

Phase 2: Site Investigation

Kingsway, Rochdale

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NE-26-019

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PHASE 2 SITE INVESTIGATION REPORT

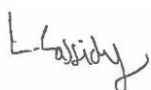
KINGSWAY, ROCHDALE

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Revision	Date	Prepared By	Signed
Final	May 2026	L Cassidy Associate Director	
		Checked By	
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		Approved By	
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1 EXECUTIVE SUMMARY

Site Address	Paul Price Cars, 311, Kingsway, Rochdale OL16 5BX
Proposed Development	No development proposals have been provided to Solmek at this stage.
Fieldwork	• 7no small percussive boreholes (BH01 to BH06 including BH02A) to a maximum depth of 5.45m below ground level (bgl). • 5no gas/water monitoring pipes installed.
Ground Conditions	• Made ground was encountered to depths of between 0.40mbgl and 1.20mbgl however locally the base was not proven in positions terminating at 2.00mbgl. • Generally, medium dense to dense sands were encountered to 5.45mbgl. • Localised loose deposits at 1.20mbgl in BH01, and localised gravel at the base of BH01. • No groundwater was encountered.
Contamination Testing Results	• Two made ground and six natural samples tested. • No elevated organic or inorganic determinants – organics generally below detection limits. • No asbestos fibres. • Slightly acidic to alkaline pH. • 3no leachate samples tested – elevated PAHs with respect to DWS but no exceedances of EQS.
Contamination Analysis	• Given the site's likely continued commercial land use, the levels of contamination recorded on site may 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 or not remediation will be required. • Made ground classed as posing a low risk with respect to construction workers. PPE for workers. Damping down of site during dry windy conditions. • Controlled waters unlikely to be at risk.
Geotechnical Testing Results	• Granular deposits loose to dense based on SPT N values (generally medium dense). • Sulphates between <10-28mg/l, pH slightly alkaline.
Geotechnical Analysis & Foundation Recommendations	• No new foundations proposed. • Normal earthworks plant for excavations.

2 INTRODUCTION

2.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of Goodsons Associates, on land located at Paul Price Cars, 311, Kingsway, Rochdale OL16 5BX (Figure 1).

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

- *DG Environmental Ltd Decommissioning Report (C1120.DS044) October 1998.*
- *Solmek Phase 1 Desk Study (NE-26-019) February 2026.*

Reference should be made to the above reports for details of the site's history and environmental setting, the ground conditions encountered, and the results of historical contamination analysis.

2.2 Scope of Works

Detailed proposals for the site are not currently known however a commercial use is anticipated.

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 was requested, primarily to understand contamination risks related to the buried tanks. The fieldwork and testing was generally carried out according to;

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- BS 10175:2026 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 18thth February 2026. The site is centred at Ordnance Survey Co-ordinates 391410, 413090 and covers approximately 0.12Ha.

The site is located on a parcel of land west of the Rochdale Bypass, Rochdale. The site is rectangular shaped and has a mostly flat and even topography.

The site is a car dealership comprising a reception building with an attached covered area for storing cars under. There is also a warehouse-type building to the north. The surrounding ground is all hardstanding. It is also evident that the site was a former petrol filling station; however, the fuel islands are no longer present, and the fuel tanks were decommissioned in 1998.

The site is secured by metal fencing, with access provided via a double gate located along the southern boundary. A drainage feature is present along the eastern boundary of the site.

Land immediately to the east of the site comprises Rochdale Bypass, a major road. The surrounding area is otherwise predominantly residential in nature.

4 FIELDWORK

The fieldwork was carried out on 31st March 2026. The extent of the investigation was:

- 7no small percussive boreholes (BH01 to BH06 including BH02A) to a maximum depth of 5.45m below ground level (bgl).
 - BHs 02, 02A and 03 were positioned to target the area of the historic northern tanks.
 - BH04 was positioned to target the forecourt area.
 - BHs 05 and 06 were positioned either side of the southern tank area to examine any migration of contaminants from this area.
 - BH01 was positioned to provide spatial coverage of the site.
- Gas/groundwater monitoring wells were installed in BH's 01, 02A, 03, 05 & 06.
 - The wells were spaced at <25m centres evenly around the site in accordance with CIRIA C665.
- 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 clean bentonite/installations upon completion.

Descriptions of the strata encountered in the boreholes together with details of sampling and groundwater are presented in Appendix B of this report. A plan showing the location of the boreholes 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 was relatively uniform across the site and, where penetrated, was encountered to a minimum depth of 0.40mbgl (BH04, BH05) and 1.20mbgl (BH01).

Made ground was not fully penetrated within BH02 which terminated at depths of 2.00mbgl.

The made ground broadly consisted of a surface covering of tarmac (0.10m thick) with paving instead present in BH01. This was underlain generally by granular made ground, variably comprising sandstone, mudstone, brick and dolomite.

No visual/olfactory evidence of contamination was present within the made ground.

5.2 Obstructions

BH02 encountered suspected concrete at 2.00mbgl, resulting in refusal. BH04 encountered a cobble within the natural deposits, also at 2.00mbgl.

5.3 Natural Deposits

Proven to underlie the made ground deposits across the site (except BH02), natural ground generally comprised medium dense (locally loose, locally dense) gravelly sand, proven to a max. depth of 5.45mbgl.

Within BH01, medium dense sandy gravel was present from 4.00mbgl onwards.

The gravel component generally comprised sandstone, limestone and mudstone.

No visual/olfactory evidence of contamination was noted within the natural deposits.

5.4 Groundwater

No groundwater was encountered during the intrusive works. Similarly, during the monitoring fieldwork (1no visit), no groundwater was present.

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 not yet detailed but is likely to remain commercial in nature. 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 buildings present from the 1970s onwards, which were later labelled as a garage by the 1980s.

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

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

6.2 Contamination Testing and Rationale

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

- BH01 – 4.00-4.45m (Natural GRAVEL)
- BH02 – 0.20-0.50m (Made ground – granular)
- BH02A – 3.00-3.45m (Natural SAND)
- BH03 – 0.50-0.80m (Natural SAND)
- BH04 – 0.20-0.40m (Made ground – granular)
- BH04 – 1.20-1.65m (Natural SAND)
- BH05 – 0.50-0.80m (Natural SAND)
- BH06 – 3.00-3.45m (Natural SAND)

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:

- 8no Metals, semi-metals, non-metals, inorganic determinants
- 8no Speciated Polyaromatic Hydrocarbons (PAHs)
- 8no Total Petroleum Hydrocarbon Criteria Working Group fractions (TPHCWG)
- 8no Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)
- 8no Methyl Tert-Butyl Ether (MTBE)
- 4no Asbestos identification screenings
- 1no Volatile Organic Compounds (VOCs)
- 1no Semi-Volatile Organic Compounds (SVOCs)

Leachate analysis was also undertaken on the below samples:

- BH01 – 4.00-4.45m (Natural GRAVEL)
- BH02 – 0.20-0.50m (Made ground – granular)
- BH04 – 0.20-0.40m (Made ground – granular)

Groundwater testing was proposed however, given the absence of encountered groundwater, this was not undertaken.

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 a Commercial land use. These are the most up to date thresholds published in 2015.

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 & 3.

TABLE 1: SUMMARY OF INORGANIC CONTAMINATION TESTING RESULTS

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	7	<0.1	0.2	190	0
Chromium	mg/kg	8	3.7	18	8600	0
Copper	mg/kg	8	6.4	29	68000	0
Lead	mg/kg	8	4.1	12	2300*	0
Mercury	mg/kg	0	<0.05	-	1100	0
Nickel	mg/kg	8	5.6	24	980	0
Zinc	mg/kg	8	18	90	730000	0
Semi metals and non metals						
Arsenic	mg/kg	8	2.7	7.3	640	0
Boron	mg/kg	0	<0.2	-	240000	0
Selenium	mg/kg	4	0.8	2.9	12000	0
Inorganic chemicals						
Cyanide	mg/kg	0	<0.1	-	1580**	0
W.S. Sulphate	mg/l	6	<10	22	2000^	0
Other						
pH	pH	-	6.3	8.6	5.5^	0
* 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

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

6.5 Inorganic Chemicals

Soluble sulphates (potentially aggressive to foundation concrete) were recorded between <10 and 22mg/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 6.3 and 8.6. These pH levels are consistent with slightly 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 0.90% therefore a SOM of 1% has been used to determine the S4UL thresholds. Table 2, below, summarises the results.

TABLE 2: SUMMARY OF ORGANIC CONTAMINATION TESTING RESULTS

Determinand	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	Commercial Threshold Value at 1% SOM	Number of Results Exceeding Threshold Value
TPH Aliphatic Fractions						
Aliphatic (C5-C6)	mg/kg	0	<0.01	-	42	0
Aliphatic (C6-C8)	mg/kg	0	<0.01	-	100	0
Aliphatic (C8-C10)	mg/kg	0	<0.01	-	27	0
Aliphatic (C10-C12)	mg/kg	1	<1.5	1.8	130	0
Aliphatic (C12-C16)	mg/kg	2	<1.2	4.4	1100	0
Aliphatic (C16-C35)	mg/kg	3	<4.9	447	65000	0
Aliphatic (C35-C44)	mg/kg	2	<3.4	43	65000	0
TPH Aromatic Fractions						
Aromatic (C5-C7)	mg/kg	0	<0.1	-	370	0
Aromatic (C7-C8)	mg/kg	0	<0.1	-	860	0
Aromatic (C8-C10)	mg/kg	0	<0.1	-	47	0
Aromatic (C10-C12)	mg/kg	2	<0.9	6.5	250	0
Aromatic (C12-C16)	mg/kg	2	<0.5	8.8	1800	0
Aromatic (C16-C21)	mg/kg	2	<0.6	69	1900	0
Aromatic (C21-C35)	mg/kg	2	<1.4	1200	1900	0
Aromatic (C35-C44)	mg/kg	2	<1.4	235	1900	0
Speciated PAH						
Naphthalene	mg/kg	0	<0.1	-	2.3	0
Acenaphthylene	mg/kg	0	<0.1	-	2900	0
Acenaphthene	mg/kg	0	<0.1	-	3000	0
Fluorene	mg/kg	0	<0.1	-	2800	0
Phenanthrene	mg/kg	0	<0.1	-	1300	0
Anthracene	mg/kg	0	<0.1	-	31000	0
Fluoranthene	mg/kg	0	<0.1	-	1500	0
Pyrene	mg/kg	0	<0.1	-	3700	0
Benzo(a)anthracene	mg/kg	0	<0.1	-	11	0
Chrysene	mg/kg	0	<0.1	-	30	0
Benzo(b)fluoranthene	mg/kg	0	<0.1	-	3.9	0
Benzo(k)fluoranthene	mg/kg	0	<0.1	-	110	0
Benzo(a)pyrene	mg/kg	0	<0.1	-	3.2	0
Indeno(123cd)pyrene	mg/kg	0	<0.1	-	360	0
Dibenzo(ah)anthracene	mg/kg	0	<0.1	-	0.31	0
Benzo(ghi)perylene	mg/kg	0	<0.1	-	45	0
PAH	mg/kg	0	<1.6	-	50*	0
Phenols	mg/kg	0	<0.3	-	440	0
* EA Threshold Values						

From the eight samples tested for organic determinants, no exceedances were recorded, and results were generally below detection limits.

6.7 BTEX & MTBE

All 8no samples were tested for BTEX and MTBE, with all results below detection limits.

6.8 VOCs and SVOCs

BH04 (0.20-0.40m) was subject to VOC and SVOC testing. This was on a conservative basis, as although BH04 did indicate some TPH fractions to be elevated above background (but below relevant thresholds), the lighter fractions were all below detection limits. The laboratory VOC and SVOC testing of this sample recorded all results below detection limits.

Photo-Ionization Detector (PID) monitoring was also done, both during the fieldwork and the monitoring fieldwork.

During the fieldwork, all samples were screened with a PID, with all results recording 0ppm.

During the monitoring visit, the five monitoring wells were screened with a PID, with the results ranging from 0.1 to 1.3ppm.

Based on the findings of the 1998 decommissioning report, where 37no sample locations were screened for VOCs, no significant levels of VOCs were expected during the PID monitoring, and the low-levels recorded by Solmek corroborate this.

6.9 Asbestos

From the four samples subject to asbestos screening, no asbestos fibres were recorded.

6.10 Leachates

The results of the three leachate tests are presented in Table 3. The results have been compared, where available, to UK Drinking Water Standards (DWS), otherwise EA Leachate Quality Thresholds, EQS Freshwater and WHO Guidelines (2005) have been used.

TABLE 3: LEACHATE TESTING

Determinant	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	UK DWS	Number of Results Exceeding Threshold Value
Inorganic Contaminants						
Cadmium	µg/l	0	<0.03	-	5	0
Chromium (Total)	µg/l	2	<0.25	1.2	50	0
Copper	µg/l	3	1.03	3.34	2000	0
Lead	µg/l	3	0.14	11.79	25	0
Mercury	µg/l	1	<0.01	0.02	1	0
Nickel	µg/l	2	<0.5	0.86	20	0
Zinc	µg/l	3	1.99	9.89	5000	0
Arsenic	µg/l	3	0.64	1.25	10	0
Selenium	µg/l	3	0.32	0.84	10	0
Cyanide (Total)	µg/l	0	<40	-	50	0
Sulphate	mg/l	4	1.8	190	250	0
Boron	µg/l	0	<12	-	2000	0
pH	-	-	6.7	6.9	>5.5**	
PAH						
Naphthalene	µg/l	3	0.22	0.55	PAH DWS is 0.1µg/l	3
Acenaphthylene	µg/l	3	0.01	0.02		0
Acenaphthene	µg/l	3	0.15	0.30		3
Fluorene	µg/l	3	0.07	0.22		2
Phenanthrene	µg/l	3	0.08	0.66		2
Anthracene	µg/l	3	0.02	0.12		1
Fluoranthene	µg/l	3	0.06	0.15		1
Pyrene	µg/l	3	0.04	0.10		0
Benzo(a)anthracene	µg/l	2	<0.01	0.02		0
Chrysene	µg/l	1	<0.01	0.01		0
Benzo(b)fluoranthene	µg/l	1	<0.01	0.02		0
Benzo(k)fluoranthene	µg/l	0	<0.01	-		0
Benzo(a)pyrene	µg/l	1	<0.01	0.01		0
Benzo(ghi)perylene	µg/l	0	<0.01	-		0
Dibenzo(ah)anthracene	µg/l	0	<0.01	-		0
Indeno(123cd)pyrene	µg/l	0	<0.01	-		0
PAH Total	µg/l	2	0.66	1.7	0.2**	3
Phenol	µg/l	0	<1.5	-	0.5	0
TPH Aliphatic Fractions						
C5-6	µg/l	0	<0.1	-	15000*	0
C6-8	µg/l	0	<0.1	-	15000*	0
C8-10	µg/l	0	<0.1	-	300*	0
C10-12	µg/l	0	<1.0	-	300*	0
C12-16	µg/l	0	<1.0	-	300*	0
C16-21	µg/l	0	<1.0	-	300*	0
C21-35	µg/l	0	<1.0	-	300*	0
TPH Aromatic Fractions						
C5-7	µg/l	1	<0.1	1.2	10*	0
C7-8	µg/l	0	<0.1	-	10*	0
C8-10	µg/l	0	<0.1	-	100*	0
C10-12	µg/l	0	<1.0	-	100*	0
C12-16	µg/l	0	<1.0	-	100*	0
C16-21	µg/l	0	<1.0	-	90*	0
C21-35	µg/l	0	<1.0	-	90*	0
* WHO Guidelines 2005						
** EA leachate quality thresholds						
*** EQS Freshwater						

Following comparison of the leachate results to date, the contaminants were generally recorded below relevant threshold values, with the exception of the below:

- BH01 – 4.00-4.45m (Natural GRAVEL) recorded elevated naphthalene, acenaphthene, fluorene, phenanthrene and total PAH
- BH02 – 0.20-0.50m (Made ground – granular) naphthalene, acenaphthene and total PAH
- BH04 – 0.20-0.40m (Made ground – granular) naphthalene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene and total PAH

6.11 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 CONTAMINATION ANALYSIS AND CONCEPTUAL MODEL

The encountered contamination has been assessed with respect to the receptors present, to determine if any pollution linkages are present on site, based on source – pathway – receptor relationships.

Mitigation measures to reduce the risks identified for each receptor are discussed in the following sections, whilst the Conceptual Model is presented as Table 4.

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.

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 & 3).

The levels of contaminants across the site are generally low with no exceedances of the relevant thresholds.

No development is currently proposed however it is assumed any such development would be commercial in nature.

Based on the soil contamination testing to date, it is considered that the encountered levels of contamination would be unlikely to pose a risk to future users of the site.

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.

It is considered that the encountered levels of contamination are unlikely to pose a risk to construction workers and users of surrounding sites, however S4ULs assume long term exposure to contamination and therefore relate primarily to chronic health risks. The risk of short-term acute exposure (e.g. to construction workers) falls under the *Health and Safety at Work Act: 1974* and underlying regulations, such as the *Control of Substances Hazardous to Health (COSHH, 2002)* Regulations. The levels of contamination and the associated risks to site workers should be considered under the *Construction Design and Management (CDM, 2015)* regulations during the planning of works and the preparation of the designers and contractors Health and Safety Plans and Method Statements.

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.

Although asbestos or other forms of contamination were not detected from the soil samples subjected to testing within this investigation, the possibility still exists that asbestos containing materials may still be present on site and currently lie undetected. It is therefore advised that a 'watching brief' is undertaken during the initial site strip and any excavation works and advice sought if asbestos is found or suspected.

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.

No new vegetation is proposed, therefore vegetation 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.

7.4.1 Hydrogeological Context

From the site investigation undertaken, ground conditions broadly comprise generally thin made ground (albeit locally the base was not proven at 2.00m) over drift deposits comprising sands/gravels (moderate to high permeability). The drift deposits are designated as a Secondary Aquifer – A by the Environment Agency.

The published geology indicates the site is underlain by solid geology of Pennine Lower Coal Measures Formation, which is designated as a Secondary Aquifer – A by the Environment Agency. Rockhead was not proven in the intrusive investigation, and a nearby BGS borehole referenced in the Phase 1 Desk Study indicated a rockhead of 37.49mbgl (shale).

The nearest surface water feature is Rochdale Canal, located 206m southeast of the site.

With respect to groundwater, during the fieldwork, no groundwater was encountered. Similarly, within the monitoring visit, no groundwater was encountered. Based on this, a reasonable thickness vadose zone is expected to be present.

No groundwater abstractions are noted within 1km of the site, however 5no surface water abstractions are noted.

7.4.2 Contamination Context

No contamination was recorded based on the eight soil samples tested, and all organic determinants were generally below detection limits.

With respect to leachates, exceedances were noted within the three samples for PAHs with respect to stringent Drinking Water Standards (DWS). The corresponding soil analysis from these samples recorded PAHs below detection limit however, whilst when consideration is given to more appropriate Environmental Quality Standards (EQS), no exceedances were noted. These PAH levels are thus not considered to pose a significant risk.

7.4.3 Hydrogeological Risk Assessment

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

No new construction is proposed therefore construction materials are not considered to be a sensitive receptor.

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, or suspected Asbestos Containing Materials (ACMs) 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 aforementioned 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.

7.8 Conceptual Model

Following the above assessments of the risks posed to various receptors, the contamination conceptual model in Table 4 identifies the potential pollution linkages present on site, based on source – pathway – receptor relationships.

TABLE 4: CONCEPTUAL MODEL

Source	Pathway	Receptor	Risk Rating	Comments
Asphyxiating or explosive ground gases - Made ground (<2.00m) - Deep coal mining - No landfills within 250m	Ground gas migration - Migration through permeable soils - Inhalation	Future site users Assumed commercial users	Moderate /Low	Gas monitoring not requested – would be required prior to any redevelopment.
		Users during development Construction workers	Low	
Areas of contamination hazardous to human health (Commercial Thresholds) 8no samples tested - No significantly elevated organic determinants - No significantly elevated inorganic determinants - No asbestos detected	- Inhalation - Dust ingestion - Dermal contact	Future site users Assumed commercial users	Low	Low contamination levels unlikely to pose a risk to future users.
		Users during development Construction workers	Low	No construction currently proposed – however, low contamination levels are unlikely to pose a risk. As good practice, during any future works, consideration to be given to Health and Safety Executive: <i>Protection of Workers and the General Public During the Development of Contaminated Land</i> .
	- Inhalation - Dust ingestion	Users of surrounding sites Transient adult workers	Low	No construction currently proposed. Possible low risk during any future construction from dust generation. Consideration to be given to dust suppression, in line with BRE: <i>The Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance</i> .
Areas of elevated Leachate contamination 3no leachate samples tested - Slightly elevated PAHs with respect to DWS, no exceedances of EQS	Leaching mobilised contaminants of	Drift geology Secondary Aquifer – A	Low	The low contamination levels and absence of shallow groundwater indicate a low risk.
		Solid geology Secondary Aquifer – A	Low	The low contamination levels and expected significant depth to rockhead mean the risk is considered to be low.
	- Drainage - Lateral migration - Accumulation of contaminated sediment of	Surface water features Rochdale Canal 206m southeast of the site	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	N/A	No potential for Vegetation impact as no vegetation is present or proposed.
Areas of contamination above service fabric or BRE Special Digest 1 thresholds	Direct contact	Construction Materials Concrete	N/A	No construction currently proposed.
		Construction Materials Service Fabric	N/A	

8 GROUND GAS ASSESSMENT

No development is currently proposed.

Ground gases such as carbon dioxide (CO₂), methane (CH₄), 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, a full programme of gas monitoring was not requested, however during the monitoring visit to attempt purging/groundwater sampling, a gas monitoring visit was undertaken.

8.1 Monitoring Wells and Response Zones

The response zones are briefly summarised below in Table 5.

TABLE 5: SUMMARY OF MONITORING WELL RESPONSE ZONES

Borehole	Pipework	Installation Depth (mbgl)	Response zone of slotted pipework (mbgl)	Response Zone Stratum
BH01	50mm HDPE pipe	5.00	1.00-5.00	Natural Sand/Gravel
BH02A	50mm HDPE pipe	5.00	1.00-5.00	Natural Sand
BH03	50mm HDPE pipe	4.00	1.00-4.00	Natural Sand
BH05	50mm HDPE pipe	4.00	1.00-4.00	Natural Sand
BH06	50mm HDPE pipe	4.00	1.00-4.00	Natural Sand

8.2 Ground Gas Results

A full monitoring programme has not been requested at this stage, however the results obtained from one visit are summarised below:

TABLE 6: SUMMARY OF GAS DATA

Borehole	Flow Range (l/hr)	CH ₄ Range (%v/v)	CO ₂ Range (% v/v)	PID (ppm)	O ₂ Range (%v/v)	GW Range (mbgl)
BH01	3.4	0	0.8	1.1	18.8	Dry
BH02A	0.1	0	2.6	0.3	17.4	Dry
BH03	0.2	0	0.9	1.3	19.0	Dry
BH05	0.3	0	1.6	0.1	17.9	Dry
BH06	0.7	0	0.2	0.8	19.7	Dry

8.3 Ground Gas Analysis

The results obtained have been compared with relevant guidance that includes the following:

- Wilson & Card (1999) – Reliability and Risk in Gas Protection Design
- CIRIA 149 (1995) – Protecting Development from Methane
- CIRIA C665 (2007) – Assessing risks posed by hazardous ground gases to buildings
- BS8576:2013 – Guidance on investigations for ground gas – permanent gases and volatile organic compounds (VOCs)
- BS8485:2015 + A1:2019 – Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings

The Building Regulations set action levels for both methane and carbon dioxide from which an initial assessment can be made. The action threshold for methane is 1% while for carbon dioxide an initial consideration should be undertaken if gas concentrations exceed 1.5%.

Action might be required if carbon dioxide concentrations exceed 5%. If these thresholds are exceeded, reference should be made to specific documentation to determine the nature and extent of the gas control measures required. A Characteristic Situation ranking of between 1 and 6 is given based on the ground gas monitoring results coupled with the gas flow rate. These combined produce a Gas Screening Value (GSV). Where no flow is recorded a flow rate of 0.1l/hr is assumed.

The GSV and risk classification define the characteristic situation, which are comparable to Table 7 below, taken from CIRIA C665, and derived from CIRIA R149. Given that the building will be occupied by transient receptors, the protection measures required are based on a commercial land use.

TABLE 7: CIRIA R149 GAS REGIMES

Characteristic Situation (CS)	Risk Classification	Gas Screening Value CH ₄ or CO ₂ (l/hr)	Additional Factors
1	Very Low Risk	<0.07	CS1 where CH ₄ is <1% and/or CO ₂ is <5%, Otherwise increase to CS2
2	Low Risk	<0.7	
3	Moderate Risk	<3.5	
4	Moderate to High Risk	<15	
5	High Risk	<70	
6	Very High Risk	>70	

A full assessment of gas risk cannot be undertaken based on one visit, however indicatively, the results recorded to date would broadly fall within Characteristic Situation 1, based on the CSVs recorded.

9 GEOTECHNICAL TESTING AND ANALYSIS

Samples taken from the boreholes 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 granular deposits yielded N values of between 6 and 30, indicative of loose to dense deposits, albeit only one test (BH01 1.20m) recorded an N value of <10, with all other tests indicating medium dense to dense deposits.

BH02 and BH04 both recorded N values of 50+ upon obstructions at 2.00m.

9.2 Particle Size Distribution Testing

Three samples from the boreholes at varying depths were 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.

9.3 pH and Sulphate Results

Three samples of natural soil from the boreholes 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 7.4 to 7.9 indicating slightly alkaline to alkaline conditions. Soluble sulphates were recorded at levels ranging from <10mg/l to 28mg/l.

9.4 Foundations

No new structures are currently proposed for the site.

9.5 Excavation

Based on the nature of the ground conditions encountered, excavations should be within the capacity of normal earthworks plant although breaking out of surface hardstanding, relict foundations and other obstructions (Section 5.2) should be anticipated. Stability of excavations will be poor in the made ground and natural sands. Excavation sides should be designed, constructed and supported in accordance with the recommendations given in CIRIA Report No. 97: "Trenching Practice".

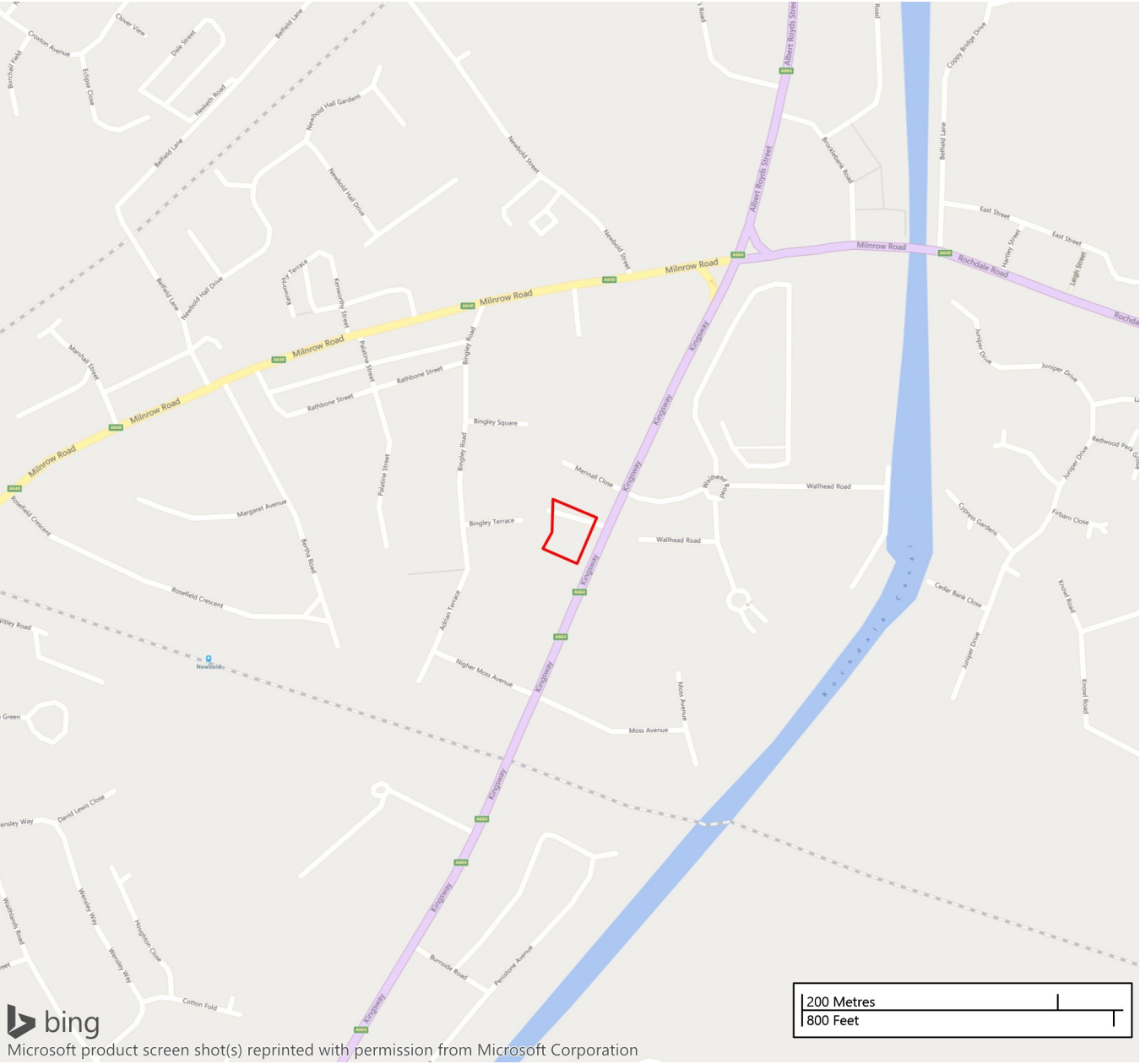
9.6 Groundwater

No groundwater was encountered during the sitework or subsequent monitoring visit.

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: Figures & Drawings



12-16 Yarm Road, Stockton on Tees, TS18 3NA
Tel: 01642 607083 Email: info@solmek.com

Figure Title

Site Location Plan

Project Number

NE-26-019

Project Name

Kingsway, Rochdale

Client

Goodsons

Date

May 2026

DRG Number

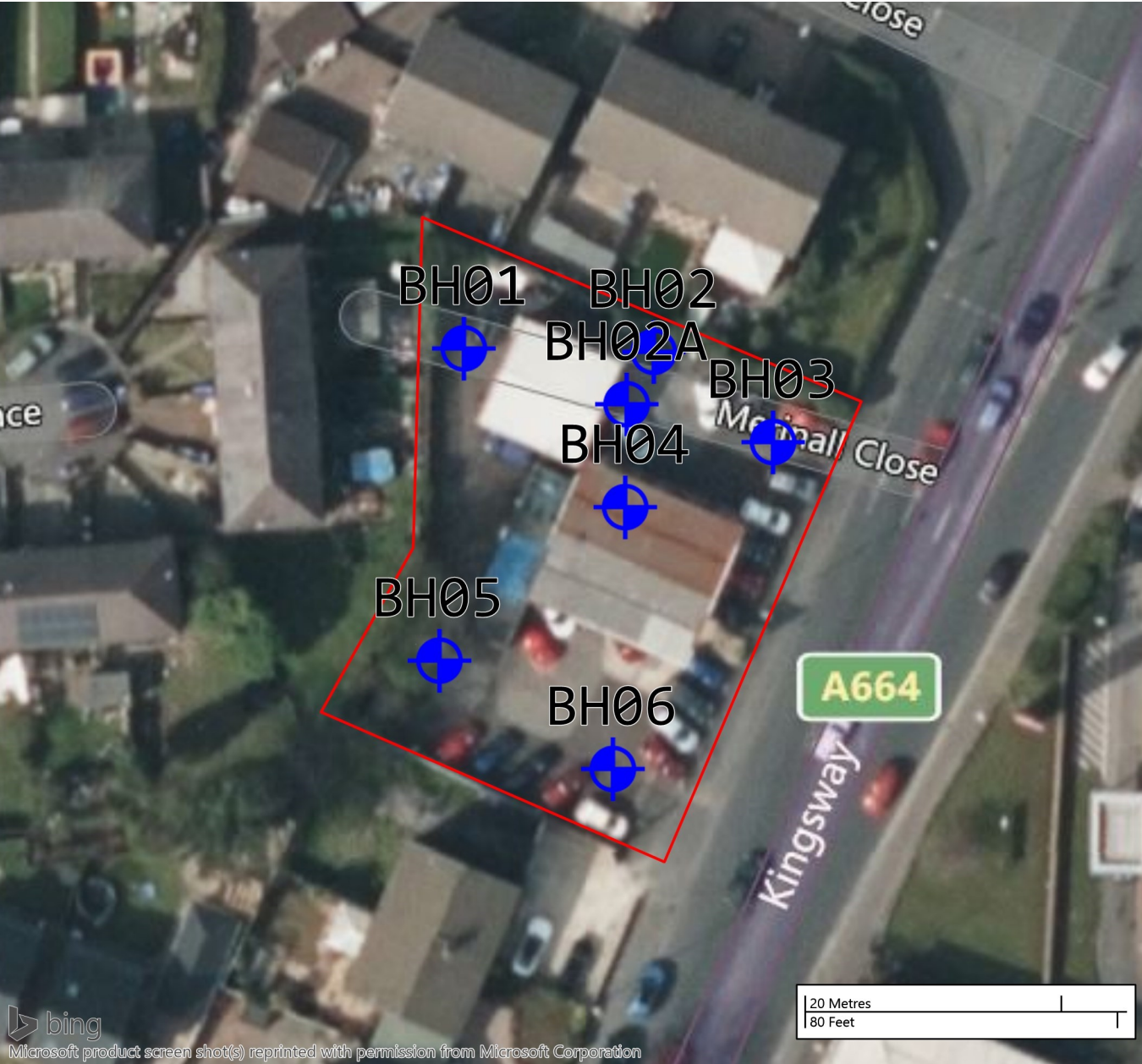
Figure 1

Scale

1:5000 @ A4 [DO NOT SCALE]

Legend Key

 Project Bounds - Project Bounds



12-16 Yarm Road, Stockton on Tees, TS18 3NA
Tel: 01642 607083 Email: info@solmek.com

Figure Title

Exploratory Hole Location Plan

Project Number

NE-26-019

Project Name

Kingsway, Rochdale

Client

Goodsons

Date

May 2026

DRG Number

Figure 2

Scale

1:500 @ A4 [DO NOT SCALE]

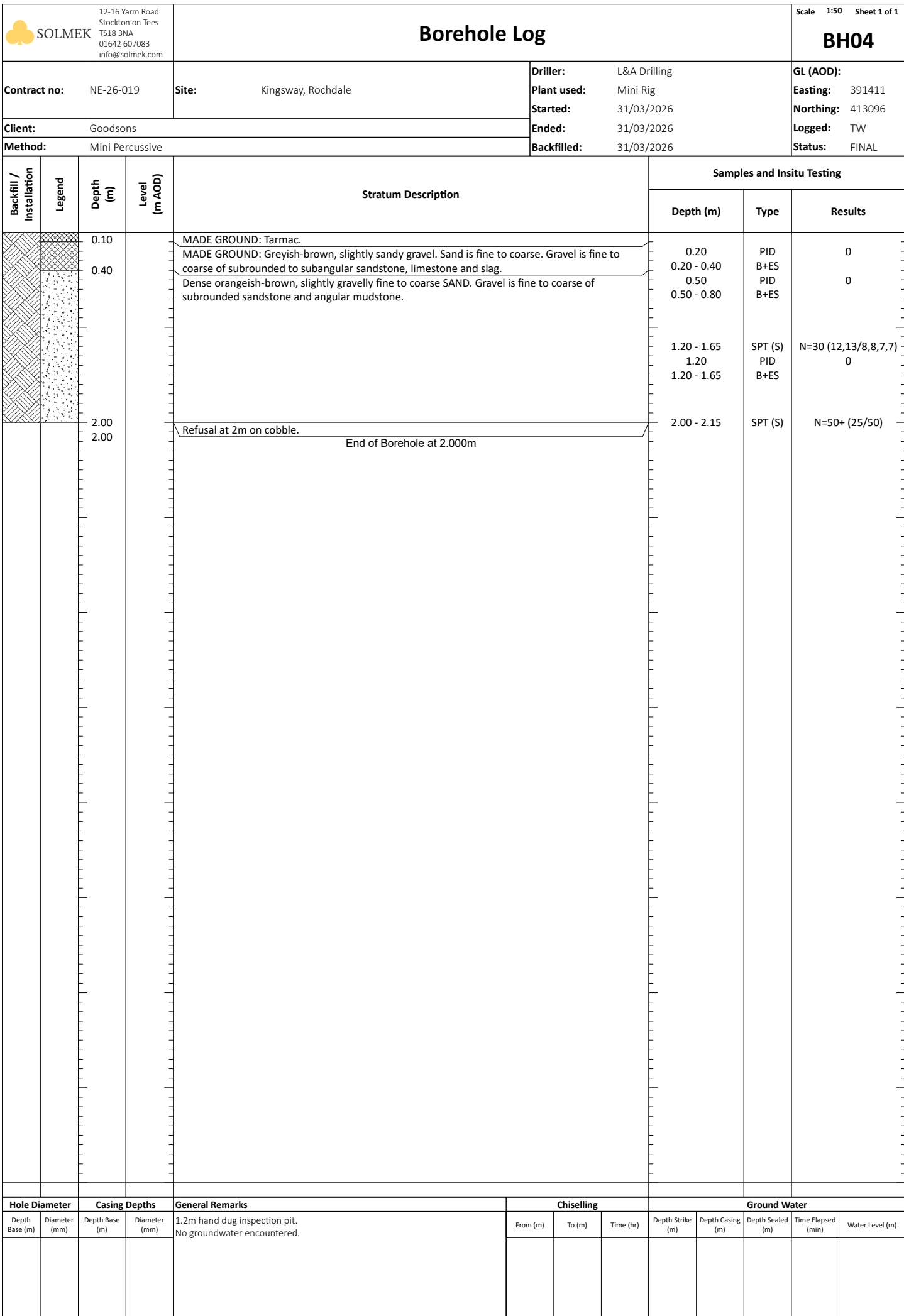
Legend Key

-  Locations By Type - BH
-  Project Bounds - Project Bounds

APPENDIX B: Borehole Logs

 12-16 Yarm Road Stockton on Tees TS18 3NA 01642 607083 info@solmek.com		Borehole Log						Scale 1:50 Sheet 1 of 1		BH01				
Contract no: NE-26-019		Site: Kingsway, Rochdale				Driller: L&A Drilling Plant used: Mini Rig Started: 31/03/2026				GL (AOD): Easting: 391398 Northing: 413109				
Client: Goodsons		Method: Mini Percussive				Ended: 31/03/2026 Backfilled: 31/03/2026				Logged: TW Status: FINAL				
Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing									
					Depth (m)		Type		Results					
		0.10		MADE GROUND: Paving. MADE GROUND: Yellow fine to coarse sand. MADE GROUND: Dark-brown, clayey sandy gravel. Sand is fine to coarse. Gravel is fine to coarse of subrounded to subangular sandstone, limestone and brick.	0.20		PID B+ES B+ES	0						
		0.20			0.20 - 0.50 0.50 - 0.80									
		1.20		Loose to dense yellowish-brown, gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse of subrounded sandstone and angular mudstone.	1.20 - 1.65		SPT (S) PID B+ES	N=6 (1,1/1,1,2,2) 0						
					1.20 1.20 - 1.65									
		4.00		Medium dense dark-brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to medium of subrounded to subangular sandstone and limestone.	2.00 - 2.45		SPT (S) PID B+ES	N=30 (5,8/7,7,8,8) 0						
					2.00 2.00 - 2.45									
		5.45		End of Borehole at 5.450m	3.00 - 3.45		SPT (S) PID B+ES	N=12 (3,3/3,3,3,3) 0						
					3.00 3.00 - 3.45									
					4.00 - 4.45		SPT (S) PID B+ES	N=28 (6,6/7,6,7,8) 0						
					4.00 4.00 - 4.45									
					5.00 - 5.45		SPT (S) PID B+ES	N=26 (8,7/6,8,6,6) 0						
					5.00 5.00 - 5.45									
Hole Diameter		Casing Depths		General Remarks			Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m hand dug inspection pit. No groundwater encountered.			From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

 12-16 Yarm Road Stockton on Tees TS18 3NA 01642 607083 info@solmek.com		Borehole Log					Scale 1:50 Sheet 1 of 1							
Contract no: NE-26-019		Site: Kingsway, Rochdale			Driller: L&A Drilling		GL (AOD):							
					Plant used: Mini Rig		Easting: 391413							
Client: Goodsons					Started: 30/03/2026		Northing: 413109							
Method: Mini Percussive					Ended: 30/03/2026		Logged: TW							
					Backfilled: 30/03/2026		Status: FINAL							
Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing									
					Depth (m)	Type	Results							
		0.10		MADE GROUND: Tarmac	0.20	PID	0							
				MADE GROUND: Yellowish-brown, sandy gravel. Sand is fine to coarse. Gravel is fine to coarse of subangular dolomite.	0.20 - 0.50	B+ES	0							
					0.50	PID								
					0.50 - 0.80	B+ES								
		1.20		MADE GROUND: Reddish-brown, slightly gravelly fine to coarse sand. Gravel is fine to coarse of subrounded sandstone and angular mudstone.	1.20 - 1.65	SPT (S)	N=16 (4,4/3,4,5,4)							
					1.20	PID	0							
					1.20 - 1.65	B+ES								
		2.00		Refusal at 2m on concrete.	2.00 - 2.15	SPT (S)	N=50+ (25/50)							
		2.00		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)	1.2m hand dug inspection pit. No groundwater encountered.			From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)



 SOLMEK 12-16 Yarm Road Stockton on Tees TS18 3NA 01642 607083 info@solmek.com				Borehole Log						Scale 1:50 Sheet 1 of 1 BH05	
Contract no: NE-26-019		Site: Kingsway, Rochdale				Driller: L&A Drilling Plant used: Mini Rig Started: 30/03/2026 Ended: 30/03/2026 Backfilled: 30/03/2026			GL (AOD): Easting: 391396 Northing: 413084 Logged: TW Status: FINAL		
Client: Goodsons		Method: Mini Percussive									
Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing						
					Depth (m)	Type	Results				
		0.10		MADE GROUND: Tarmac	0.20	PID	0				
		0.40		MADE GROUND: Yellowish-brown, slightly sandy slightly clayey gravel. Sand is fine to coarse. Gravel is fine to medium of subrounded to subangular sandstone, limestone and mudstone.	0.20 - 0.40	B+ES	0				
				Medium dense orangeish-brown, gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse of subrounded to angular sandstone, limestone and angular mudstone.	0.50	PID	0				
					0.50 - 0.80	B+ES					
					1.20 - 1.65	SPT (S)	N=12 (2,3/3,3,3,3)				
					1.20	PID	0				
					1.20 - 1.65	B+ES					
					2.00 - 2.45	SPT (S)	N=12 (3,3/3,3,3,3)				
					2.00	PID	0				
					2.00 - 2.45	B+ES					
					3.00 - 3.45	SPT (S)	N=12 (3,3/3,3,3,3)				
					3.00	PID	0				
					3.00 - 3.45	B+ES					
					4.00 - 4.45	SPT (S)	N=12 (3,3/3,3,3,3)				
					4.00	PID	0				
					4.00 - 4.45	B+ES					
					5.00 - 5.45	SPT (S)	N=13 (3,4/3,4,3,3)				
					5.00	PID	0				
					5.00 - 5.45	B+ES					
		5.45		End of Borehole at 5.450m							

APPENDIX C:

Contamination Laboratory Results

Certificate of Analysis

Certificate Number 26-08351

Issued: 17-Apr-26

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

Our Reference 26-08351

Client Reference ~ NE-26-019

Order No ~ PO-01-26372

Contract Title ~ Kingsway, Rochdale

Description 8 Soil samples.

Date Received 09-Apr-26

Date Started 09-Apr-26

Date Completed 17-Apr-26

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

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

Approved By



Reyhan Irfan
Operations Manager



2139

Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

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

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Sample ID	Depth	Lab No	Completed	Matrix Description
BH01	4.00-4.45	2668104	17/04/2026	Brown gravelly, clayey SAND
BH02	0.20-0.50	2668105	17/04/2026	Brown very gravelly, clayey SAND
BH02A	3.00-3.45	2668106	17/04/2026	Brown SAND
BH03	0.50-0.80	2668107	17/04/2026	Brown gravelly SAND
BH04	0.20-0.40	2668108	17/04/2026	Brown gravelly, clayey SAND
BH04	1.20-1.65	2668109	17/04/2026	Brown SAND
BH05	0.50-0.80	2668110	17/04/2026	Brown gravelly, clayey SAND
BH06	3.00-3.45	2668111	17/04/2026	Brown gravelly SAND

Summary of Chemical Analysis

Soil Samples

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2668104	2668105	2668106	2668107	2668108	2668109
Sample ID ~	BH01	BH02	BH02A	BH03	BH04	BH04
Depth ~	4.00-4.45	0.20-0.50	3.00-3.45	0.50-0.80	0.20-0.40	1.20-1.65
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	31/03/2026	31/03/2026	31/03/2026	31/03/2026	31/03/2026	31/03/2026
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	6.0	3.6	3.8	5.3	3.8	2.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.2	0.1	0.3	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	17	9.2	6.7	14	15	3.7
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	26	7.0	10	19	20	6.4
Lead	DETSC 2301#	0.3	mg/kg	9.5	4.3	4.1	8.7	12	5.0
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	24	12	8.6	20	23	5.6
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	51	37	23	52	90	18
Inorganics									
pH	DETSC 2008#		pH	6.9	8.6	7.5	8.5	8.6	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	%	0.5	1.5	2.0	0.4	0.9	< 0.1
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	10	< 10	11	17	11	< 10
Petroleum Hydrocarbons									
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
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	1.8	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	3.3	< 1.2	< 1.2	4.4	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	10	< 1.5	< 1.5	27	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	120	< 3.4	9.6	420	< 3.4
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	3.4	mg/kg	< 3.4	13	< 3.4	< 3.4	43	< 3.4
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	140	< 10	12	500	< 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	6.5	< 0.9	< 0.9	5.6	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	8.8	< 0.5	< 0.5	8.2	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6	36	< 0.6	< 0.6	69	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4	370	< 1.4	< 1.4	1200	< 1.4
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1.4	mg/kg	< 1.4	55	< 1.4	< 1.4	180	< 1.4
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10	470	< 10	< 10	1500	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10	620	< 10	12	2000	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis Soil Samples

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2668104	2668105	2668106	2668107	2668108	2668109
Sample ID ~	BH01	BH02	BH02A	BH03	BH04	BH04
Depth ~	4.00-4.45	0.20-0.50	3.00-3.45	0.50-0.80	0.20-0.40	1.20-1.65
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	31/03/2026	31/03/2026	31/03/2026	31/03/2026	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2668110	2668111
Sample ID ~	BH05	BH06
Depth ~	0.50-0.80	3.00-3.45
Other ID ~		
Sample Type ~	ES	ES
Sampling Date ~	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	7.3	4.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	18	12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	29	19
Lead	DETSC 2301#	0.3	mg/kg	11	7.5
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	23	17
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	55	39
Inorganics					
pH	DETSC 2008#		pH	6.3	7.3
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	0.7	0.4
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	22	12
Petroleum Hydrocarbons					
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2668110	2668111
Sample ID ~	BH05	BH06
Depth ~	0.50-0.80	3.00-3.45
Other ID ~		
Sample Type ~	ES	ES
Sampling Date ~	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Chrysene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3

Summary of Asbestos Analysis Soil Samples

Our Ref 26-08351

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2668105	BH02 0.20-0.50	SOIL	NAD	none	James Heath
2668107	BH03 0.50-0.80	SOIL	NAD	none	James Heath
2668108	BH04 0.20-0.40	SOIL	NAD	none	James Heath
2668110	BH05 0.50-0.80	SOIL	NAD	none	James Heath

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 26-08351
 Client Ref ~ NE-26-019
 Contract ~ Kingsway, Rochdale

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests	Headspace in container for tests
2668104	BH01 4.00-4.45 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668105	BH02 0.20-0.50 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668106	BH02A 3.00-3.45 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668107	BH03 0.50-0.80 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668108	BH04 0.20-0.40 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668109	BH04 1.20-1.65 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668110	BH05 0.50-0.80 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS
2668111	BH06 3.00-3.45 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	BTEX / C5-C10 (7 days), pH + Conductivity (7 days)		BTEX/C5-10, HS

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

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

Det

Aliphatic C5-C6

Acronym

HS_1D_AL

Appendix A - Details of Analysis

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

Appendix A - Details of Analysis

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

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

Appendix A - Details of Analysis

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

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 26-09177

Issued: 28-Apr-26

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

Our Reference 26-09177

Client Reference ~ NE-26-019

Order No ~ PO-01-26372

Contract Title ~ Kingsway, Rochdale

Description 1 Soil sample, 3 Leachate prepared by DETS samples.

Date Received 09-Apr-26

Date Started 17-Apr-26

Date Completed 28-Apr-26

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

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

Approved By



Louise Cook
Contracts Manager



2139

Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

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

Summary of Chemical Analysis Soil Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672404
Sample ID ~	BH04
Depth ~	0.20-0.40
Other ID ~	
Sample Type ~	ES
Sampling Date ~	31/03/2026
Sampling Time ~	n/s

Test	Method	LOD	Units
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Summary of Chemical Analysis

Soil Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672404
Sample ID ~	BH04
Depth ~	0.20-0.40
Other ID ~	
Sample Type ~	ES
Sampling Date ~	31/03/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431*	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672404
Sample ID ~	BH04
Depth ~	0.20-0.40
Other ID ~	
Sample Type ~	ES
Sampling Date ~	31/03/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431*	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431*	0.01	mg/kg	< 0.01
Naphthalene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
TAME	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 2.0
Aniline	DETSC 3433*	0.1	mg/kg	< 2.0
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 2.0
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 2.0
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 2.0
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 2.0
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 2.0
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 2.0
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 2.0
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 2.0
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 2.0
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 2.0
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 2.0
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 2.0
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 2.0
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 2.0
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 2.0
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 2.0
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 2.0
Acenaphthylene	DETSC 3433	0.1	mg/kg	< 2.0
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 2.0
Acenaphthene	DETSC 3433	0.1	mg/kg	< 2.0
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 2.0
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 2.0
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 2.0
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 2.0
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 2.0
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 2.0

Summary of Chemical Analysis

Soil Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672404
Sample ID ~	BH04
Depth ~	0.20-0.40
Other ID ~	
Sample Type ~	ES
Sampling Date ~	31/03/2026
Sampling Time ~	n/s

Test	Method	LOD	Units	
Fluorene	DETSC 3433	0.1	mg/kg	< 2.0
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 2.0
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 2.0
Diphenylamine	DETSC 3433	0.1	mg/kg	< 2.0
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 2.0
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 2.0
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 2.0
Phenanthrene	DETSC 3433	0.1	mg/kg	< 2.0
Anthracene	DETSC 3433	0.1	mg/kg	< 2.0
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 2.0
Fluoranthene	DETSC 3433	0.1	mg/kg	< 2.0
Pyrene	DETSC 3433	0.1	mg/kg	< 2.0
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 2.0
Benzo(a)anthracene	DETSC 3433	0.1	mg/kg	< 2.0
Chrysene	DETSC 3433	0.1	mg/kg	< 2.0
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 2.0
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 2.0
Benzo(b)fluoranthene	DETSC 3433	0.1	mg/kg	< 2.0
Benzo(k)fluoranthene	DETSC 3433	0.1	mg/kg	< 2.0
Benzo(a)pyrene	DETSC 3433	0.1	mg/kg	< 2.0
Indeno(123cd)pyrene	DETSC 3433	0.1	mg/kg	< 2.0
Dibenzo(ah)anthracene	DETSC 3433	0.1	mg/kg	< 2.0
Benzo(ghi)perylene	DETSC 3433	0.1	mg/kg	< 2.0
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 2.0
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 2.0
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 2.0
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 2.0
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 2.0
Azobenzene	DETSC 3433	0.1	mg/kg	< 2.0
Carbazole	DETSC 3433*	0.1	mg/kg	< 2.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672401	2672402	2672403
Sample ID ~	BH01	BH02	BH04
Depth ~	4.00-4.45	0.20-0.50	0.20-0.40
Other ID ~			
Sample Type ~	ES	ES	ES
Sampling Date ~	31/03/2026	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Preparation						
NRA Leachate Preparation	DETSC 1009*			Y	Y	Y
Metals						
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.25	0.64	0.85
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12.00	< 12.00	< 12.00
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.56	< 0.25	1.20
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.34	1.03	3.00
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.24	0.14	11.79
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	0.70	< 0.50	0.86
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.84	0.46	0.32
Zinc, Dissolved	DETSC 2306	1.3	ug/l	9.89	1.99	7.21
Inorganics						
pH	DETSC 2008		pH	6.7	6.7	6.9
Cyanide, Free	DETSC 2130	20	ug/l	< 20	< 20	< 20
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	< 1.5	< 1.5	< 1.5
Sulphate as SO4	DETSC 2055	0.1	mg/l	1.3	1.3	0.99
Petroleum Hydrocarbons						
Aliphatic C5-C6: HS_1D_AL	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8: HS_1D_AL	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10: HS_1D_AL	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C35-C40: EH_CU_1D_AL	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C5-C40: EH_CU+HS_1D_AL	DETSC 3072*	10	ug/l	< 10	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C7-C8: HS_1D_AR	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C8-C10: HS_1D_AR	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C35-C40: EH_CU_1D_AR	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C5-C40: EH_CU+HS_1D_AR	DETSC 3072*	10	ug/l	< 10	< 10	< 10
TPH Ali/Aro C5-C40: EH_CU+HS_1D_Total	DETSC 3072*	10	ug/l	< 10	< 10	< 10
PAHs						
Naphthalene	DETSC 3304	0.05	ug/l	0.55	0.22	0.23
Acenaphthylene	DETSC 3304	0.01	ug/l	0.02	0.01	0.01

Summary of Chemical Analysis

Leachate Samples

Our Ref 26-09177

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2672401	2672402	2672403
Sample ID ~	BH01	BH02	BH04
Depth ~	4.00-4.45	0.20-0.50	0.20-0.40
Other ID ~			
Sample Type ~	ES	ES	ES
Sampling Date ~	31/03/2026	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Acenaphthene	DETSC 3304	0.01	ug/l	0.30	0.15	0.16
Fluorene	DETSC 3304	0.01	ug/l	0.13	0.07	0.22
Phenanthrene	DETSC 3304	0.01	ug/l	0.14	0.08	0.66
Anthracene	DETSC 3304	0.01	ug/l	0.04	0.02	0.12
Fluoranthene	DETSC 3304	0.01	ug/l	0.06	0.06	0.15
Pyrene	DETSC 3304	0.01	ug/l	0.05	0.04	0.10
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	0.02
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	1.3	0.66	1.7

Information in Support of the Analytical Results

Our Ref 26-09177
 Client Ref ~ NE-26-019
 Contract ~ Kingsway, Rochdale

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests	Headspace in container for tests
2672401	BH01 4.00-4.45 LEACHATE	31/03/26	GJ 250ml, GJ 60ml, PT 1L x2	Aliphatics/Aromatics (5 days), BTEX / C5-C10 (7 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days)		
2672402	BH02 0.20-0.50 LEACHATE	31/03/26	GJ 250ml, GJ 60ml, PT 1L x2	Aliphatics/Aromatics (5 days), BTEX / C5-C10 (7 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days)		
2672403	BH04 0.20-0.40 LEACHATE	31/03/26	GJ 250ml, GJ 60ml, PT 1L x2	Aliphatics/Aromatics (5 days), BTEX / C5-C10 (7 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days)		
2672404	BH04 0.20-0.40 SOIL	31/03/26	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2	VOC (7 days)		VOC, HS

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

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

Det	Acronym
Aliphatic C5-C6	HS_1D_AL
Aliphatic C6-C8	HS_1D_AL
Aliphatic C8-C10	HS_1D_AL
Aliphatic C10-C12	EH_CU_1D_AL
Aliphatic C12-C16	EH_CU_1D_AL
Aliphatic C16-C21	EH_CU_1D_AL
Aliphatic C21-C35	EH_CU_1D_AL
Aliphatic C35-C40	EH_CU_1D_AL
Aliphatic C5-C40	EH_CU+HS_1D_AL
Aromatic C5-C7	HS_1D_AR
Aromatic C7-C8	HS_1D_AR
Aromatic C8-C10	HS_1D_AR
Aromatic C10-C12	EH_CU_1D_AR
Aromatic C12-C16	EH_CU_1D_AR
Aromatic C16-C21	EH_CU_1D_AR
Aromatic C21-C35	EH_CU_1D_AR
Aromatic C35-C40	EH_CU_1D_AR
Aromatic C5-C40	EH_CU+HS_1D_AR
TPH Ali/Aro C5-C40	EH_CU+HS_1D_Total

Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 26.03.15

APPENDIX D: Geotechnical Laboratory Results

Laboratory Report Front Sheet

G2M Testing

Unit 5/6 Innovation Court,
Meadowfield Industrial Estate,
County Durham,
DH7 8FA

0191 349 9210
info@g2mtesting.co.uk



10258

Site name

Kingsway, Rochdale

Job number

NE-26-019

Client details:

Reference: NE-26-019
Name: Solmek
Address: 12 Yarm Road
Stockton-on-Tees
TS18 3NA

Telephone:

Email:

FAO: Leo Cassidy

Samples received: 07/04/2026

Date commenced: 10/04/2026

Date reported: 24/04/2026

Observations and interpretations are outside of the UKAS 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 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:

A handwritten signature in black ink, appearing to read 'D. Anderson'.

Approved Signatories:

- ☒ D. Anderson (Managing Director)
- ☐ J. Brischuk (Laboratory Manager)
- ☐



PARTICLE SIZE DISTRIBUTION

Job Ref

NE-26-019

Borehole/Pit No.

BH01

Site Name

Kingsway, Rochdale

Sample No.

Soil Description

Clayey/Silty, Gravelly, SAND

Depth, m

2.00

Specimen
Reference

BH01

Specimen
Depth

22

m

Sample Type

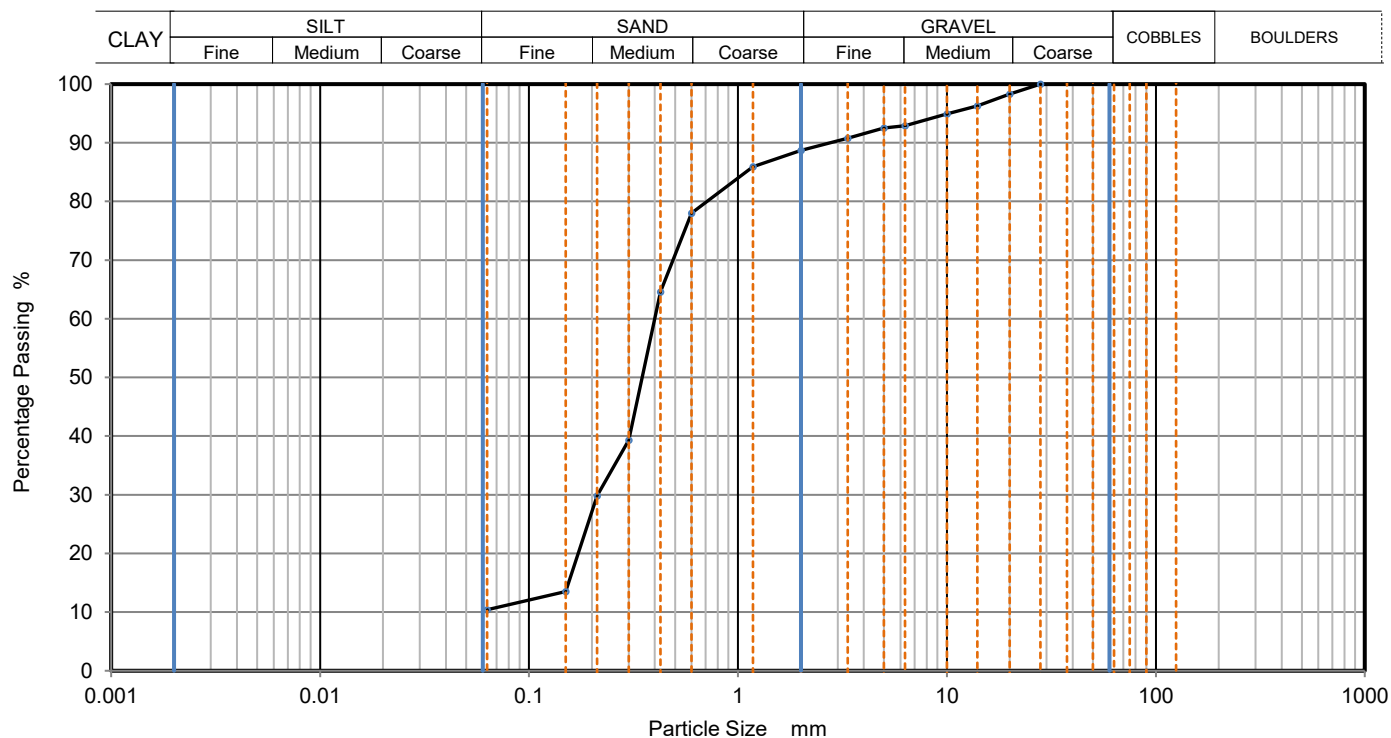
B

Test Method

ISO 17892 -4, by sieving on pre-dried or dry sample

KeyLAB ID

G2MT202604100



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
28	100		
20	98		
14	96		
10	95		
6.3	93		
5	93		
3.35	91		
2	89		
1.18	86		
0.6	78		
0.425	65		
0.3	39		
0.212	30		
0.15	14		
0.063	10		

Dry Mass of sample, g

967

Sample Proportions	% dry mass
Very coarse	0
Gravel	11
Sand	79
Fines <0.063mm	10

Grading Analysis		
D100	mm	28
D60	mm	0.399
D30	mm	0.214
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing performed to BS EN ISO 17892-4 unless noted below

Deviating sample (insufficient mass)

Operator

Checked

Approved

Sheet printed

24/04/2026 15:04

Fig 1

Sheet



PARTICLE SIZE DISTRIBUTION

Job Ref

NE-26-019

Borehole/Pit No.

BH05

Site Name

Kingsway, Rochdale

Sample No.

Soil Description

Slightly Silty, very Gravelly, SAND

Depth, m

2.00

Specimen
Reference

BH05

Specimen
Depth

2

m

Sample Type

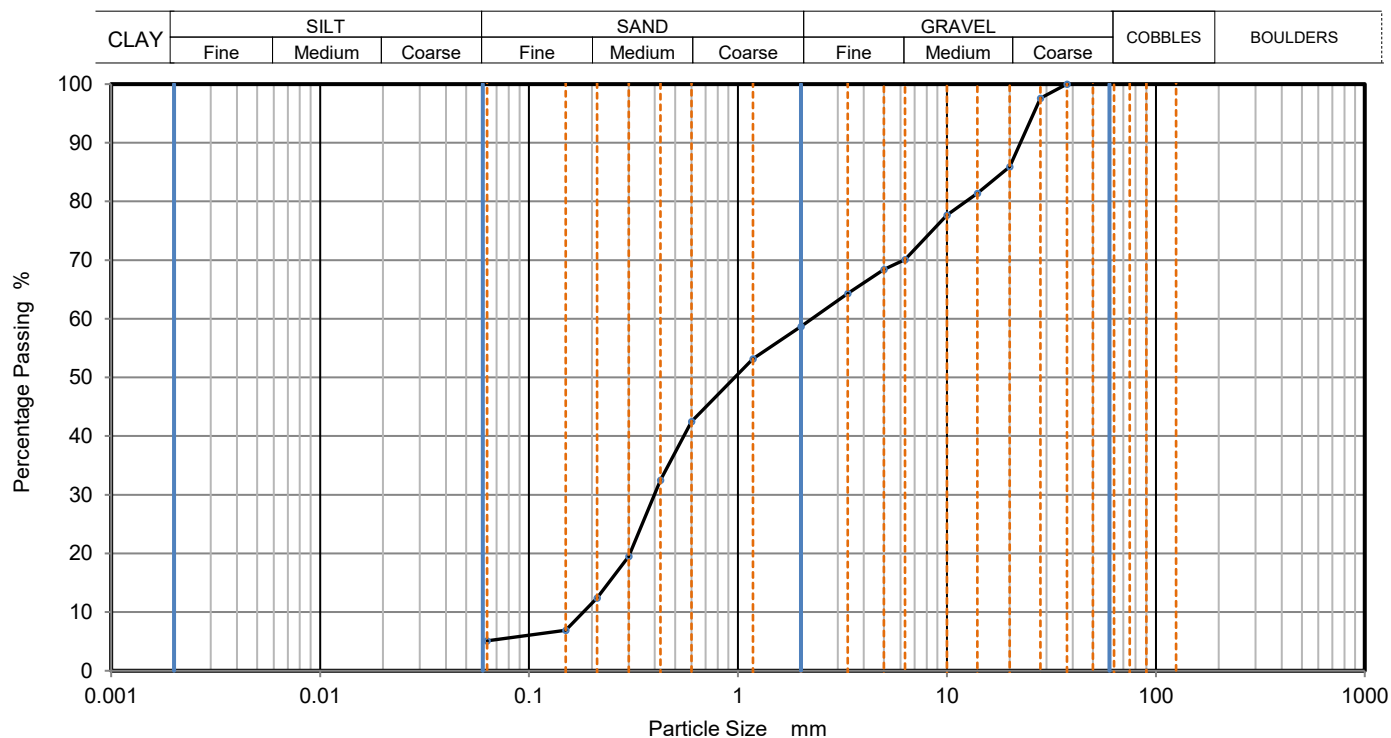
B

Test Method

ISO 17892 -4, by sieving on pre-dried or dry sample

KeyLAB ID

G2MT202604102



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
37.5	100		
28	98		
20	86		
14	81		
10	78		
6.3	70		
5	68		
3.35	64		
2	59		
1.18	53		
0.6	43		
0.425	33		
0.3	20		
0.212	12		
0.15	7		
0.063	5		

Dry Mass of sample, g

2574

Sample Proportions	% dry mass
Very coarse	0
Gravel	41
Sand	54
Fines <0.063mm	5

Grading Analysis		
D100	mm	37.5
D60	mm	2.26
D30	mm	0.398
D10	mm	0.182
Uniformity Coefficient		12
Curvature Coefficient		0.39

Remarks

Preparation and testing performed to BS EN ISO 17892-4 unless noted below

Deviating sample (insufficient mass)

Operator	Checked	Approved	Sheet printed	Fig 1 Sheet
Allan Asquith	A.trojanowska	David.Anderson	24/04/2026 15:04	



PARTICLE SIZE DISTRIBUTION

Job Ref

NE-26-019

Borehole/Pit No.

BH03

Site Name

Kingsway, Rochdale

Sample No.

Soil Description

Slightly Silty, slightly Gravelly, SAND

Depth, m

3.00

Specimen
Reference

BH03

Specimen
Depth

3

m

Sample Type

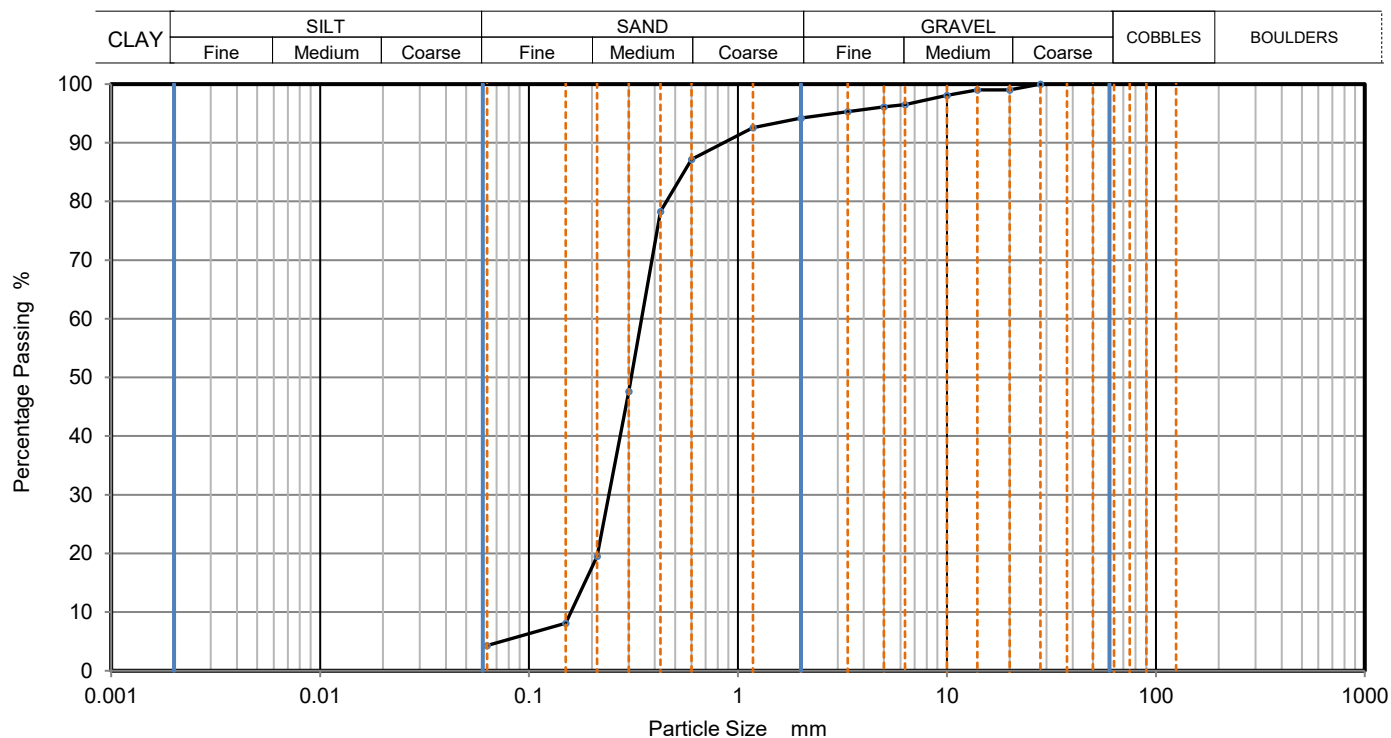
B

Test Method

ISO 17892 -4, by sieving on pre-dried or dry sample

KeyLAB ID

G2MT202604101



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
28	100		
20	99		
14	99		
10	98		
6.3	97		
5	96		
3.35	95		
2	94		
1.18	93		
0.6	87		
0.425	78		
0.3	48		
0.212	20		
0.15	8		
0.063	4		

Dry Mass of sample, g

1059

Sample Proportions	% dry mass
Very coarse	0
Gravel	6
Sand	90
Fines <0.063mm	4

Grading Analysis		
D100	mm	28
D60	mm	0.345
D30	mm	0.241
D10	mm	0.159
Uniformity Coefficient		2.2
Curvature Coefficient		1.1

Remarks

Preparation and testing performed to BS EN ISO 17892-4 unless noted below

Deviating sample (insufficient mass)

Operator

Checked

Approved

Sheet printed

24/04/2026 15:04

Fig 1

Sheet

Certificate of Analysis

Certificate Number 26-08349

Issued: 17-Apr-26

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

Our Reference 26-08349

Client Reference ~ NE-26-019

Order No ~ PO-01-26372

Contract Title ~ Kingsway, Rochdale

Description 3 Soil samples.

Date Received 09-Apr-26

Date Started 09-Apr-26

Date Completed 17-Apr-26

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

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

Approved By




Louise Cook
Contracts Manager



Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited

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

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 26-08349

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Sample ID	Depth	Lab No	Completed	Matrix Description
BH01	2.00-2.45	2668099	17/04/2026	Brown gravelly, clayey SAND
BH03	3.00-3.45	2668100	17/04/2026	Brown SAND
BH05	2.00-2.45	2668101	17/04/2026	Brown gravelly SAND

Summary of Chemical Analysis Soil Samples

Our Ref 26-08349

Client Ref ~ NE-26-019

Contract Title ~ Kingsway, Rochdale

Lab No	2668099	2668100	2668101
Sample ID ~	BH01	BH03	BH05
Depth ~	2.00-2.45	3.00-3.45	2.00-2.45
Other ID ~			
Sample Type ~	D	D	D
Sampling Date ~	31/03/2026	31/03/2026	31/03/2026
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Inorganics						
pH	DETSC 2008#		pH	7.5	7.9	7.4
Sulphate Aqueous Extract as SO ₄ (2:1)	DETSC 2076#	10	mg/l	14	< 10	28

Information in Support of the Analytical Results

Our Ref 26-08349
 Client Ref ~ NE-26-019
 Contract ~ Kingsway, Rochdale

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date		Containers Received	Holding time exceeded for tests	Incorrect container for tests
		Sampled ~				
2668099	BH01 2.00-2.45 SOIL	31/03/26		PT 500ml	pH + Conductivity (7 days)	
2668100	BH03 3.00-3.45 SOIL	31/03/26		PT 500ml	pH + Conductivity (7 days)	
2668101	BH05 2.00-2.45 SOIL	31/03/26		PT 500ml	pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

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

Soil Analysis Notes

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

Disposal

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

Appendix A - Details of Analysis

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

Appendix A - Details of Analysis

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

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

Appendix A - Details of Analysis

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

Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

APPENDIX E:
Ground Gas Monitoring Results



GAS MONITORING RESULTS

Project number	NE26 - 019
Project name	Kingsway, Rochdale
Client	Goodson Associates
Visit no	1
Date	15/05/2026
Equipment	GFM 435 Gas Analyser
Operator	BG

Weather Conditions	Sunny
Ground Conditions	Dry
Ambient Atmospheric Pressure	992
Regional Pressure Trend	Steady

Position	Flow (l/hr)	Pressure	CH4			CO2			O2		PID (ppm)	CO (ppm)	H2S (ppm)	Groundwater Level (mbgl)	Depth to Base (mbgl)	Notes
			Peak (% v/v)	Steady (% v/v)	GSV (l/hr)	Peak (% v/v)	Steady (% v/v)	GSV (l/hr)	Peak (% v/v)	Steady (% v/v)						
BH 01	3.4	992	0.0	0.0	0.0000	0.8	0.8	0.0272	18.8	18.8	1.1	0.0	0.0	Dry	5.00	
BH 02A	0.1	992	0.0	0.0	0.0000	2.6	2.6	0.0026	17.4	17.4	0.3	0.0	0.0	Dry	5.00	
BH 03	0.2	992	0.0	0.0	0.0000	0.9	0.9	0.0018	19.0	19.0	1.3	0.0	0.0	Dry	4.00	
BH 05	0.3	992	0.0	0.0	0.0000	1.6	1.6	0.0000	17.9	17.9	0.1	0.0	0.0	Dry	4.00	
BH 06	0.7	992	0.0	0.0	0.0000	0.2	0.1	0.0014	19.7	19.7	0.8	0.0	0.0	Dry	4.00	

KEY

CH₄ = Methane, **CO₂** = Carbon Dioxide, **O₂** = Oxygen, **CO** = Carbon Monoxide, **H₂S** = Hydrogen Sulphide, **GSV** = Gas Screening Value (If no flow is recorded a value of 0.1 is assumed), ND = Not Detected, * = not measured, N/A = Not applicable, % = % by volume, mbgl = m below ground level, ppm = parts per million.

APPENDIX F:

Notes on Limitations & Contamination Guidance

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 <i>significant harm</i> , 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.

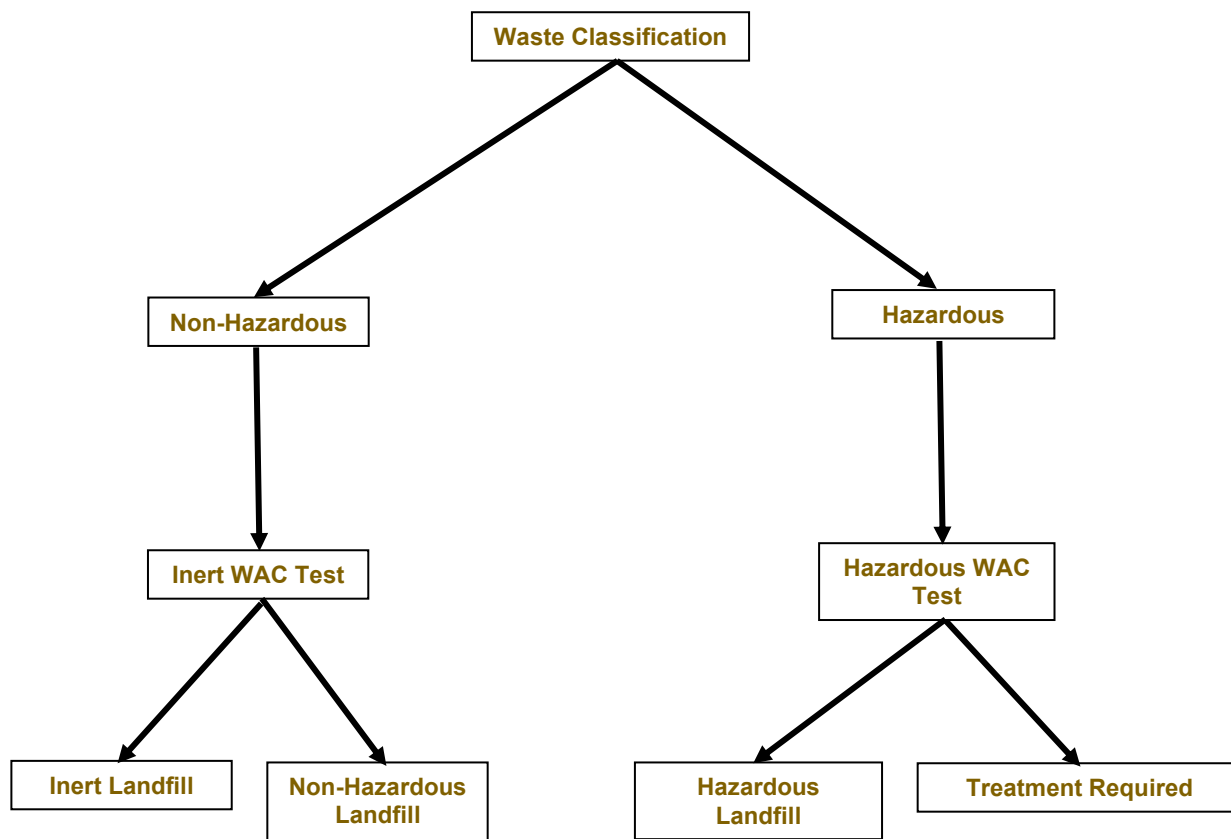
WASTE CLASSIFICATION AND WASTE ACCEPTANCE CRITERIA

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.

Parameter group	Pipe Material (Threshold concentrations in mg/kg)					
	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: version1/2026)

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.