	0
Phenanthrene	mg/kg	6	<0.1	160	22000	0
Anthracene	mg/kg	6	<0.1	62	540000	0
Fluoranthene	mg/kg	6	<0.1	330	23000	0
Pyrene	mg/kg	6	<0.1	290	54000	0
Benzo[a]anthracene	mg/kg	6	0.6	150	170	0
Chrysene	mg/kg	6	<0.1	140	350	0
Benzo[b]fluoranthene	mg/kg	6	0.5	100	44	1
Benzo[k]fluoranthene	mg/kg	6	0.3	67	1200	0
Benzo[a]pyrene	mg/kg	6	0.7	160	35	1
Benzo[g,h,i]perylene	mg/kg	6	0.4	84	4000	0
Dibenz(a,h)Anthracene	mg/kg	4	<0.1	16	3.6	1
Indeno(1,2,3-c,d)Pyrene	mg/kg	6	0.4	90	510	0
Total PAH	mg/kg	6	7.9	1700	1000*	1
Total Phenol	mg/kg	1	<0.3	0.4	1500	0
* EA Threshold Values						

From the six samples tested for organic determinants, the below exceedances were recorded:

- TP02 – 0.10-0.20m recorded elevated benzo(b)fluoranthene, benzo(a)pyrene,

dibenz(a,h)anthracene and total PAH

No other samples indicated raised levels of contamination above the S4UL threshold values, based on the six samples tested.

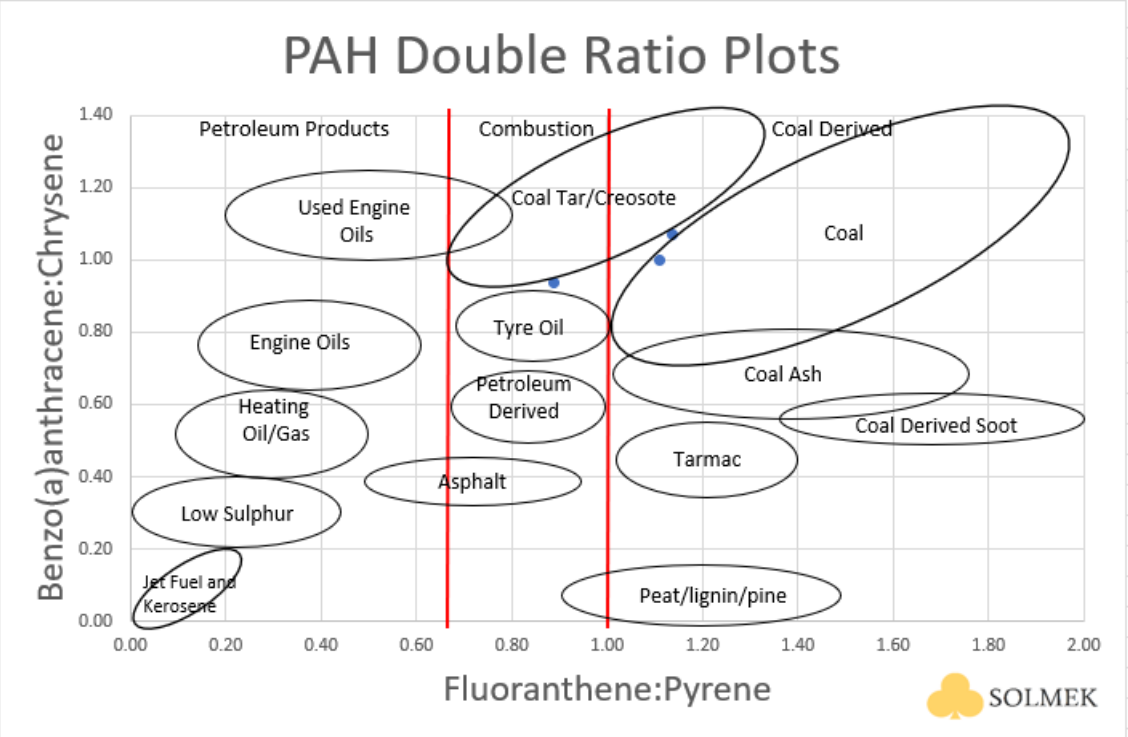
Double Ratio Plot Analysis of the samples TP02, TP03 & TP04 which recorded elevated PAHs (Figure A, below) indicates that the PAH is generally of coal/creosote origin.

FIGURE A: DOUBLE PLOT RATIO CHART

6.7 Asbestos

From the six samples subject to asbestos screening, asbestos fibres were recorded in one sample TP03 – 1.00-1.10mbgl. The asbestos fibres found comprised Chrysotile (white) fibre bundles. The sample was sent for quantification testing, with the results indicating the samples comprised 0.005% asbestos by mass.

6.8 Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)



This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to "identify and remove unacceptable risks to human health and the environment" and to "seek to ensure that contaminated land is made suitable for its current use". Part 2A uses a risk-based approach to defining contaminated land whereby the "risk" is interpreted as "the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land" and by "the scale and seriousness of such harm or pollution if it did occur".

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that *"for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."*

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include “land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health.” Categories 3 and 4 “encompass land which is not capable of being determined on such grounds”.

See Appendix E for additional notes on contamination guidelines.

7 CONCEPTUAL MODEL AND CONTAMINATION ANALYSIS

The contamination conceptual model in Table 3 identifies the potential pollution linkages present on site based on source – pathway – receptor relationships.

TABLE 3: CONCEPTUAL MODEL

Source	Pathway	Receptor	Risk Rating	Comments
Asphyxiating or explosive ground gases • Made ground generally between 0.30 and 1.30m but locally >3.50m in thickness.	**Ground gas migration** • Migration through permeable soils • Inhalation	**Future site users** • Transient adult workers	Moderate	Gas monitoring in progress, source risk rating subject to change.
		Users during development • Construction workers	Moderate /Low	
Areas of contamination hazardous to human health (Commercial Thresholds) • 6no samples tested • TP02 – 0.10-0.20m recorded elevated benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene and total PAH • TP03 - 1.00-1.10m recorded elevated levels of Nickel & presence of asbestos	• Inhalation • Dust ingestion • Dermal contact	**Future site users** • Transient adult workers	Low	Localised contamination however this will be mitigated by encapsulation beneath proposed structure footprint/hard standing.
		Users during development • Construction workers	Moderate	Mitigation measures required during construction. Consideration to be given to Health and Safety Executive: *Protection of Workers and the General Public During the Development of Contaminated Land.*
	• Inhalation • Dust ingestion	**Users of surrounding sites** • Adult & Infant residents	Moderate	Potential moderate risk during remediation/construction from dust generation. Consideration to be given to dust suppression, in line with BRE: *The Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance.*
	• Leaching of mobilised contaminants	**Drift geology** • Not designated	Very Low	No natural drift deposits recorded.
		Solid geology • Secondary Aquifer - A	Low	Localised contamination overlying a medium sensitive aquifer. Limited potential for contamination.
	• Drainage • Lateral migration • Accumulation of contaminated sediment	**Surface water features** • Longwood Brook 116m north	Low	The distant surface water is highly unlikely to be impacted by the low contamination levels recorded.
Areas of phytotoxic contamination	• Uptake via roots and leaf surfaces	**Vegetation** • None on site or proposed	Very Low	No potential for Vegetation impact as no vegetation is present or proposed.
Areas of contamination above service fabric or BRE Special Digest 1 thresholds • Elevated pH	• Direct contact	**Construction Materials** • Concrete	Low	Made ground and natural ground not considered aggressive to concrete.
		Construction Materials • Service Fabric	High	Polyethylene, copper and wrapped steel piping to be avoided and prudent to lay any service within a clean bedding.

In general terms, construction materials, are **potentially most** at risk as pollution linkages may be present for each of these receptors. Users of the site, construction workers, users of surrounding site and potential future users of the site are **potentially** at risk from contamination in the soils on site. Controlled waters and vegetation are at **potentially less** of a risk.

Mitigation measures to reduce the risks identified for reach receptor are discussed in the following sections.

7.1 Users of the Site Once Development is Complete

The users of the site, particularly construction workers, are likely to be exposed to contaminants present in the soils beneath the site during redevelopment work. **Potential** exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatised compounds, and inadvertent soil ingestion. Moreover, a risk to ground/surface water receptors exists through leaching of contaminants.

To establish if the levels of contaminants present on site may pose a risk to the health of the future users of the site the results of the contamination testing have been compared to a series of LQM S4UL thresholds based on commercial end use (see Tables 1 & 2).

The levels of contaminants across the site are generally low with exceedances limited to two of the six samples tested, as summarised below:

- TP02 - 0.10-0.20m (Made Ground – granular) recorded elevated benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene and total PAH
- TP03 - 1.00-1.10m (Made Ground – granular) recorded elevated levels of nickel and asbestos (chrysotile)

The location of the samples which recorded elevated contamination are shown below on Figure B, based on the 6no samples tested to date.

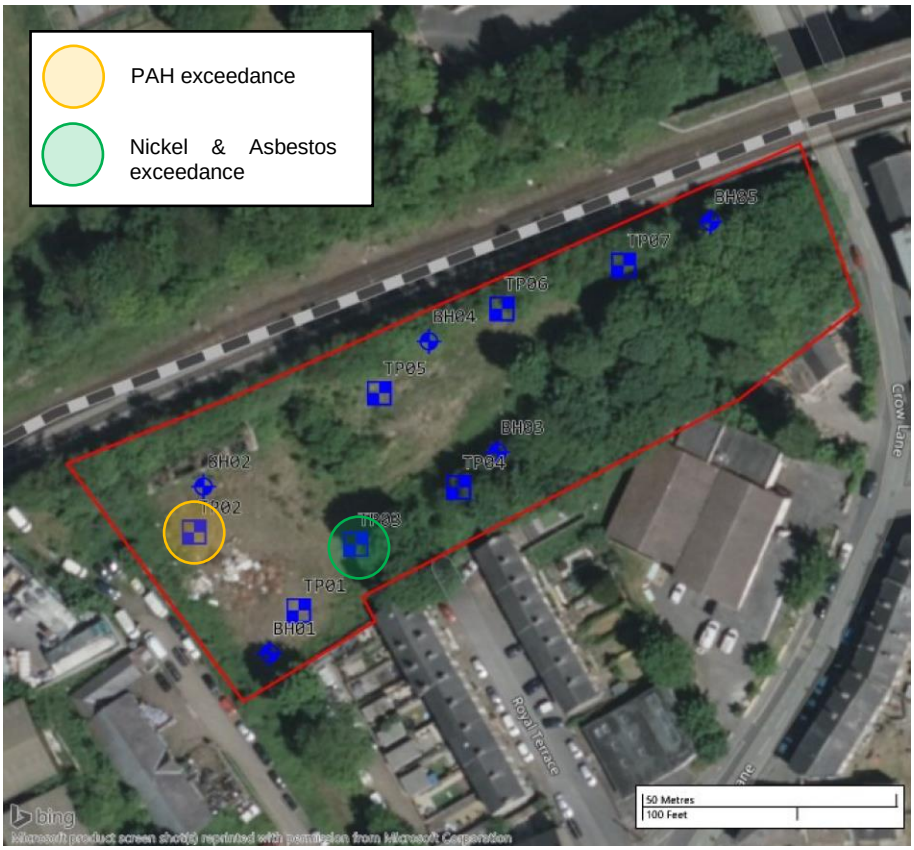


FIGURE B: ELEVATED CONTAMINATION LOCATIONS

The new development is expected to comprise industrial units with associated access roads and parking. Based on the **shallow** soil contamination testing, it is considered that the levels of contamination are unlikely to pose a risk to future users of the site, as all contaminated areas will be covered either by buildings or hardstanding.

7.2 Construction Workers and Users of Surrounding Sites

Short term human exposure to contaminants present in soils can occur via several pathways during the construction and ground works phase of the development. These include dermal absorption after contact with contaminated ground, inhalation of soil or dust (including windblown dust), inhalation of volatised compounds, inadvertent soil ingestion and contact with contaminated groundwater.

Chrysotile asbestos fibres were detected in the sample from TP03 (1.00 – 1.10mbgl). This sample was sent for further analysis asbestos quantification testing by Gravimetry. The results of the screening and further testing are presented in Appendix C. This indicated that there was 0.005% by mass of asbestos within the sample.

Based on the guidance set forth in the Interdepartmental Committee for the Redevelopment of Contaminated Land (ICRCL), 1990, Guidance note 64/85 *Asbestos on Contaminated Sites* asbestos contaminated soil should be considered as a hazardous waste if the percentage by mass exceeds 0.1%. Should it have a mass of >0.001% it is considered as a risk to human health. Given that the sample showed 0.005% by mass it is possible that the soil may present a risk to human health.

In addition, raised levels of Nickel in TP03 and PAHs in TP02 were detected. It is considered that such levels of contamination may pose a risk to construction workers and users of surrounding sites. As good practice, full PPE must be employed in accordance with Health and Safety Executive*: Protection of Workers and the General Public During the Development of Contaminated Land* and safeguards should be taken to limit dust during ground works, and access to the public should be restricted. Construction workers should use gloves as a precaution when handling any fill materials. Provision of suitable hygiene facilities are needed for site workers.

Further asbestos may be present elsewhere on the site that has not been sampled or tested during this investigation. It is therefore advised that having a qualified asbestos surveyor present during the initial site strip and any excavation works is given careful consideration. All works should be undertaken in accordance with the *Control of Asbestos Regulations* (2012) and CIRIA C733 *Asbestos in soil and made ground: a guide to understanding and managing risks*.

During dry weather, any excavations may require clean water to be sprinkled at shallow depth to prevent excess dust escaping to off-site receptors. Monitoring of dust concentrations during construction should be given careful consideration to ensure occupational exposure levels are not exceeded. Works should be undertaken in line with BRE: *The Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance*.

7.3 Vegetation

Plants can be affected by soil contamination in a number of ways resulting in growth inhibition, nutrient deficiencies and yellowing of leaves. Contaminants are taken up by plants through the roots and through foliage. Contaminants identified as being highly phytotoxic include boron, cadmium, copper, nickel, and zinc.

For this development, no vegetation is proposed therefore it is not considered to be a sensitive receptor.

7.4 Ground and Surface Water

The principal pathway by which soil contamination may reach the water environment is through a slow seepage or leaching to groundwater or surface water. The potential for contaminants to migrate along such pathways is dependent on the chemical and physical characteristics of the contaminants and the local hydrogeology.

From the site investigation undertaken, ground conditions broadly comprise thin made ground over suspected bedrock deposits. The granular weathered rock deposits can be considered to have a moderate to high permeability. The drift deposits are not designated as an aquifer by the Environment Agency.

The published geology indicates the site is underlain by solid geology of Huddersfield White Rock Sandstone, which is designated as a Secondary Aquifer - A by the Environment Agency. Rockhead is suspected from 0.30mbgl in the west and north of the site but was not encountered along the southern boundary due to deep made ground deposits being discovered (>3.50m).

The nearest surface water feature is Longwood Brook, a river located 116m north of the site.

The groundwater flow onsite is likely to be southeast, although no groundwater was encountered during the intrusive works.

Due to the generally low contamination found across the site, the aquifer designations beneath the site, and the distance to surface waters, the development is considered to represent a low risk to groundwater or surface water receptors.

7.5 Construction Materials

Materials at risk from potential soil contamination include inorganic matrices such as cement and concrete and also organic material; e.g. plastics and rubbers. Acid ground conditions and elevated levels of sulphates can accelerate the corrosion of building materials. Plastics and rubbers are generally used for piping and service ducts and are potentially attacked by a range of chemicals, most of which are organic, particularly petroleum-based substances. Drinking water supplies can be tainted by substances that can penetrate piping and water companies enforce stringent threshold values.

6.5.1 Concrete Classification

BRE Special Digest One: *Concrete in Aggressive Ground*: 2005 3rd Edition has been used to assess the risks posed to underground concrete and to establish the design measures required to mitigate the risks. The results of the pH and water-soluble sulphate tests (when converted to total potential sulphate) fall into Class DS-1 ACEC (Class AC-1s) requirements for concrete protection. This assumes static groundwater conditions.

6.5.2 Water Supply Pipes Material Selection

The levels of potential contaminants should be compared to thresholds supplied in the UK Water Industry Research (UKWIR) publication *Guidance for the selection of Water Supply Pipes to be used in Brownfield Sites* (June 2011). A Brownfield Site is defined in the document as “Land or premises that have previously been used or developed that may be vacant or derelict”. It should be noted that Brownfield sites may not be contaminated. The guidance does not apply to Greenfield Sites however water companies may have their own assessment criteria which should be checked by the developer.

Based on the samples tested during the site investigation, levels of acidic to alkaline pH (5.2 to 10.8) were recorded across the site at depths of between 0.00mbgl and 2.00mbgl within the made ground and natural samples.

The concentrations of the selected determinants should be compared to the pipe material selection table in Appendix E, and consultation with the appropriate utility supply company is required to identify the most suitable service fabric. However, the pH levels may preclude the use of polyethylene, copper and wrapped steel piping depending on the depth of proposed service corridors.

7.6 Unexpected Contamination

If during the initial site strip or subsequent ongoing construction activities, any zones of odorous, brightly coloured or suspected contaminated ground are encountered, then the following procedure should be followed:

- Stop work in the affected area
- Contact Solmek and provide pictures of the affected area
- Solmek can visit site to investigate the material and provide guidance
- If required – Solmek can sample and test the material
- Once test results are returned, this will determine whether or not remediation will be required

7.7 Waste Classification

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste* (2015). This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

For this project, Waste Classification has not been requested by the client. Waste classification, in line with the EA guidance, would be needed to classify the material as Hazardous or Non-Hazardous Waste. WAC testing would then be required to determine the suitability of the material for the relevant landfill.

Solmek note that tarmac was locally present across the site which has not been tested – the client may wish to consider subjecting select tarmac samples to coal tar testing, to determine whether coal tar is present within the material. Should coal tar be present, it may require disposal as hazardous waste.

8 GROUND GAS ASSESSMENT

The proposed development includes the construction of commercial buildings.

Ground gases such as carbon dioxide (CO_2), methane (CH_4), carbon monoxide (CO) and volatile organic compounds (VOCs) can be classed as a form of contamination where there is a potential risk to human health.

For this report, gas monitoring is via measuring emissions from three standpipes (BH02, BH03 & BH05) that were installed during the sitework. The gas monitoring will consist of six visits over a period of three months. The gas monitoring results will be presented as an addendum to this report.

The rationale of the ground gas installations was to capture ground gas emissions from across the site, with BH03 in particular targeting deep made ground, and BH02 and BH05 providing additional spatial coverage.

9 GEOTECHNICAL TESTING AND ANALYSIS

Samples taken from the boreholes and trial pits underwent a series of geotechnical tests at a UKAS accredited laboratory to aid foundation design and soil description. In addition, in-situ Standard Penetration Tests (SPTs) were undertaken at regular intervals during drilling. The geotechnical results are presented in Appendix D.

9.1 Strength and Density

9.1.1 *SPT N Values*

Standard Penetration Tests undertaken within the natural weathered rock deposits between 0.70 and 2.00mbgl yielded N values of between 15 and 50+, indicative of medium dense to very dense deposits.

9.2 Moisture Contents

One combined sample recovered from the trial pits has been subject to moisture content tests to determine the moisture profile. Moisture levels were measured at 4.9% combined over the positions.

9.3 Particle Size Distribution and Sedimentation Testing

One combined sample from the trial pits was subject to Particle Size Distribution (PSD) tests in accordance

with BS1377 Part 2 to aid soil descriptions. The results have been used to prepare precise soil descriptions in accordance with BS5930:2015 Section 6 and are presented in Appendix D.

9.4 pH and Sulphate Results

Eleven samples of natural and made ground material from the boreholes and trial pits were tested for acidity and soluble sulphate content to assess whether the material may be potentially aggressive to building fabric. The results of the testing for pH ranged from 5.2 to 10.8 indicating acidic alkaline conditions. Soluble sulphates were recorded at levels ranging from 27mg/l to 410mg/l.

9.5 Mining Assessment

The ten times seam thickness rule states that where competent rock exceeds ten times the extracted seam thickness then no major crown holing should occur at the surface (Structural Foundations Manual; M. F. Atkinson, *Spon Press* 2003). If the competent rock cover is less than ten times the extracted seam thickness, then recommendations suggest the workings must be grouted using a mixture of pulverised fuel ash (PFA) and cement placed into the area under pressure. Should the overlying rock be weak and/or faulting, a ratio in excess of 10x may be required, whilst weak basement rock underlying the works could cause a separate collapse mechanism via pillars sinking. For certain developments, a ratio of less than 10x may be addressed via using rafts, however this would be dependent on approval from the regulatory authorities. This may not be appropriate for steeply dipping seams and where strong flowing water is encountered.

For this site, the Phase 1 Desk Study/CMRA indicated that the site was within a Coal Mining Reporting Area. Subsequent review of the Coal Mining Report and Geological Mapping did not indicate that the site was at risk of historic shallow mine workings, therefore further investigation was not considered necessary.

9.6 Foundations

9.6.1 *Foundations within Bedrock*

The site is underlain by sandstone with rockhead noted from 0.30mbgl. It would be prudent to situate the foundations directly upon the sandstone bedrock.

The foundations will be required to found at a minimum depth of 0.45mbgl to protect against damage from frost action.

Strip footings, 0.60m wide, should be adopted placed directly onto the weathered sandstone rockhead at depths of at least 0.45mbgl.

Within localised areas of deeper made ground, foundations will need to be taken through the into natural strata of adequate bearing capacity. Deepened sections would require stepping and reinforcement measures during construction.

The shallow weathered sandstone can be considered weak. Table 2.4 in *Foundation Design & Construction, 6th Edition*, M.J. Tomlinson outlines a bearing capacity of 250kN/m^2 for sandstone be assumed. Providing imposed loads do not exceed the bearing capacity then settlement have been calculated at less than 25mm. The developer should also ensure the footings are placed at sufficient depth through the weathered zone to more competent bedrock to achieve the desired 250kN/m^2 allowable bearing capacity.

9.6.2 *Mini-Piled Foundations*

Locally (TP03, TP04 & BH03 in the south of the site) deeper made ground was recorded to at least 3.50mbgl with the base not proven. It is understood that no buildings are proposed for this area, however, should the site layout change, mini-piled foundations will be required.

Information provided in this report should be made available to a competent piling contractor who can design appropriate foundations in accordance with Section 7: Pile foundations of BS EN 1997 – 1:2004 which applies to end-bearing piles, friction piles, tension piles and transversely loaded piles installed by driving, by jacking, and by screwing or boring. The piling contractor will need to take into consideration the possible effects of negative skin friction from made ground. Allowance should be made for breaking through known and unknown buried obstructions.

The precise method of pile installation and the applicability of proprietary systems, diameters and depths required would need to be determined by a specialist piling contractor.

9.6.3 *General Foundation Comments*

It is recommended that an adequate drainage system for surface water be installed by a competent contractor in order to prevent surface water ponding or collecting during and post construction, which may in turn lead to deterioration of the founding stratum.

Prior to placing foundation concrete, obvious soft or loose spots should be removed and replaced with suitably recompacted hardcore or lean mix concrete. In addition, all excavations should be inspected to ensure that they fully penetrate areas of disturbed ground.

Further advice should be sought from Solmek if unexpected ground conditions are encountered during redevelopment.

9.7 Excavation

Based on the nature of the ground conditions encountered, excavations should be within the capacity of normal earthworks plant although breaking out of relict foundations and other obstructions should be anticipated. Stability of excavations will be poor in the made ground but should improve slightly in the natural highly weathered sandstone. Excavation sides should be designed, constructed and supported in accordance with the recommendations given in CIRIA Report No. 97: “Trenching Practice”.

9.8 Groundwater

No groundwater was encountered during this investigation.

It should be noted the rapid rate of advancement of the exploratory holes may mask minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including season, rainfall, dewatering and pumping activities. Therefore, water levels significantly higher than those found during this investigation may be encountered.

SOLMEK

APPENDIX A

SOLMEK
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Figure Title

Site Boundary

Project Number

S240420

Project Name

Milnsbridge, Huddersfield

Client

Dempsey and Gannon

Date

June 2024

DRG Number

Figure 1

Scale

1:1000 @ A4 [DO NOT SCALE]

Legend Key

Project Bounds - Project Bounds

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Figure Title

Site Investigation Plan

Project Number

S240420

Project Name

Milnsbridge, Huddersfield

Client

Dempsey and Gannon

Date

June 2024

DRG Number

Figure 2

Scale

1:1000 @ A4 [DO NOT SCALE]

Legend Key

- Locations By Type - Empty
- Locations By Type - BH
- Locations By Type - TP
- Project Bounds - Project Bounds

APPENDIX B

SOLMEK
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Borehole Log

Scale 1:50 Sheet 1 of 1

BH01

Contract no:	S240420	**Site:**	Milnsbridge, Huddersfield	**Driller:**	BBL
				Plant used:	Small Percussive
				Started:	09/05/2024
Client:	Dempsey and Gannon			**Ended:**	09/05/2024
Method:	Small Percussive			**Backfilled:**	09/05/2024

GL (AOD):		
Easting:	411268	
Northing:	416055	
Logged:	SD	
Status:	FINAL	

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
		0.30		MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.			
		0.72		SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.	0.70 - 0.74	SPT (S)	N=50+ (25 for 10mm/50 for 20mm)
				End of Borehole at 0.720m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m Hand excavated inspection pit dug. No groundwater encountered.	From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 1 of 1

BH02

Contract no:	S240420	**Site:**	Milnsbridge, Huddersfield	**Driller:**	BBL
				Plant used:	Small Percussive
				Started:	09/05/2024
Client:	Dempsey and Gannon			**Ended:**	09/05/2024
Method:	Small Percussive			**Backfilled:**	09/05/2024

GL (AOD):	
Easting:	411255
Northing:	416088
Logged:	SD
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
		0.40		MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.			
G		0.73		SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.	0.70 - 0.88	SPT (S)	N=50+ (6,9/50 for 30mm)
				End of Borehole at 0.730m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m Hand excavated inspection pit dug. No groundwater encountered.	From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 1 of 1

BH03

Contract no:	S240420	**Site:**	Milnsbridge, Huddersfield	**Driller:**	BBL
				Plant used:	Small Percussive
				Started:	09/05/2024
Client:	Dempsey and Gannon			**Ended:**	09/05/2024
Method:	Small Percussive			**Backfilled:**	09/05/2024

GL (AOD):	
Easting:	411313
Northing:	416095
Logged:	SD
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.	0.00 - 0.50	D	
					0.50 - 1.00	D	
					1.00 - 1.50	D	
					1.20 - 1.60	SPT (S)	N=50+ (6,9/10,12,13,15 for 25mm)
					1.20 - 1.60	D	
		1.60		End of Borehole at 1.600m	1.60	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m Hand excavated inspection pit dug. No groundwater encountered.	From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 1 of 1

BH04

Contract no:	S240420	**Site:**	Milnsbridge, Huddersfield	**Driller:**	BBL
				Plant used:	Small Percussive
				Started:	09/05/2024
Client:	Dempsey and Gannon			**Ended:**	09/05/2024
Method:	Small Percussive			**Backfilled:**	09/05/2024

GL (AOD):	
Easting:	411300
Northing:	416117
Logged:	SD
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.	0.00 - 0.30	D	
		0.30			0.30 - 0.60	D	
					0.60 - 1.00	D	
				SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.	1.00 - 1.80	D	
					1.20 - 1.65	SPT (S)	N=15 (5,5/4,4,3,4)
					1.20 - 1.65	D	
					1.80 - 2.20	SPT (S)	N=50+
		2.00			1.80 - 2.00	D	(9,10/12,13,9,16 for 25mm)
				End of Borehole at 2.000m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
				1.2m Hand excavated inspection pit dug. No groundwater encountered.								

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Borehole Log

Scale 1:50 Sheet 1 of 1

BH05

Contract no:	S240420	**Site:**	Milnsbridge, Huddersfield	**Driller:**	BBL
				Plant used:	Small Percussive
				Started:	09/05/2024
Client:	Dempsey and Gannon			**Ended:**	09/05/2024
Method:	Small Percussive			**Backfilled:**	09/05/2024

GL (AOD):	
Easting:	411356
Northing:	416140
Logged:	SD
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.	0.00 - 0.50	D	
		0.50		SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.	0.50 - 0.75	D	
					0.90 - 1.20	D	
	G				1.20 - 1.65	SPT (S)	N=22 (4,5/6,6,5,5)
					1.20 - 1.60	D	
					1.20 - 1.65	D	
					1.60 - 2.00	D	
		2.00		End of Borehole at 2.000m	2.00 - 2.24	SPT (S)	N=50+ (11,14/16,34 for 20mm)
					2.00	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m Hand excavated inspection pit dug. No groundwater encountered.	From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Trial Pit Log

TrialPit No
TP01
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411274E - 416063N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 1.10	1.60 × 0.60
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES		0.30			MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.
	0.40 - 0.50	B+ES		0.50			MADE GROUND: Orange gravelly slightly clayey Sand with high cobble content. Sand is fine to coarse grained, gravel is fine to coarse grained angled to sub-angled of sandstone, limestone, brick fragments, coal and concrete. Cobbles are angled to sub-angled of sandstone and concrete.
	0.80 - 0.90	B+ES		1.10			SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
							End of Pit at 1.100m

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP02
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411254E - 416079N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 0.90	1.10 × 0.60
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES		0.30			MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.
	0.50 - 0.60	B+ES		0.90			SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
							End of Pit at 0.900m

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP03
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411285E - 416077N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 1.90	1.90 × 0.60
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES					MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with high cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, fabric, glass, metal, plastic, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete, tyres and paving slabs. Sulphurous Odour noted from 0.60 - 0.80mbgl.
	0.60 - 0.70	B+ES					
	1.00 - 1.10	B+ES					
				1.30			
	1.40 - 1.50	B+ES					SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
				1.90			End of Pit at 1.900m

1
2
3
4
5

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP04
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411306E - 416088N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 3.50	2.40 × 0.85
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES					MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with high cobble content and low boulder content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, fabric, glass, metal, plastic, roots, slate, tile, wood, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, carpet, concrete with rebar, concrete siding panels, doors, tyres and paving slabs. Boulders are angled to sub-rounded of sandstone blocks and concrete. Sulphurous Odour noted from 0.40mbgl
	0.40 - 0.50	ES					
	0.90 - 1.00	ES					
	1.40 - 1.50	ES					
	1.90 - 2.00	ES					
	2.40 - 2.50	ES					
	2.90 - 3.00	ES					
	3.40 - 3.50	ES					
				3.50			End of Pit at 3.500m

1
2
3
4
5

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP05
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411290E - 416106N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 2.00	2.00 × 0.60
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES		0.30			MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.
	0.40 - 0.50	B+ES					SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
	0.90 - 1.00	B					
	1.90 - 2.00	B		2.00			End of Pit at 2.000m

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP06
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411314E - 416123N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 1.30	1.60 × 0.60
Client:	Dempsey and Gannon		Date 09/05/2024 Scale 1:26 Logged SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES		0.30			MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.
	0.50 - 0.60	B+ES					SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
	1.10 - 1.20	B		1.30			End of Pit at 1.300m

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

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Trial Pit Log

TrialPit No
TP07
Sheet 1 of 1

Project Name:	Milnsbridge, Huddersfield	Project No. S240420	Co-ords: 411338E - 416132N Level:
Plant Used:	JCB 3CX	Dimensions (m): Depth 1.75	1.80 × 0.60
Client:	Dempsey and Gannon		

Date: 09/05/2024
Scale: 1:26
Logged: SD

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.20	B+ES		0.30			MADE GROUND: Brown to dark brown gravelly slightly clayey Sand with low cobble content. Sand is fine to coarse grained with some ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, ceramics, coal, concrete, glass, metal, slate, tile, and slag-like material. Cobbles are angled to sub-angled of sandstone, bricks, concrete and paving slabs.
	0.40 - 0.50	B+ES		0.70			MADE GROUND: Brown becoming black slightly gravelly slightly clayey Sand. Sand is fine to coarse grained with ash and coal dust. Gravel is fine to coarse grained, angled to sub-angled of sandstone, limestone, brick fragments, clinker, coal, concrete, and slag-like material.
	0.90 - 1.00	B+ES					SUSPECTED SANDSTONE BEDROCK - RECOVERED AS Orange slightly gravelly clayey SAND with high cobble content. Sand is fine to coarse grained. Gravel is fine to coarse grained, angled to sub-rounded of sandstone. Cobbles are angled to sub-angled of sandstone.
	1.50 - 1.60	B		1.75			End of Pit at 1.750m

Remarks: No groundwater encountered.

Stability: Unstable in made ground, slightly instability in natural.

TP01 - Pit

TP01 - Spoil

Title	**Date**
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP02 - Pit

TP02 - Spoil

Title	**Date**
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP03 - Pit

TP03 - Spoil

Title	**Date**
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP04 - Pit

TP04 - Spoil

Title	**Date**
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP05 - Pit

TP05 - Spoil

Title	Date
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP06 - Pit

TP06 - Spoil

Title	**Date**
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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TP07 - Pit

TP07 - Spoil

Title	Date
TP Photos	June 2024
Project	
Milnsbridge, Huddersfield	
Client	
Dempsey & Gannon	

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APPENDIX C

Certificate of Analysis

Certificate Number	24-10279	*Issued:*	29-May-24

Client SOLMEK
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	24-10279
Client Reference ~	S240420
Order No ~	SOL8396
Contract Title ~	MILNSBRIDGE, HUDDERSFIELD
Description	6 Soil samples.
Date Received	20-May-24
Date Started	20-May-24
Date Completed	29-May-24
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

Kirk Bridgewood
General Manager

Summary of Chemical Analysis
Matrix Descriptions

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

Sample ID	Depth	Lab No	Completed	Matrix Description
TP01	0.40-0.50	2339953	29/05/2024	Dark brown slightly gravelly, sandy CLAY
TP02	0.10-0.20	2339954	29/05/2024	Dark grey very gravelly SAND
TP03	1.00-1.10	2339955	29/05/2024	Dark brown gravelly, sandy CLAY (Possible made ground - slag)
TP04	0.90-1.00	2339956	29/05/2024	Dark brown gravelly, sandy CLAY (Possible made ground - slag)
TP06	0.10-0.20	2339957	29/05/2024	Dark brown gravelly, sandy CLAY
TP07	0.40-0.50	2339958	29/05/2024	Dark brown gravelly, sandy CLAY

Summary of Chemical Analysis
Soil Samples

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

			Lab No	2339953	2339954	2339955	2339956	2339957	2339958
			Sample ID ~	TP01	TP02	TP03	TP04	TP06	TP07
			Depth ~	0.40-0.50	0.10-0.20	1.00-1.10	0.90-1.00	0.10-0.20	0.40-0.50
			Other ID ~						
			Sample Type ~	ES	ES	ES	ES	ES	ES
			Sampling Date ~	09/05/2024	09/05/2024	09/05/2024	09/05/2024	09/05/2024	09/05/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	5.9	6.2	28	26	15	29
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.6	0.8	2.2	1.4	0.4	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.3	0.1	0.2	0.2	0.3
Chromium	DETSC 2301#	0.15	mg/kg	20	74	410	99	37	27
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	57	39	820	270	82	130
Lead	DETSC 2301#	0.3	mg/kg	24	52	130	110	73	150
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.06	0.10	0.10	0.23
Nickel	DETSC 2301#	1	mg/kg	13	11	2000	85	110	36
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	50	87	270	200	91	130
Inorganics									
pH	DETSC 2008#		pH	7.8	10.8	8.3	8.1	7.8	8.2
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	2.0	5.5	2.0	6.2	4.2	4.7
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	75	110	61	410	66	87
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
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 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
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	6.6	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	17	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	150	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	170	< 10	< 10	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 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
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 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	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	4.1	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	9.7	65	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	39	470	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	48	540	< 10	< 10	< 10	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	48	710	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 2.0	< 0.1	1.2	0.2	0.2
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 2.0	< 0.1	< 0.1	< 0.1	0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	0.1	29	0.3	1.7	0.2	0.4
Fluorene	DETSC 3301	0.1	mg/kg	0.1	26	0.3	1.3	0.2	0.4

Summary of Chemical Analysis
Soil Samples

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

			Lab No	2339953	2339954	2339955	2339956	2339957	2339958
			Sample ID ~	TP01	TP02	TP03	TP04	TP06	TP07
			Depth ~	0.40-0.50	0.10-0.20	1.00-1.10	0.90-1.00	0.10-0.20	0.40-0.50
			Other ID ~						
			Sample Type ~	ES	ES	ES	ES	ES	ES
			Sampling Date ~	09/05/2024	09/05/2024	09/05/2024	09/05/2024	09/05/2024	09/05/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3301	0.1	mg/kg	0.5	160	2.0	11	1.0	1.9
Anthracene	DETSC 3301	0.1	mg/kg	0.7	62	0.5	3.0	0.2	0.5
Fluoranthene	DETSC 3301	0.1	mg/kg	2.4	330	3.0	14	1.4	3.5
Pyrene	DETSC 3301	0.1	mg/kg	2.7	290	2.7	12	1.2	3.5
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	1.5	150	1.5	6.0	0.6	1.9
Chrysene	DETSC 3301	0.1	mg/kg	1.6	140	1.5	6.2	0.7	2.0
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	1.4	100	1.0	4.4	0.5	1.4
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.9	67	0.6	2.8	0.3	0.8
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	2.3	160	1.6	6.2	0.7	1.9
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	1.3	90	0.8	3.6	0.4	1.2
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	16	0.1	0.5	< 0.1	0.2
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	1.4	84	0.8	3.6	0.4	1.2
PAH 16 Total	DETSC 3301	1.6	mg/kg	17	1700	17	77	7.9	21
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	0.4	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2339953	TP01 0.40-0.50	SOIL	NAD	none	Ben Barsby
2339954	TP02 0.10-0.20	SOIL	NAD	none	Ben Barsby
2339955	TP03 1.00-1.10	SOIL	Chrysotile	Chrysotile present as fibre bundles	Ben Barsby
2339956	TP04 0.90-1.00	SOIL	NAD	none	Ben Barsby
2339957	TP06 0.10-0.20	SOIL	NAD	none	Ben Barsby
2339958	TP07 0.40-0.50	SOIL	NAD	none	Ben 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.

Information in Support of the Analytical Results

Our Ref 24-10279
Client Ref ~ S240420
Contract ~ MILNSBRIDGE, HUDDERSFIELD

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2339953	TP01 0.40-0.50 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10
2339954	TP02 0.10-0.20 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10
2339955	TP03 1.00-1.10 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10
2339956	TP04 0.90-1.00 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10
2339957	TP06 0.10-0.20 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10
2339958	TP07 0.40-0.50 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	BTEX / C5-C10

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

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 425µm sieve, in accordance with BS1377.

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	24-10279	*Issued:*	29-May-24

Client SOLMEK
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	24-10279
Client Reference ~	S240420
Order No ~	SOL8396
Contract Title ~	MILNSBRIDGE, HUDDERSFIELD
Description	5 Soil samples.
Date Received	20-May-24
Date Started	20-May-24
Date Completed	29-May-24
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

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Matrix Descriptions

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

Sample ID	Depth	Lab No	Completed	Matrix Description
BH04	1.00-1.80	2339959	29/05/2024	Brown very gravelly SAND including odd rootlets
BH05	2	2339960	29/05/2024	Brown very gravelly SAND
TP01	0.80-0.60	2339961	29/05/2024	Brown sandy, very gravelly CLAY
TP02	0.40-0.30	2339962	29/05/2024	Brown gravelly, sandy CLAY
TP05	0.40-0.60	2339963	29/05/2024	Brown gravelly, sandy CLAY

Summary of Chemical Analysis
Soil Samples

Our Ref 24-10279
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

	Lab No	2339959	2339960	2339961	2339962	2339963
	Sample ID ~	BH04	BH05	TP01	TP02	TP05
	Depth ~	1.00-1.80	2.00	0.80-0.60	0.40-0.30	0.40-0.60
	Other ID ~					
	Sample Type ~	D	D	D	D	D
	Sampling Date ~	09/05/2024	09/05/2024	09/05/2024	09/05/2024	09/05/2024
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Inorganics						
pH	DETSC 2008#		pH	8.0	8.0	7.8	5.2	7.9
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	52	27	34	74	74

Information in Support of the Analytical Results

Our Ref 24-10279
Client Ref ~ S240420
Contract ~ MILNSBRIDGE, HUDDERSFIELD

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2339959	BH04 1.00-1.80 SOIL	09/05/24	GJ 250ml, PT 1L	pH + Conductivity (7 days)	
2339960	BH05 2.00 SOIL	09/05/24	GJ 250ml, PT 1L	pH + Conductivity (7 days)	
2339961	TP01 0.80-0.60 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	
2339962	TP02 0.40-0.30 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	
2339963	TP05 0.40-0.60 SOIL	09/05/24	GJ 250ml, PT 1L x2	pH + Conductivity (7 days)	

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

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 425µm sieve, in accordance with BS1377.

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	24-11243	*Issued:*	06-Jun-24

Client SOLMEK
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	24-11243
Client Reference ~	S240420
Order No ~	SOL8396
Contract Title ~	MILNSBRIDGE, HUDDERSFIELD
Description	One Soil sample.
Date Received	20-May-24
Date Started	03-Jun-24
Date Completed	06-Jun-24
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

Kirk Bridgewood
General Manager

2139

Summary of Asbestos Analysis

Samples

Our Ref 24-11243
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

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 24-11243
Client Ref ~ S240420
Contract Title ~ MILNSBRIDGE, HUDDERSFIELD

Lab No		2345392
Sample ID ~		TP03
Depth ~		1.00-1.10
Other ID ~		
Sample Type ~		ES
Sampling Date ~		09/05/2024
Sampling Time ~		

Test	**Method**	**Units**		
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %		**0.005**
Gravimetric Quantification (a)	DETSC 1102	Mass %		na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %		0.005
Quantification by PCOM (c)	DETSC 1102	Mass %		na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g		na
Breakdown of Gravimetric Analysis (a)				
Mass of Sample		g		803.36
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
% Chrysotile bundles in sample		Mass %		0.005
Breakdown of PCOM Analysis (c)				
% Amphibole fibres in sample		Mass %		na
% Chrysotile fibres in sample		Mass %		na
Breakdown of Potentially Respirable Fibre Analysis (d)				
Amphibole fibres		Fibres/g		na
Chrysotile fibres		Fibres/g		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

Information in Support of the Analytical Results

Our Ref 24-11243
Client Ref ~ S240420
Contract ~ MILNSBRIDGE, HUDDERSFIELD

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2345392	TP03 1.00-1.10 SOIL	09/05/24	GJ 250ml, PT 1L x2		

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

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

APPENDIX D

Laboratory Report Front Sheet

Site name	Job number
Milnsbridge, Huddersfield	S240420

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S240420
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	lcassidy@solmek.com
FAO:	Leo Cassidy

Samples received: 16/05/2024

Date commenced: 21/05/2024

Date reported: 29/05/2024

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Milnsbridge, Huddersfield	S240420

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
TP Composite	0.00		B	4.9	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	JBrischuk
Approval date	29/05/2024 08:31
Date report generated	
Report Number	

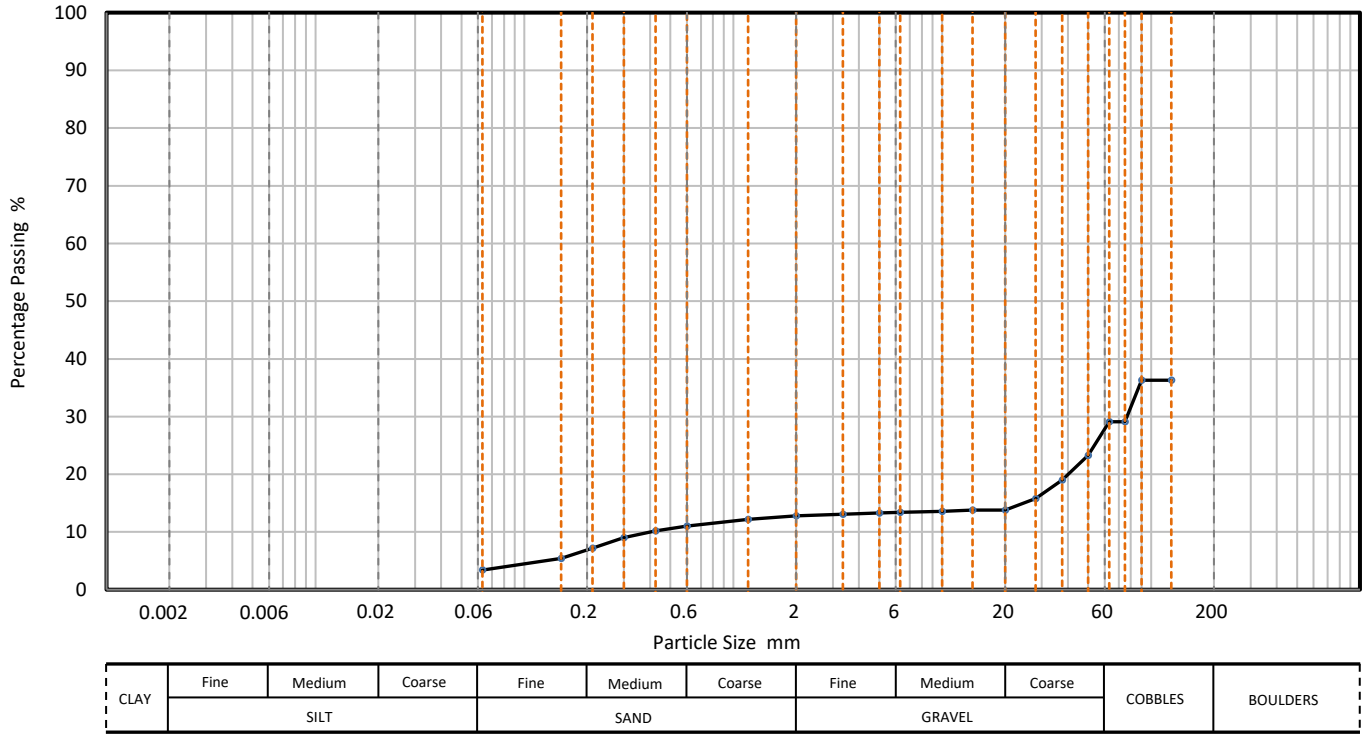
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Milnsbridge, Huddersfield	S240420

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole		TP Composite	Lab sample ID	G2MT2024052231
Depth (Top)	m	0.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Clayey, Sandy, Gravelly, COBBLES
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	36		
90	36		
75	29		
63	29		
50	23		
37.5	19		
28	16		
20	14		
14	14		
10	14		
6.3	13		
5	13		
3.35	13		
2	13		
1.18	12		
0.6	11		
0.425	10		
0.3	9		
0.212	7		
0.15	5		
0.063	3		

Dry Mass of sample, g	14963

Sample Proportions	% dry mass
Very coarse	70.9
Gravel	16.3
Sand	9.4
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	76.8
D10	mm	0.4
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	29/05/2024 08:30

APPENDIX E

UK BACKGROUND

Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)

This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to *"identify and remove unacceptable risks to human health and the environment" and* to *"seek to ensure that contaminated land is made suitable for its current use".*

Part 2A uses a risk based approach to defining contaminated land whereby the "risk" is interpreted as *"the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land"* and by *"the scale and seriousness of such harm or pollution if it did occur".*

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that *"for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."*

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include *"land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health."*

Categories 3 and 4 *"encompass land which is not capable of being determined on such grounds".*

PRELIMINARY CONCEPTUAL MODEL

Preliminary Conceptual Models are undertaken in accordance with CIRIA C552. The Preliminary Conceptual Model assesses the consequence and the likelihood of a risk being realised to provide a risk classification, using the tables detailed below.

CONSEQUENCE OF RISK BEING REALISED (Based on C552 CIRIA, 2001)

Classification	Definition	Example
Severe	Short-term (acute) risk to human health, the environment, an element of the development or other aspect with is likely to result in *significant harm*, damage or both.	High concentrations of cyanide on the surface of an informal recreational area. Major spills of contaminants from site into controlled water. High concentrations of explosive gas in the subsurface environment that have a clear unobstructed pathway into buildings.
Moderate	Chronic damage to human health, a plausible chance that an event will occur, although the timeline is not immediate to be in the short-term.	Appreciable concentration of contamination that over the longer-term will cause significant harm i.e. high lead concentration in topsoil. Shallow mine workings that are potentially unstable but may remain in a satisfactory or stable conditions for a number of years.
Mild	Low level pollution of non-sensitive water, a feasible hazardous scenario although the timeline of such occurring can probably be considered in 10's of years.	The effect of high sulphate concentrations on structural concrete. Pollution of non-classified groundwater.
Minor	Harm, although not necessarily significant to human health, or with respect to other aspects of the development, which are considered implausible in terms of occurrence, or will have little consequential impact.	The presence of contaminants at such low concentrations that protective equipment is required during site works. Any damage to structures is minimal and will not be structural in characteristics.

PROBABILITY OF RISK BEING REALISED (C552 CIRIA, 2001)

Classification	Definition
High Likelihood	There is a viable pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence that the receptor has been harmed or polluted.
Likely	There is a viable pollutant linkage and all elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a viable pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a viable pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

RISK CLASSIFICATION MATRIX (C552 CIRIA, 2001)

Risk = Probability x Consequence		Consequence			
		Severe	Moderate	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

HUMAN RECEPTORS

Human exposure to contaminants present in soils can occur via several pathways. Direct exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatised compounds, and inadvertent soil ingestion (or deliberate soil ingestion in the case of some children). Other indirect pathways include human ingestion of plants grown in contaminated soil or contaminated ground or surface water. Contaminants associated with wind blown dust can affect humans on surrounding sites.

VEGETATION

Plants can be affected by soil contamination in a number of ways resulting in growth inhibition, nutrient deficiencies and yellowing of leaves. Contaminants are taken up by plants through the roots and through foliage. Contaminants identified as being highly phytotoxic include boron, cadmium, copper, lead, nickel, and zinc.

To establish if the levels of contaminants present on a site may pose a risk to vegetation the results of the contamination testing are compared to a series of threshold values published in 'Code of Good Agricultural Practice for the Protection of Soil'.

GROUNDWATER AND SURFACE WATER RECEPTORS

The principal pathway by which soil contamination may reach the water environment is through a slow seepage or leaching to groundwater or surface water. The potential for contaminants to migrate along such pathways is dependent on the chemical and physical characteristics of the contaminants and the local hydrogeology. Surface watercourses may also accumulate contamination as contaminated sediments are deposited within the water body.

Where the site investigated overlies major/principal aquifers (and in some cases minor/secondary aquifers depending on certain conditions), groundwater Source Protection Zones and areas in close proximity to groundwater abstractions, contamination test results have been compared with the Water Supply (Water Quality) Regulations 1989 and The Water Supply (Water Quality) Regulations 2000.

Should a surface water receptor, such as a fresh water environment (river, canal, stream, lake etc), or marine environment be considered sensitive in relation to a site, then test results are compared with DEFRA & SEPA Environmental Quality Standards (2004). Many of the Environmental Quality Standards are hardness ($CaCO_3$) depended. Where no hardness values are available, Solmek assume conservative values (of between 0 and 50mg/l).

In the absence of vulnerable ground and surface water environments, Solmek may compare any test results with the Environment Agency Leachate Quality Threshold Values.

DETAILED QUANTITATIVE RISK ASSESSMENT (DQRA)

In line with Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*, a DQRA for groundwater/human health may be required following a Phase 2 investigation and before the preparation of a Phase 3 Remediation Strategy. For human health DQRA, a site specific assessment criteria is undertaken using CLEA Software Version 1.06. For groundwater DQRA, the Environment Agency Remedial Targets Worksheet Version 3.1 is used.

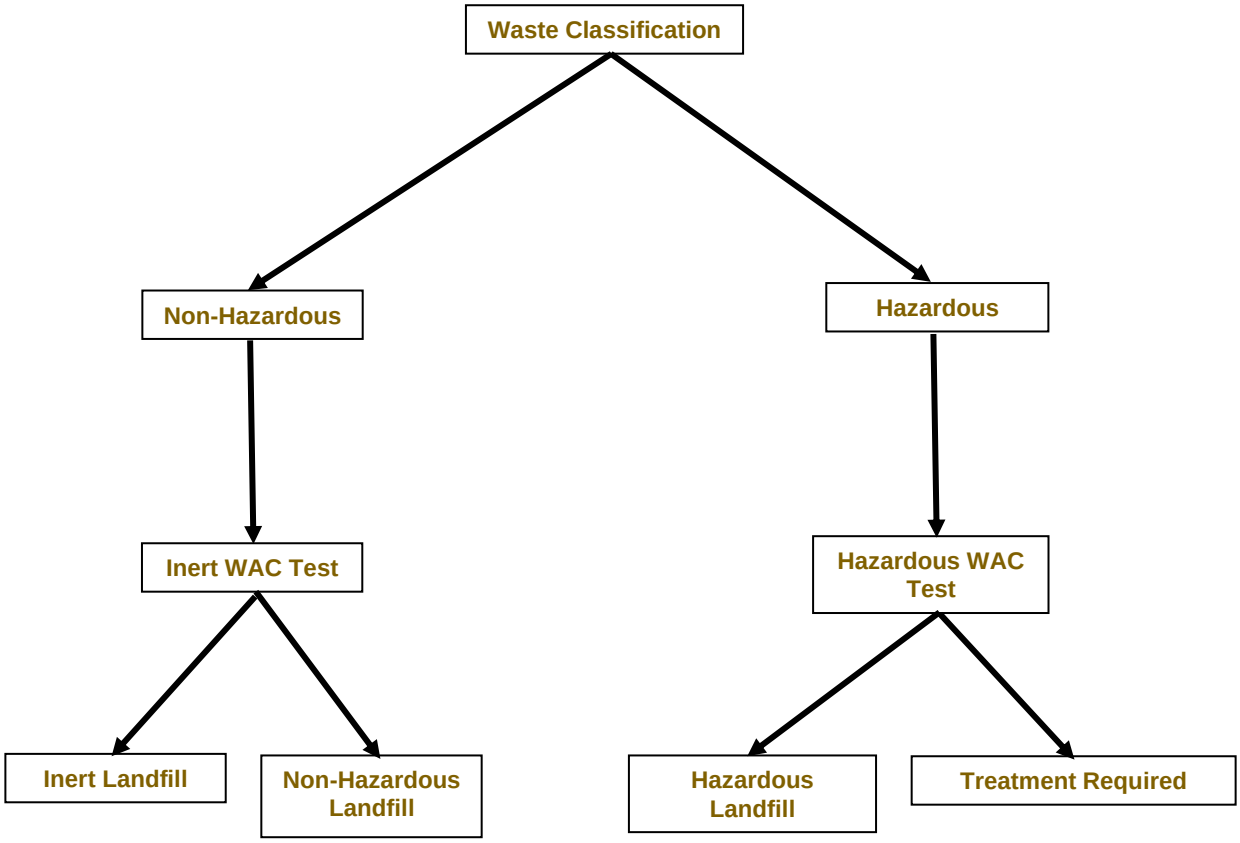
WASTE CLASSIFICATION AND WASTE ACCEPTANCE CRITERIA

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste (2015)*. This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste. The WAC testing relates to materials that are to be exported from a site/development to landfill, and do not directly relate to human health specifically. The testing results are generally presented as certificates which can be used by site owners/contractors etc, which should be presented to the accepting waste facility or waste contractor.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

The below flow chart provides further information on the waste classification process.



CONSTRUCTION MATERIALS

Materials at risk from possible soil contaminants include inorganic matrices such as cement and concrete and also organic material such as plastics and rubbers. Acid ground conditions and high levels of sulphates can accelerate the corrosion of building materials. Where pH and soluble sulphate analysis has been undertaken, Solmek compare the test results with the guidelines presented within BRE Special Digest 1, 2005 (3rd Edition) 'Concrete in Aggressive Ground'. Plastics and rubbers are generally used for piping and service ducts and are potentially attacked by a range of chemicals, most of which are organic, particularly petroleum based substances. Drinking water supplies can be tainted by substances that can penetrate piping and water companies enforce stringent threshold values.

The levels of potential contaminants should be compared to thresholds supplied in the UK Water Industry Research (UKWIR) publication "Guidance for the selection of Water Supply Pipes to be used in Brownfield Sites" (January 2011). A Brownfield Site is defined in the document as "Land or premises that have not previously been used or developed that may be vacant or derelict". It should be noted that Brownfield sites may not be contaminated. The guidance does not apply to Greenfield Sites however water companies may have their own assessment criteria which should be checked by the developer. The table below outlines the pipe material selection threshold concentrations.

	Pipe Material (Threshold concentrations in mg/kg)					
Parameter group	**PE**	**PVC**	**Barrier pipe (PE-AL-PE)**	**Wrapped Steel**	**Wrapped Ductile Iron**	**Copper**
Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
+ BTEX + MTBE	0.1	0.03	Pass	Pass	Pass	Pass
SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5-C10)	2	1.4	Pass	Pass	Pass	Pass
+ Phenols	2	0.4	Pass	Pass	Pass	Pass
+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
Mineral oil C21-C40	500	Pass	Pass	Pass	Pass	Pass
Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5, Eh not neutral and conductivity >400µS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suite identified as relevant following site investigation						
Ethers	0.5	1	Pass	Pass	Pass	Pass
Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
Ketones	0.5	0.02	Pass	Pass	Pass	Pass
Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
Amines	Fail	Pass	Pass	Pass	Pass	Pass

REQUIREMENTS OF PARTIES WITHIN THE DEVELOPMENT PROCESS

Interested parties involved in the development process may use the data in different ways and there may be varying views and interpretation of the factual data. Local Authority staff may have a view on contamination and human health and the wider environment. The Environment Agency are concerned principally with the protection of Controlled waters. Building insurers, funders and purchasers may be primarily concerned with issues of potential commercial blight. Purchasers are also not always fully informed, and perceptions on issues associated with risk can affect the decision to purchase. Developers and construction organisations will focus on financial aspects of dealing with the contamination in the context of the development and construction programme.

RISKS & LIABILITIES FROM CONTAMINATION

In simple terms, risks associated with contamination may be considered in terms of 1) statutory risks and 2) development related risks. If contamination is severe or forms a potential hazard based on its potential to affect groundwater, surface water or human health, a statutory risk may be present, and as such, if the risk is not reduced, criminal proceedings may be instigated by a government body or local authority.

If the contamination is less severe or not considered to be mobile, it may be considered a commercial liability which could, in theory remain untreated, but which may at a later date affect the value of the property, or, with changing legislation, become a statutory risk. Commercial liabilities could give rise to civil proceedings by third parties if there are grounds for action.

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2024)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2011 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.