GEO-ENVIRONMENTAL PHASE 2 SITE INVESTIGATION

Report No.: A260310-R02

Date: May 2026

47 SEDGEBOROUGH ROAD

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1.0 INTRODUCTION

1.1 Background

Adeptus was appointed by HD Rental Properties Ltd (the client) to undertake a Land Contamination Phase 2 Site Investigation at the site known as the 47 Sedgeborough Road.

The investigation is required in support of a planning application for redevelopment of the site and to further assess potentially significant contaminant linkages identified in an earlier phase 1 report.

Land contamination is a material consideration under the National Planning Policy Framework (2012). This means that local authorities must take the potential or actual presence of contamination into account when considering planning applications.

“Contamination” is defined in BS 10175:2011 as:

presence of a substance or agent, as a result of human activity, in, on or under land, which has the potential to cause harm or to cause pollution.

1.2 Scope and Objectives

The following scope of works has been undertaken:

- Review of desk study and preliminary risk assessment
- Design and implementation of suitable exploratory investigation
- Sample retrieval and laboratory chemical analysis
- Tier 1 quantitative risk assessment
- Update of the initial conceptual site model
- Factual and interpretive reporting

The objectives of the works were as follows:

- Obtain site specific chemical data on potential contaminants
- Provide an assessment of risks to relevant receptors in line with the principles of Environment Agency publication Land Contamination Risk Management (LCRM).

1.3 Supporting Information

Phase 1 Desk Study (Adeptus, Ref: A260310-R01A)

A site plan is presented as Appendix A.

Other sources of information utilised in producing this report are listed as Appendix B.

2 SITE LOCATION AND DESCRIPTION

This section provides a review of the land use on and in the vicinity of the Site, with the purpose of identifying potential contaminant sources and environmental constraints.

2.1 Location and Description

Table 2-1: Site Particulars

Location	The site is situated east of Sedgeborough Road in a residential area towards the north of Whalley Range.
Area & Coordinates	0.08 ha | 383038 395520 (centred on, approx.)
Development Proposals	Erection of two-storey building comprising 2no. two-bedroom apartments (Use Class C3) with associated car parking, cycle storage and waste storage, together with reconfiguration of existing HMO and associated elevational alterations.

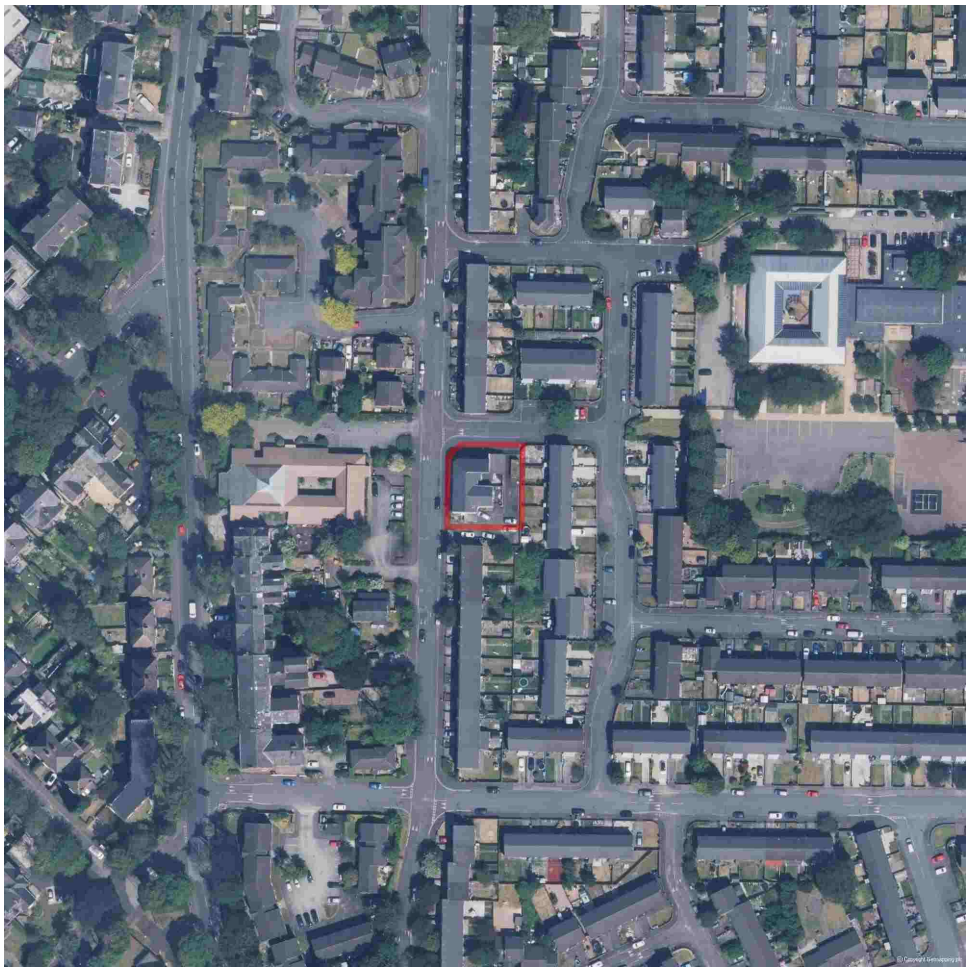


Figure 2-1: Site Location (based on the plan in Appendix A)

2.2 Summary of Preliminary Risk Assessment

The risk assessment identified a number of potentially significant pollutant linkages and a moderate risk, suggesting that further assessment should be undertaken.

Historically, one or two terraced dwellings appear to have fallen within the south of the study site, and their demolition is a likely source of Made Ground underlying that area.

Additionally, all of the surrounding Victorian or earlier dwellings have been demolished and replaced with more modern ones, suggesting Made Ground will underlie those sites also, although this may have been excavated to some degree in the course of their redevelopment.

Made Ground is frequently a source of common contaminants including metals/metalloids, PAHs, asbestos-containing materials (ACMs).

Moderate risk was identified to future site users as a result of potential soil contamination and ground gas.

The site was considered unlikely to be affected by significant mobile and/or leachable contamination, hydrocarbons or VOCs.

3 PHASE 2 EXPLORATORY INVESTIGATION

3.1 Fieldworks & Testing

An exploratory investigation was designed based on the findings of the desk study. The scope of works was as follows.

- Formation of exploratory boreholes
- Strata logging and sample retrieval
- PID screening of selected samples
- Construction of environmental monitoring installations in selected boreholes
- Chemical laboratory analysis
- Factual and interpretive reporting of investigation findings

3.1.1 Fieldworks

3No windowless sampler boreholes were advanced to enable strata logging, sample retrieval and installation of environmental monitoring wells.

Fieldworks were completed on 09/04/2026 and are summarised in the table below.

Table 3-1: Fieldworks Summary

Location Reference* and Rationale		Max Depth (mbgl)	Monitoring Wells Response Zone (mbgl)	PID Screening
WS1	Within the southwest of the proposed building footprint targeting Made Ground and potential backfilled basement from the previously demolished dwelling.	5.0	1 - 5	0 ppm
WS2	Within the northeast of the proposed building footprint targeting Made Ground and potential backfilled basement from the previously demolished dwelling.	5.0	-	0 ppm
WS3	Within the proposed soft landscaped area at the east of the site and for general site coverage	5.0	1 - 5	0 ppm

*Notes: * HP = Hand Pit; TP = Mechanically Excavated Trial Pit; WS = Windowless Sampler Borehole; BH = Cable Percussion Borehole | ** + Indicates base of stratum was not reached.*

Monitoring installations consisted of 1m of plain pipe with a bentonite seal at the surface to prevent flooding of the response zone with surface water and to prevent atmospheric leakage/ingress. The standpipes were sealed with a bung and valve with a flush fitting cover.

Exploratory hole locations are shown on the plan in Appendix A, with borehole logs in Appendix C.

Laboratory Analysis

5No. selected samples were submitted for a range of chemical analyses comprising pH, soil organic matter (SOM); total and speciated polycyclic-aromatic hydrocarbons (PAHs); TPH; metals/metalloids, and asbestos ID.

Samples were also screened on site for VOCs using a hand-held photo ionisation detector. No significant PID readings were obtained.

Analytical work was undertaken by UKAS accredited laboratory. Results are summarised and discussed below, and the lab report is attached as Appendix D.

3.2 Ground Conditions

Made Ground

Made Ground was encountered in all three windowless sample locations, extending to 2.2m in WS1, 2.1m in WS2, and 0.8m in WS3. It comprised tarmac with Type 2 stone to 0.1m underlain by full and half bricks and occasional cobbles of concrete in a variably gravelly, silty, clayey sand matrix. Occasional slate, ash and possible coal were noted in WS1.

WS2 refused on an obstruction in Made Ground at 2.2m.

The thickness of Made Ground encountered in WS1 and WS2 is considered indicative of probable backfill basements. It's possible that the refusal in WS2 was on the former basement floor slab.

Superficial Deposits

Superficial deposits varied across the locations. In WS2, soft light brown slightly gravelly silty sand was proven to 3.2m, underlain by firm brown clay to in excess of 4m. In WS3, soft light grey mottled brown slightly silty clay was

encountered to 1.5m, underlain by brown and mottled grey sandy gravelly clay to 1.9m, in turn underlain by brown silty very gravelly sand to 3.0m. Superficial deposits were not proven beneath the Made Ground in WS1 due to refusal at 2.2m.

Solid Geology

Bedrock was not anticipated or encountered at the investigation depth.

Visual or Olfactory Contamination

No direct evidence of gross contamination was noted, although the presence of ash and possible coal within the Made Ground at WS1 was considered likely to indicate the presence of soil-bound contamination.

3.3 Groundwater Conditions

Groundwater was not encountered in any of the windowless sample locations.

No visual or olfactory evidence of groundwater contamination was noted.

3.4 Environmental Monitoring

Monitoring of permanent ground gases was carried out via WS1 and WS2. The monitoring results are assessed in Section 4.

4 CONTAMINATED LAND RISK ASSESSMENT

4.1 Human Health Risk Assessment

A Tier 1 (generic) quantitative risk assessment has been undertaken by screening measured contaminant concentrations against reference values for chronic (long term) risk to human health known as generic assessment criteria (GAC).

Concentrations exceeding the relevant screening values are described as ‘elevated’ and indicate a requirement to further characterise or otherwise address health and environmental risks.

In line with the initial conceptual site model, GAC for the residential with consumption of homegrown produce (RwHP) scenario have been utilised. The GAC are based on 2.5% SOM, the highest available as the measured values were all above this.

The assessment is summarised in Table 4-1, and the source of GAC is indicated in the final column and footnotes to the table.

Table 4-1: Summary of Soil Analytical Results vs Tier 1 Screening Values

Determinand	GAC	Units	No. of Samples	No. of Exceedances	Exceedance Locations	Summary Statistics*			**
						Minimum	Maxi mum	Average	

Inorganics & Metals / Metalloids									
Asbestos	N/A	-	5	1	WS3-0.7m (chrysotile)	-	-	-	***
Arsenic	37	mg/kg	5	0	-	4.8	16.0	9.1	1
Barium	1300	mg/kg	5	0	-	180.0	490.0	328.0	2
Beryllium	1.7	mg/kg	5	0	-	0.3	1.3	0.7	1
Boron	290	mg/kg	5	0	-	0.2	0.7	0.4	1
Cadmium	11	mg/kg	5	0	-	0.3	1.8	0.6	1
Chromium	910	mg/kg	5	0	-	9.8	16.0	13.0	1
Copper	2400	mg/kg	5	0	-	15.0	92.0	36.6	1
Lead	200	mg/kg	5	0	WS1-0.3m (760mg/kg), WS2-0.2m (230mg/kg), WS2-1.0m (720mg/kg), WS3-0.7m (230mg/kg)	120.0	760.0	412.0	3
Mercury	1.2	mg/kg	5	0	-	< 1.0	< 1.0	< 1.0	1
Nickel	180	mg/kg	5	0	-	9.6	25.0	17.1	1
Selenium	250	mg/kg	5	0	-	< 1.0	1.3	1.3	1
Vanadium	1200	mg/kg	5	0	-	14.0	35.0	22.6	1
Zinc	3700	mg/kg	5	0	-	49.0	120.0	69.0	1
Determinand	**GAC**	**Units**	**No. of Samples**	**No. of Exceedances**	**Exceedance Locations**	**Summary Statistics***			****
						Minimum	**Maxi mum**	**Average**	
***PAHs** - at 2.5% SOM*									
Naphthalene	5.6	mg/kg	5	0	-	< 0.05	0.5	0.5	1
Acenaphthylene	420	mg/kg	5	0	-	< 0.05	0.9	0.9	1

Acenaphthene	510	mg/kg	5	0	-	< 0.05	1.1	0.3	1
Fluorene	400	mg/kg	5	0	-	< 0.05	2.0	1.1	1
Phenanthrene	220	mg/kg	5	0	-	0.3	11.0	2.9	1
Anthracene	5400	mg/kg	5	0	-	0.0	3.7	2.2	1
Fluoranthene	560	mg/kg	5	0	-	0.3	11.0	2.9	1
Pyrene	1200	mg/kg	5	0	-	0.3	11.0	2.9	1
Benzo(a)anthracene	11	mg/kg	5	0	-	0.1	5.2	1.3	1
Chrysene	22	mg/kg	5	0	-	0.1	5.1	1.4	1
Benzo(b)fluoranthene	3.3	mg/kg	5	0	WS3-0.7m (5.3mg/kg)	0.1	5.3	1.4	1
Benzo(k)fluoranthene	93	mg/kg	5	0	-	0.1	1.9	0.5	1
Benzo(a)pyrene	2.7	mg/kg	5	0	WS3-0.7m (4.7mg/kg)	0.1	4.7	1.2	1
Indeno(1,2,3-cd) pyrene	36	mg/kg	5	0	-	0.1	1.8	0.5	1
Dibenz(a,h)anthracene	0.28	mg/kg	5	0	WS3-0.7m (0.48mg/kg)	< 0.05	0.5	0.3	1
Benzo(ghi)perylene	340	mg/kg	5	0	-	0.1	2.1	0.6	
Determinand	**GAC**	**Units**	**No. of Samples**	**No. of Exceedances**	**Exceedance Locations**	**Summary Statistics***			****
						Minimum	**Maxi mum**	**Average**	
***Petroleum Hydrocarbons (TPH)** - at 2.5% SOM*									
Benzene	0.87	mg/kg	3	0	-	0	0	0	1
Toluene	130	mg/kg	3	0	-	0	0	0	1

Ethylbenzene	47	mg/kg	3	0	-	0	0	0	1
P & M-Xylene	115	mg/kg	3	0	-	0	0	0	1
O-Xylene	60	mg/kg	3	0	-	0	0	0	1

Notes: ** Summary statistics based on targeted sampling are provided for information only.*

*** Source of GAC: 1 = LQM / CIEH (2014) S4UL3785 | 2 = CL:AIRE (2009) Soil Generic Assessment Criteria for Human Health | 3 = Defra (2014) C4SL*

**** For asbestos, the number of detections is shown and does not relate to any GAC. N.D = Not detected*

Principal findings of the quantitative screening summarised in Table 4-1 are as follows.

- Asbestos (chrysotile loose fibres) was detected in the sample WS3-0.7m
- Lead was elevated in 4No. samples at up to 3.8 times the guideline value
- Benzo(b)fluoranthene was elevated in sample WS3-0.7m at 1.6 times the guideline value
- Benzo(a)pyrene was elevated in sample WS3-0.7m at 1.7 times the guideline value
- Dibenz(a,h)anthracene was elevated in sample WS3-0.7m at 1.7 times the guideline value

The majority of TPH species were not present above lab detection limits. The small number of higher molecular weight TPHs that were detected remained orders of magnitude below the respective guideline values.

4.2 Controlled Waters Risk Assessment

Groundwater was not encountered during the investigation, and no samples could be obtained during the investigation or monitoring visit.

Further to this, established site history and the nature of material encountered within the exploratory locations are not suggestive of a significant source of mobile or leachable contamination, and risk is considered to be low.

4.3 Ground Gas Quantitative Risk Assessment

Soil gas flow and steady state concentration readings have been taken over 3No. monitoring visits to date. A summary of the monitoring results is provided in the table below based on the highest values measured.

Gas screening values (GSV) are a function of gas concentration and gas flow from a borehole and therefore provide an indication of gas flux from the ground. The GSVs below are calculated using the highest steady state flow rate and concentration of each hazardous gas recorded in any of the wells, thereby giving a worst-case scenario for the risk assessment.

Table 3-2: Summary of Gas Screening Values

Monitoring well ID	aP (mb)	Flow (l/h)	CH_4 (%)	CO_2 (%)	VOC (ppm)	O_2	CH_4 GSV (l/hr)	CO_2 GSV (l/hr)	Characteristic Situation	Date
WS1	1012	<0.1	0	0.3	0	19.3	0	<0.0003	CS1	17/04/26

WS2		<0.1	0	0.2	0	19.2	0	<0.0002	CS1	17/04/26
WS1	1021	<0.1	0	0.2	0	20.4	0	<0.0002	CS1	30/04/26
WS2		<0.1	0	0.2	0	19.8	0	<0.0002	CS1	30/04/26
WS1	1016	<0.1	0	0.1	0	19.1	0	<0.0001	CS1	02/05/26
WS2		<0.1	0	0.2	0	19.9	0	<0.0002	CS1	02/05/26

The monitoring has detected no methane and a maximum carbon dioxide concentration of 0.5%, with detected borehole flow rates of zero.

However, in line with the precautionary approach set out in BS8485, assuming a borehole flow rate at the limit of detection (0.1l/h) a GSV of <0.03l/hr is calculated. The calculated GSV is equivalent to Characteristic Situation 1 (very low risk).

Vapours

Total VOC concentrations were also monitored using a ppb RAE handled photoionization detector and no significant concentrations were detected.

An additional line of evidence is also provided by the absence of any VOC/BTEX compounds above detection limits in the soil sample taken from shallow Made Ground in the cellar

4.5 Gas Protection Measures

BS8485 sets out a points system for the selection of appropriate gas protection measures. Essentially, higher characteristic situation sites and more sensitive uses require a greater number of ‘points’ to be scored in terms of gas protective measures and construction methods.

However, according to this framework, no specific gas protection measures are required for Characteristic Situation 1 sites.

4.6 Updated Conceptual Site Model

The initial conceptual site model has been updated in Table 4-2, below, to reflect the presence of sources proven by the investigation works.

Table 4-2. Updated Conceptual Site Model

Source	Pathway	Receptor	Consequence	Likelihood	Classification*	Rationale
Contaminants exceeding GAC in soil: • Lead • PAHs	Dermal contact, ingestion, particulate inhalation	Future site occupants & users	Medium	Low Likelihood	Moderate/ Low Risk	Several of the exceedances were in samples from WS3 within the proposed soft landscaped area at the east of the site, suggesting a complete contaminant linkage is likely. Remediation will be necessary to ensure there is no undue risk to receptors.
	Consumption of homegrown produce		Medium	Low Likelihood	Moderate/ Low Risk	
Chrysotile asbestos	Release of asbestos fibres; subsequent inhalation	Site occupants & users	Medium	Likely	Moderate Risk	The asbestos detection was in a sample from WS3 within the proposed soft landscaped area at the east of the site, suggesting a complete contaminant linkage is likely. Remediation will be necessary to ensure there is no undue risk to receptors.
		Nearby occupants	Medium	Low Likelihood	Moderate/ Low Risk	

**in the absence of any mitigation or remedial measures*

5 SUMMARY

5.1 Conclusions

Adeptus was appointed by HD Rental Properties Ltd (the client) to undertake a Land Contamination Phase 2 Site Investigation at the site known as the 47 Sedgeborough Road.

The investigation is required in support of a planning application for redevelopment of the site and to further assess potentially significant contaminant linkages identified in an earlier phase 1 report.

The primary objective of the works was to provide a quantitative assessment of risks to relevant receptors in line with the principles of Environment Agency publication 'Land contamination risk management' (LCRM).

Proposals are for erection of two-storey building comprising 2no. two-bedroom apartments (Use Class C3) with associated car parking, cycle storage and waste storage, together with reconfiguration of existing HMO and associated elevational alterations.

The preliminary risk assessment identified a number of potentially significant pollutant linkages and a moderate risk, suggesting that further assessment should be undertaken.

Historically, one or two terraced dwellings appear to have fallen within the south of the study site, and their demolition is a likely source of Made Ground underlying that area.

Additionally, all of the surrounding Victorian or earlier dwellings have been demolished and replaced with more modern ones, suggesting Made Ground will underlie those sites also, although this may have been excavated to some degree in the course of their redevelopment.

Made Ground is frequently a source of common contaminants including metals/metalloids, PAHs, asbestos-containing materials (ACMs). Moderate risk was identified to future site users as a result of potential soil contamination and ground gas.

A phase 2 investigation was undertaken consisting of 3No. window sampler boreholes advanced to allow gas monitoring, as well as targeted sampling of shallow soil and Made Ground. Made Ground was encountered in all three locations and to depths suggestive of potential backfilled basements in WS1 and WS2.

Samples were tested for the following range of contaminants: organic matter (SOM), metals suite, PAH (USEPA-16), Total Petroleum Hydrocarbons and asbestos ID.

In summary, elevated lead was detected in four of five samples, and elevated PAHs were detected in one sample. Additionally, chrysotile asbestos was detected in the same sample as the elevated PAHs.

Both the elevated PAHs and asbestos detection were from a sample in WS3, which was situated within the proposed soft landscapes area at the east of the site. This indicates potential for a contaminant linkage if remediation was not undertaken.

Therefore, remediation will be required to ensure sensitive receptors are not exposed to elevated contamination or that may otherwise remain in gardens.

Three rounds of ground gas monitoring were also undertaken after a period of equilibration following the fieldworks. A worst-case GSV for carbon dioxide of <0.03l/hr was calculated, which is equivalent to CS1 (very low risk). No methane was detected.

N.B.: This summary forms part of the overall risk assessment and should not be viewed or used as an independent report.

5.2 Recommendations

Remediation will be required to ensure soil to a depth of 0.6m in the proposed soft landscaped areas does not contain asbestos or elevated contamination.

Where Made Ground or other potentially contaminated material remains at depths greater than 0.6m, a clean cover system of minimum 0.6m thickness will be required above such material.

Any cover system should comprise circa 0.45m of subsoil and 0.15m of topsoil, both from an approved source.

In areas where permanent hardstandings are to be constructed, long term exposure pathways will be removed and there is no requirement to excavate underlying soil to any set depth. Notwithstanding, some excavation will be required to allow the construction of hardstanding to formation levels, and any arisings must be disposed of offsite.

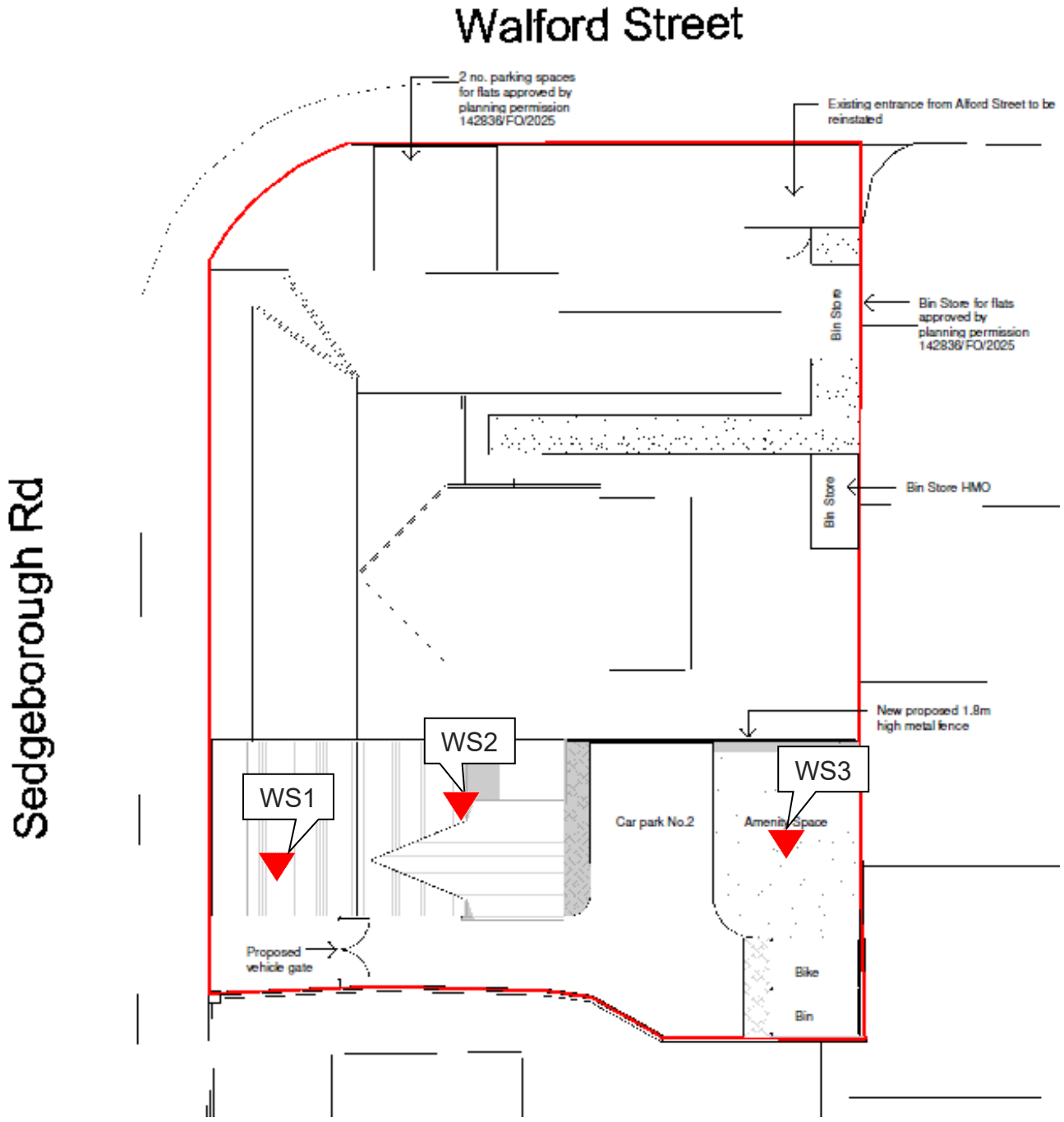
Mitigation will also be required to ensure site workers and adjacent land users are not exposed to short term particulate inhalation. Typically, such measures include the use PPE and damping down to prevent fugitive dust.

Following waste classification, any excavated material should be disposed of at a suitably licenced facility.

It is emphasized however that LPA approval should be obtained before any works commence onsite.

N.B.: This summary forms part of the overall risk assessment and should be read in conjunction with the main report and supporting information.

APPENDIX A – SITE & EXPLORATORY HOLE LOCATION PLAN



APPENDIX B – SUPPORTING INFORMATION

The following information and data sources are utilised in compiling this report:

- Phase 1 Desk Study (Adeptus, Ref: A260310-R01A)

This report is based on information available at the time of writing and is subject to the limitations set out in Appendix G.

APPENDIX C – SOIL LOGS

APPENDIX D – LABORATORY CERTIFICATE - SOIL RESULTS

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Analytical Report Number : 26-020255

Project / Site name:	47 Sedgeborough Road Manchester	**Samples received on:**	10/04/2026
Your job number:	A260310	**Samples instructed on/ Analysis started on:**	19/04/2026
Your order number:		**Analysis completed by:**	04/05/2026
Report Issue Number:	1	**Report issued on:**	04/05/2026
Samples Analysed:	5 soil samples		

[redacted]

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 26-020255
Project / Site name: 47 Sedgeborough Road Manchester

Lab Sample Number				893003	893004	893005	893006	893007
Sample Reference				WS1A	WS2A	WS2B	WS3A	WS3B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.30	0.20	1.00	0.30	0.70
Date Sampled				09/04/2026	09/04/2026	09/04/2026	09/04/2026	09/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Mass of stone >10mm	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	13	15	9.4	13
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.2	0.2	0.3
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	-	Not-detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	CAD	CAD	-	CAD	CAD
Analysis completed	N/A	N/A	N/A	01/05/2026	01/05/2026	-	01/05/2026	04/05/2026
Actinolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Anthophyllite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	-	-	-	-	Detected
Crocidolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	-	-	Loose Fibres
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	8.3	-	-	-	-
Organic Matter	%	0.1	MCERTS	3	1.5	1.3	2.2	1.9
Organic Matter (automated)	%	0.1	MCERTS	2.8	1.1	1	2.2	1.9
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.54
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.88
Acenaphthene	mg/kg	0.05	MCERTS	0.06	0.1	< 0.05	0.06	1.1
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.1	< 0.05	< 0.05	2
Phenanthrene	mg/kg	0.05	MCERTS	0.63	2.2	0.26	0.58	11
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.66	< 0.05	< 0.05	3.7
Fluoranthene	mg/kg	0.05	MCERTS	1.1	0.91	0.28	1.3	11
Pyrene	mg/kg	0.05	MCERTS	1.2	0.93	0.27	1.3	11
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.44	0.22	0.11	0.53	5.2
Chrysene	mg/kg	0.05	MCERTS	0.6	0.35	0.12	0.64	5.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.6	0.24	0.14	0.73	5.3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.3	0.08	0.06	0.25	1.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.57	0.17	0.13	0.65	4.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.23	0.1	0.07	0.25	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	0.48
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.33	0.13	0.09	0.33	2.1
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	6.1	6.15	1.53	6.54	68.5

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Project / Site name: 47 Sedgeborough Road Manchester

Lab Sample Number				893003	893004	893005	893006	893007
Sample Reference				WS1A	WS2A	WS2B	WS3A	WS3B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.30	0.20	1.00	0.30	0.70
Date Sampled				09/04/2026	09/04/2026	09/04/2026	09/04/2026	09/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.7	4.8	6.8	11	16
Barium (aqua regia extractable)	mg/kg	1	MCERTS	330	180	220	490	420
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.55	0.31	0.36	0.89	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	0.3	0.3	0.7	0.2	0.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	1.8	0.3	0.3	0.3
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	16	9.8	10	13	16
Copper (aqua regia extractable)	mg/kg	1	MCERTS	25	15	21	30	92
Lead (aqua regia extractable)	mg/kg	1	MCERTS	760	230	720	120	230
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	10	9.6	21	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.3
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	22	14	18	24	35
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	49	54	55	67
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	-
TPHCWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	-
TPHCWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	-
TPHCWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	-	3.4	< 1.0	-
TPHCWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	< 2.0	-	15	< 2.0	-
TPHCWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	< 8.0	-	< 8.0	< 8.0	-
TPHCWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	130	-	< 8.0	93	-
TPHCWG - Aliphatic >EC5 - EC35 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	130	-	18	93	-
TPHCWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	-
TPHCWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	-
TPHCWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.02	MCERTS	< 0.020	-	< 0.020	< 0.020	-
TPHCWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
TPHCWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	< 2.0	-	< 2.0	< 2.0	-
TPHCWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	< 10	-	< 10	< 10	-
TPHCWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	120	-	< 10	98	-
TPHCWG - Aromatic >EC5 - EC35 $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	120	-	< 10	98	-
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	-
Benzene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	-
Toluene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	-
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	-	< 8.0	< 8.0	-
o-Xylene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
893003	WS1A	None Supplied	0.3	Brown sand with gravel
893004	WS2A	None Supplied	0.2	Brown sand with clinker
893005	WS2B	None Supplied	1	Brown gravelly sand
893006	WS3A	None Supplied	0.3	Brown gravelly sand with brick
893007	WS3B	None Supplied	0.7	Brown clay and sand with gravel and brick

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L023B	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

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This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS1A	None Supplied	S	893003	c	BTEX and/or Volatile organic compounds in soil	L073B	c
WS1A	None Supplied	S	893003	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS1A	None Supplied	S	893003	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
WS1A	None Supplied	S	893003	c	Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	L088-PL	c
WS2A	None Supplied	S	893004	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS2B	None Supplied	S	893005	c	BTEX and/or Volatile organic compounds in soil	L073B	c
WS2B	None Supplied	S	893005	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS2B	None Supplied	S	893005	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
WS2B	None Supplied	S	893005	c	Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	L088-PL	c
WS3A	None Supplied	S	893006	c	BTEX and/or Volatile organic compounds in soil	L073B	c
WS3A	None Supplied	S	893006	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS3A	None Supplied	S	893006	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
WS3A	None Supplied	S	893006	c	Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	L088-PL	c
WS3B	None Supplied	S	893007	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c

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APPENDIX E - LIMITATIONS

This report was prepared by Adeptus (registered in England: 05908395) for the use of the client, named on page 1. The report has been prepared specifically on the basis of the end use as defined by the client. Any change of end use would necessitate review of this report and its findings. Use of or reliance on this report by any third party is not permitted without our express written agreement, and where this is given, will be subject to our terms and conditions.

We have prepared this report in our professional capacity using reasonable skill, care and diligence. The assessments, conclusions and recommendations within this report pertain to the study site (the extents of which are in Figure 1, below) and the immediate area in continuity with the Site. They are based on the established historical uses, information available at the time of writing and the proposed use of the Site. Where any information supplied by the client or other sources have been utilised, it has been assumed that the information is correct. No responsibility can be accepted by Adeptus for inaccuracies in data supplied by any other party.

Any plans, diagrams, cross sections or images are for illustrative purposes only and should be checked for accuracy on-site. In the event of changes to the proposed end use of the Site, the report may require updating to reflect such changes. Although reference may be made to archaeological, ecological or geotechnical issues, invasive species, flood risk and the presence of asbestos containing materials (ACMs), this report does not constitute an archaeological assessment, ecological assessment, geotechnical assessment, invasive species survey, flood risk assessment or asbestos survey and liability for any claim caused by arising out of or in any way involving asbestos is excluded.

New information relating to environmental matters can come to light after the report has been prepared and changes in conditions and regulatory requirements may occur in future. Either of those factors may change the conclusions presented in our report. If development does not take place within the expected timescales, consideration should be given to reviewing this assessment to confirm that no changes to the site or relevant legislation have taken place. No part of this report is intended to provide legal advice or opinion of any nature.