



TIER 2 CONTAMINATED LAND GENERIC QUANTITATIVE RISK ASSESSMENT AND GEOTECHNICAL APPRAISAL

BARBARA HUCKLESBURY CLOSE, LONDON N22 6PQ

REFERENCE: P1407/R1/V1

REPORT PREPARED FOR: ASPIRE COMMERCIAL CONTRACTORS LTD

REPORT PREPARED BY: EPS CONSULTING

JUNE 2026



PLANNING | DUE DILIGENCE | CONSTRUCTION

QUALITY ASSURANCE

Issue	Version 1	Version 2	Version 3
Issue Date	03/06/2026		
Comments	Draft for comment and pending receipt of geotechnical laboratory analysis		
Prepared by	Hayley Elson (BEng Hons)		
Job Title	Senior Geo-Environmental Consultant		
Reviewed by	Tim Conibear (BSc Hons)		
Job title	Director		
Authorised by	Stuart Phillips (BSc Hons, MEnvSc)		
Job title	Director		
Project number	P1407/R1/V1		

CONTACT DETAILS

Head Office:
Environment House
39 East Drive
Carshalton Beeches
SM5 4PA

London Office:
Build Studios
203 Westminster Bridge Road
London
SE1 7FR

www.epsconsulting.co.uk



EXECUTIVE SUMMARY

This executive summary provides an overview of the key findings and conclusions and should not be read as an independent document.

Site Address	Barbara Hucklesbury Close, London, SE22 6PQ
National Grid Reference	TQ3154990020
Current Site Use	Eight bungalows with associated private gardens, access and parking.
Proposed Development	HGY/2022/0859: Demolition of existing eight bungalows and the construction of a part one, two and three-storey building to provide supported living accommodation (Use Class C2) comprising 14 one-bedroom homes, a support office and communal garden. Provision of two wheelchair accessible parking bays, refuse/recycling and cycle stores and landscaping.
Scope of Site Investigation Works	▶ 3 window sample boreholes to a maximum depth of 5.00mbgl; ▶ 2 hand excavated pits to a maximum depth of 1.10mbgl; and ▶ Collection of representative soil samples for subsequent laboratory chemical and geotechnical analysis.
Summary of Ground Conditions Encountered	Block Paving / Concrete – from ground level within two locations to a maximum depth of 0.40mbgl. Made Ground – from either directly below hardstanding or from ground level where hardstanding was absent, to a maximum depth of 1.30mbgl. Superficial Deposits – directly underlying the Made Ground, typically comprising a slightly gravelly / gravelly CLAY, and persisting to a maximum proven depth of 1.60mbgl. London Clay Formation – directly underlying the Superficial Deposits, typically comprising fine-grained CLAY with variable proportions of silt and sand, extending to a maximum proven depth exceeding 5.00mbgl. With the exception of a slight groundwater seepage noted at 1.00mbgl within HP105, no groundwater was encountered during the investigation.



Conclusions	Contaminated Land: ▶ The presence of a fragment chrysotile asbestos cement encountered a single soil sample is considered to be an isolated occurrence and it is not considered to pose a significant risk to human health; ▶ It is considered that contaminants within the soils do not represent a significant risk to human health within the proposed communal garden areas; ▶ However, exceedances of lead, zinc and several PAH species are considered to present a potentially significant risk within the growing garden area, assuming that plants will be grown for human consumption within this area; ▶ It considered that contaminants within soils underlying the site do not pose a significant risk to controlled waters; ▶ Given the relatively minimal thickness of made ground encountered and the relatively low concentrations of organic matter identified within the soils, it is not considered that a credible source of land gas is present; and ▶ No significant risk posed to drinking water supply has been identified from contamination on site. Geotechnical: To be completed following completion of laboratory geotechnical testing which is currently ongoing.
Recommendations	▶ Consideration should be given to possibility for further asbestos to be present within the soils underlying the site and appropriate measures taken to identify and manage any asbestos that may be encountered during groundworks; ▶ Assuming that plants will be grown for human consumption within the proposed growing garden area, the risk to human health should be addressed either by the use of raised planters separated from existing soils, or the installation of clean cover within this area; ▶ Depending on the nature and design of the proposed growing garden, a Remediation Strategy and Verification Plan may be required in order to detail how the risk to human health should be addressed within this area; and Whilst no significant risk to drinking water supply has been identified, it would be prudent to install new drinking water supply using barrier pipe given the history of the site.

TABLE OF CONTENTS

QUALITY ASSURANCE	I
CONTACT DETAILS	I
EXECUTIVE SUMMARY	II
1.0 INTRODUCTION	6
1.1 Background	6
1.2 Proposed Development	6
1.3 Background and Planning Conditions	7
1.4 Previous Reports	8
1.4.1 Ecologia: Phase 1 Contaminated Land Assessment (ref. EES 21.239.1, dated February 2022)	8
1.4.2 Quantum Consulting Engineers: Sustainable Drainage Statement (ref. 5781035/TG, dated February 2022)	8
1.5 Objectives	9
1.6 Sources of Information	9
1.7 Confidentiality	9
1.8 Limitations	9
2.0 SITE SETTING	10
2.1 Site Details	10
2.2 Initial Conceptual Site Model	10
3.0 SITE INVESTIGATION	12
3.1 Utilities Surveying	12
3.2 Intrusive Site Investigation Works	12
3.3 Site Investigation Standards	13
4.0 LABORATORY ANALYSIS	14
4.1 Chemical Laboratory Analysis	14
4.2 Geotechnical Laboratory Analysis	14
5.0 GROUND AND GROUNDWATER CONDITIONS	15
5.1 Summary of Ground Conditions	15
5.1.1 Block Paving / Concrete	15
5.1.2 Made Ground	15
5.1.3 Superficial Deposits	15
5.1.4 London Clay Formation	16
5.2 Groundwater Conditions	17
5.3 Magnetometer Probing	17
5.4 pH and Sulphate (pending completion of laboratory geotechnical testing)	17
5.5 Moisture Content and Atterberg Limits	17
6.0 TIER 2 GENERIC QUANTITATIVE CONTAMINATED LAND RISK ASSESSMENT	18
6.1 Human Health	18



6.1.1	Communal Garden Areas	18
6.1.2	Area of Growing Garden	20
6.1.3	Polychlorinated Biphenyls (PCB)	23
6.2	Controlled Waters	23
6.3	Ground Gas	23
6.4	Drinking Water Supply	23
6.5	Developed Conceptual Site Model	24
7.0	GEOTECHNICAL ASSESSMENT	25
8.0	CONCLUSIONS	26
8.1	Contaminated Land	26
8.2	Geotechnical	26
9.0	RECOMMENDATIONS	27

APPENDICES

Appendix 1	Limitations
Appendix 2	General Glossary
Appendix 3	Engineering Logs
Appendix 4	Results of Chemical Laboratory Analysis
Appendix 5	Results of Geotechnical Laboratory Analysis
Appendix 6	Site Walkover Photographs
Appendix 7	Site Investigation Photographs



1.0 INTRODUCTION

1.1 Background

eps consulting (EPS) has been commissioned by Aspire Commercial Contractors Ltd ('the client') to undertake a Tier 2 Contaminated Land Generic Quantitative Risk Assessment and Geotechnical Appraisal at Barbara Hucklesbury Close, London, SE22 6PQ ('the site').

A Red Line Boundary Plan is presented as Figure 1 below:

Figure 1 – Red Line Boundary Plan



1.2 Proposed Development

Planning permission has been granted by Haringey Council (ref. HGY/2022/0859) for the "Demolition of existing eight bungalows and the construction of a part one, two and three-storey building to provide supported living accommodation (Use Class C2) comprising 14 one-bedroom homes, a support office and communal garden. Provision of two wheelchair accessible parking bays, refuse/recycling and cycle stores and landscaping."

A proposed development plan is provided as Figure 2, overleaf.



[illegible]

1.3 Background and Planning Conditions

Condition 12

a. Using the information already submitted in Phase I Land Contamination Assessment report with reference EES 21. 239.1 prepared by Ecologia Environmental Solutions Ltd dated February 2022, an intrusive/ground investigation, assessment and modelling of identified contaminants set in the context of the proposed development shall be conducted for the site using information obtained from the desktop study and Conceptual Model. The site investigation must be comprehensive enough to enable; a risk assessment to be undertaken, refinement of the Conceptual Model, and the development of a Method Statement detailing the remediation requirements.

c. Where remediation of contamination on the site is required, completion of the remediation detailed in the method statement shall be carried out and;

d. A report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied.

Reason: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

It is understood that planning permission is due to expire on 15th June 2026, and that the client intends to begin implementation works prior to this date, following the discharge of all pre-commencement planning conditions.

1.4 Previous Reports

1.4.1 Ecologia: Phase 1 Contaminated Land Assessment (ref. EES 21.239.1, dated February 2022)

This assessment concluded the overall contaminated land risk for the proposed development to be **moderate to moderate / low**, with the following significant (moderate/ low and above) potential pollutant linkages identified:

Potential risks from Onsite Sources:

- ▶ Moderate Risk associated with dermal contact, inhalation of indoor and outdoor dust and vapours from Made Ground and potential contamination in underlying soils;
- ▶ Moderate / Low risk to Unproductive aquifer associated with the bedrock (London Clay);
- ▶ Moderate Risk associated with ground gas accumulation within new buildings due to the possible presence of Made Ground and contamination in underlying soils; and
- ▶ Moderate Risk associated with VOC permeation of plastic utilities pipes.

Potential risks from Offsite Sources:

- ▶ Moderate Risk associated with lateral migration of contaminants associated with current and historic surrounding land uses, and the potential for lateral migration of ground gas.

1.4.2 Quantum Consulting Engineers: Sustainable Drainage Statement (ref. 5781035/TG, dated February 2022)

The key findings of this statement are summarised below:

- ▶ The site is located in flood zone 1 of the Environment Agency flood maps;
- ▶ The site is generally flat but it is underlain by impermeable Clay geology which precludes the use of infiltration SuDS techniques. Therefore, it is proposed to use tanked block pavements and a green roof to attenuate the surface water runoff;
- ▶ The applicable discharge for the site is 2.0 l/s, whilst the attenuation volume is 110m³;
- ▶ The proposed attenuation structures incorporated within the landscaping strategy will provide a robust SuDS strategy to facilitate the delivery of the site without increasing flooding elsewhere; and
- ▶ It is considered that the most appropriate SuDS drainage design has been proposed for this development and should be implemented when the site is developed.



1.5 Objectives

The objectives of this report are:

- ▶ To address parts (a) and (b) of Condition 12 of the planning consent;
- ▶ To assess the potential pollutant linkages identified within the preliminary conceptual site model (CSM) developed within the Phase 1 Contaminated Land Assessment Report prepared by Ecologica (ref. EES 21.239.1, dated February 2022);
- ▶ To provide a Tier 2 Generic Quantitative Risk Assessment (GQRA) with chemical results screened against appropriate screening criteria for the proposed residential end use;
- ▶ To provide recommendations for any further assessment or works considered necessary to make the site suitable for a residential end use; and
- ▶ To provide a geotechnical appraisal including information on suitability and /or minimum founding depths for shallow foundations, groundwater levels, obstructions, concrete aggressivity and soil infiltration for surface water disposal.

This report has been prepared in accordance with Land Contamination Risk Management (LCRM) guidance produced by the Environment Agency (June 2025).

1.6 Sources of Information

The following sources of information have been utilised in the preparation of this report:

- ▶ **Haringey Council:** Decision Notice (ref. HGY/2022/0859, dated 15th June 2023);
- ▶ **Ecologica:** Phase 1 Contaminated Land Assessment (ref. EES 21.239.1, dated February 2022);
- ▶ **Quantum Consulting Engineers:** Sustainable Drainage Statement (ref. 5781035/TG, dated February 2022);
- ▶ **Satish Jassal Architects:** Design and Access Statement (revision P2, dated July 2022); and
- ▶ **Satish Jassal Architects:** Proposed Site Plan (ref. 181-009-GA-SIT-P2, dated June 2026).

1.7 Confidentiality

EPS has prepared this report solely for the use of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from EPS. A charge may be levied against such approval.

1.8 Limitations

The full limitations of this report are presented in Appendix 1 and within EPS's fee proposal letter dated 27th March 2026 (ref. P1407/260326/P1).



2.0 SITE SETTING

2.1 Site Details

The site is approximately 0.19ha in size and located at Barbara Hucklesbury Close, London, N22 6PQ at National Grid Reference (TQ3154990020). The site is approximately level and situated at circa 18.5 metres above ordnance datum (mAOD).

A site walkover was undertaken by EPS on 12th March 2026 with access available from the north via Russell Avenue. A selection of photographs pertaining to the walkover are included within Appendix 6.

The site comprised eight residential bungalows, all of which (except for number 7) were vacant. Six terraced bungalows (photograph 3) were located in the east of the site, two semi-detached bungalows were located in the centre of the site, vehicle parking, an access road and an electricity substation (photograph 2) were located in the northwest of the site. The substation was bound by brick walls and a locked access gate. A portacabin surrounded by wooden hoarding was also present in the northwest corner of the site.

Evidence of fly tipping was noted within the rear gardens within the east of the site.

The majority of the site was covered in hard standing in the form of buildings, block paving and pedestrian walkways. However, soft landscaping was present within the private gardens and communal planters. Trees were present along the southern boundary of the site.

2.2 Initial Conceptual Site Model

The initial CSM was developed within the Phase 1 Contaminated Land Assessment Report prepared by Ecologia. Key findings are summarised below and overleaf:

Potential “Active” Sources

On-site

- ▶ **Made Ground** – associated with historical development of the site including railway sidings, coal yard and more recently residential development and electrical substation;
- ▶ **Fly Tipped Material** – noted during the initial site walkover; and
- ▶ **Ground Gas** – potential for ground gas from historical development of the site.

Off-site

Potential off-site sources of contamination identified include:

- ▶ **Surrounding Land Uses** – construction / commercial / industrial activities (nearby electrical substations, residential/commercial properties surrounding, nearby railway sidings/stations, schools/colleges, tube lines, engineering works, unspecified tanks).



Pathways

Receptors may be potentially at risk from the identified potential sources of contamination via the following pathways:

- ▶ Migration of mobile contaminants on or off site via services, sewers and manmade conduits;
- ▶ Direct contact, ingestion and inhalation of contaminants on site;
- ▶ Ingress into water supply pipework and subsequent water ingestion;
- ▶ Migration of mobile contaminants into groundwater and transport into surface waters; and
- ▶ Migration of ground gas and vapours into buildings.

Human Health Receptors

- ▶ **Future site users;**
- ▶ **Residents of adjacent properties;** and
- ▶ **Maintenance / Construction workers.**

Controlled Water Receptors

- ▶ **Unproductive Aquifer** contained within the London Clay Formation;
- ▶ **WFD Surface Water Body** for the Moselle Brook River; and
- ▶ **Surface Water Feature** – New River located c.925m south-west.

Property

- ▶ **Buildings**
 - Proposed residential buildings;
 - Aggressive ground to sub-surface concrete; and
 - VOC Permeation of plastic utilities pipes.



3.0 SITE INVESTIGATION

3.1 Utilities Surveying

Tracing of buried services and clearance of proposed exploratory hole locations was undertaken using Ground Penetrating Radar (GPR) and Electromagnetic (EM) detection techniques on 24th April 2026.

3.2 Intrusive Site Investigation Works

Intrusive site investigation works were carried out on 27th April 2026 and comprised the following scope:

Table 3.1 Summary of Fieldwork

Hole Reference	Rationale	Depth (mbgl)
WS101	Windowless sample boreholes to determine ground conditions, prove surface of natural soils, determine potential evidence of olfactory and / or visual evidence of potential contamination and obtain soil samples for subsequent chemical and geotechnical laboratory analysis.	5.00
WS102		5.00
WS103		5.00
HP104	Hand excavated pits to determine shallow ground conditions and obtain soil samples for subsequent chemical laboratory analysis.	1.10
HP105		1.00

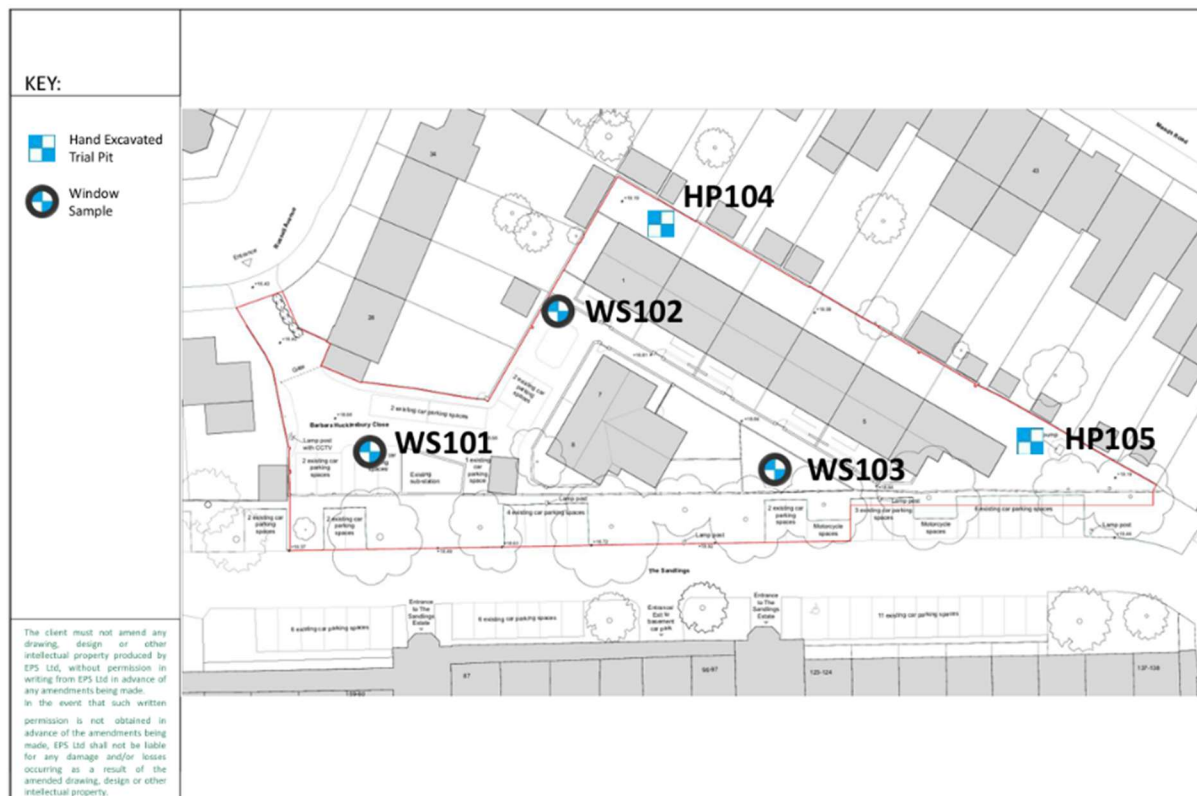
Notes: mbgl – metres below ground level. WS – Window sample borehole HP– Hand excavated pit

Window sample boreholes (WS101 to WS103 incl.) were positioned to obtain maximum coverage of the area of the proposed building footprint, within areas of the site accessible using a tracked window sample rig. Hand excavated pits (HP104 and HP105) were positioned within areas of existing external areas of soft standing in order to provide additional site coverage for obtaining shallow soil samples for contamination analysis.

A selection of photographs is presented in Appendix 7 and an Exploratory Hole Layout Plan is presented as Figure 3, overleaf.



Figure 3 – Site Investigation Layout Plan



Prior to commencement of works, all exploratory holes were cleared for buried utilities and excavated by hand to a depth of 1.20mbgl using insulated pitting tools.

Down-hole magnetometer probing was carried out at regular intervals during window sampling and hand excavated pits to confirm the absence of ferromagnetic materials. Specialist UXO on-site support including magnetometer probing was provided by Brimstone.

All samples were collected using appropriate PPE and sampling equipment that was cleaned at each sampling location. A detailed copy of sampling methodology, QA procedures and laboratory chain of custody forms can be provided upon request.

3.3 Site Investigation Standards

All exploratory works, associated sampling, in-situ testing and logging were carried out broadly in accordance with techniques outlined in:

- ▶ BS5930:2015+A1:2020 (BS5930: 'Code of Practice for Ground Investigations');
- ▶ BS EN ISO 14688-1, Identification and Description;
- ▶ BS EN ISO 14688-2, Principles for a Description;
- ▶ BS 10175:2011+A2:2017: Investigation of potentially contaminated sites – Code of practice; and
- ▶ BS EN ISO 22475, Sampling methods and groundwater measurements and BS EN ISO 22476 – Field Testing, as appropriate.



4.0 LABORATORY ANALYSIS

4.1 Chemical Laboratory Analysis

Chemical laboratory analysis was carried out by I2 Analytical based in Watford who are a UKAS and MCERTS accredited laboratory.

The number of tests scheduled are listed in Table 4.1 below:

Table 4.1 Summary of Chemical Analysis of Soil Samples

Test Type and Determinands	No. Scheduled	Remarks
EPS Standard Soil Suite (organic matter, asbestos in soil, heavy metals, PAH's, TPH CWG, BTEX, MTBE, cyanide and phenols)	6	The results of the chemical laboratory analysis are presented in Appendix 4 and discussed in Section 6.
PCBs	1	

4.2 Geotechnical Laboratory Analysis

Selected soil samples were submitted to UKAS accredited I2 Analytical, and scheduled for a range geotechnical analysis as summarised in Table 4.2, below:

Table 4.2 Summary of Laboratory Geotechnical Testing

Test Type	No. Scheduled	Remarks
Moisture Content	5	The geotechnical test certificates are presented in Appendix 5 (pending) and discussed in Section 7 (yet to be completed)
Atterberg Limits	5	
BRE SD1 Full Suite (pyrite absent)	4	

The geotechnical test procedures used were pursuant to the methods described in BS1377:1990 (inclusive of Eurocode Amendments).



5.0 GROUND AND GROUNDWATER CONDITIONS

5.1 Summary of Ground Conditions

Ground conditions encountered were inconsistent with published geology comprising Made Ground overlying superficial deposits, overlying the bedrock geology of the London Clay Formation to the full depth of the investigation (>5.00mbgl).

A summary of ground conditions encountered is detailed further below, with Engineering Logs presented in Appendix 3.

5.1.1 Block Paving / Concrete

Within WS101, located within the northeast of the site, block paving was present at surface overlying bedding sand, which was underlain by 0.22m thickness of reinforced concrete.

Within WS102, located within the north of the site, concrete paving slabs were encountered at surface overlying 0.05m thickness of concrete.

5.1.2 Made Ground

Made Ground was encountered within all the exploratory holes across the site from below surface hardstanding where present and from ground level elsewhere. This stratum persisted to depths varying between 0.80 and 1.30mbgl and was highly variable in composition, comprising both fine and coarse-grained soils.

The coarse-grained soils comprised either GRAVEL or SAND with varying secondary constituents of sand, gravel, clay, silt and cobbles. Gravels encountered comprised flint, concrete and brick. Minor constituents of clinker, ceramic and wood were encountered. Within WS103 cobbles of brick and concrete were present.

Typically, the fine-grained soils comprised of a CLAY or SILT/CLAY with varying secondary constituents of sand and gravel. Cobbles of brick and concrete were encountered within WS101. Gravels encountered comprised flint and brick. Minor constituents of charcoal, concrete and glass were encountered. An organic odour was noted within HP104.

No significant visual or olfactory evidence of potential contamination was encountered within this stratum.

5.1.3 Superficial Deposits

Whilst Superficial Deposits are not indicated on geological mapping to be present within the area, horizons of natural soils which did not appear characteristic of the London Clay Formation were identified persisting to proven depths varying between 1.20 and 1.60mbgl where present immediately underlying the Made Ground (where penetrated). These have therefore been interpreted as Superficial Deposits.



This stratum typically comprised fine-grained soils comprising a slightly gravelly / gravelly CLAY. Within WS102, this stratum was also slightly sandy. Gravels encountered typically comprised flint, however within WS101 siltstone was also noted. Dark staining and a natural organic odour were recorded within WS101 between 1.00 and 1.30mbgl.

Hand shear vanes were undertaken within the cohesive materials of this stratum and ranged between 72kPa (WS101) and 88kPa (WS102) indicating medium to high strength.

5.1.4 London Clay Formation

The London Clay Formation was encountered directly beneath the Superficial Deposits (where penetrated), persisting to the full depth of the investigation (>5.00mbgl).

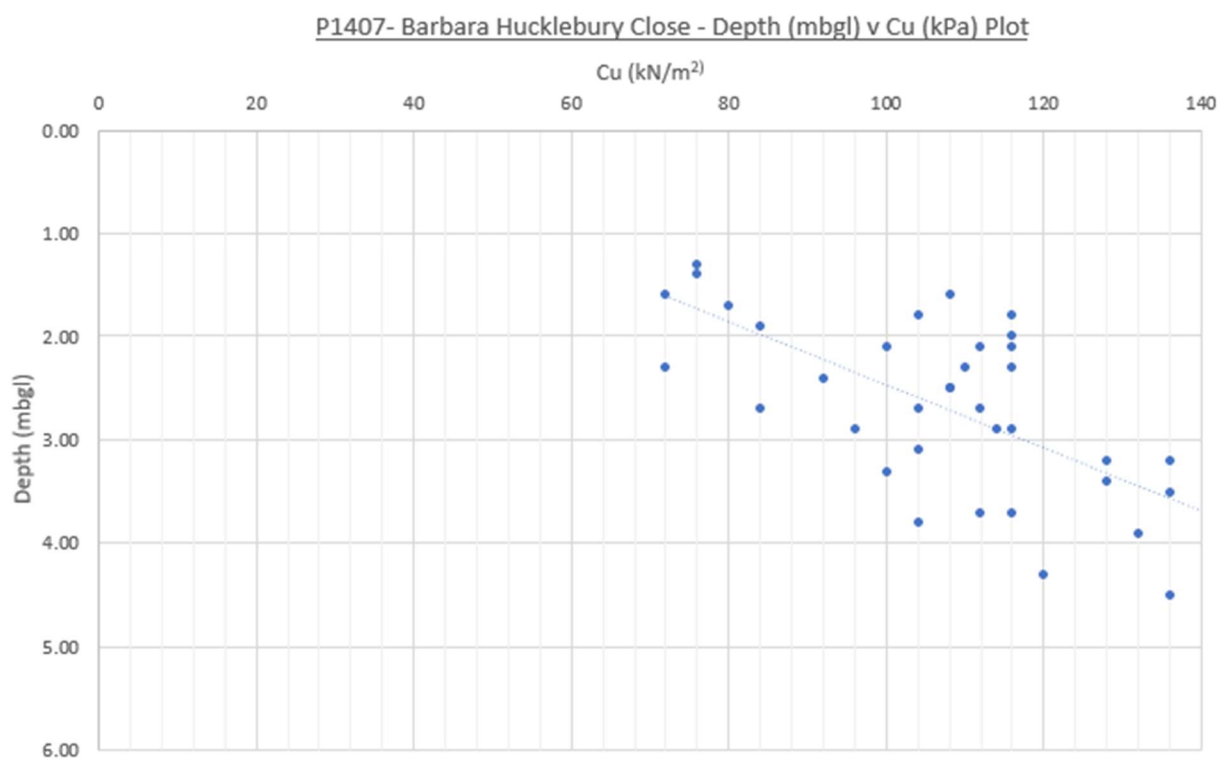
This stratum was predominantly fine grained, comprising CLAY with variable proportions of silt and sand. Occasional relic rootlets, siltstone gravel and selenite crystals were present.

No significant visual or olfactory evidence of potential contamination was encountered within this stratum.

The results of hand shear vanes testing undertaken within this stratum ranged between 72kPa (WS101 and WS103) and 156kPa (WS102 and WS103) indicating medium to very high strength, and correlating with the engineer's field assessment of firm to very stiff consistency.

The plot below in Figure 3 indicates that the London Clay Formation is of medium to very high strength with a general increase of Cu with depth. This is generally typical for bedrock geology of this type.

Figure 4 – Depth v Cu (KPa) Plot



5.2 Groundwater Conditions

With the exception of a slight groundwater seepage noted at 1.00mbgl within HP105, no groundwater was encountered during the investigation.

5.3 Magnetometer Probing

No significant magnetometer readings or potential UXO were encountered within any of the investigation locations.

5.4 pH and Sulphate (pending completion of laboratory geotechnical testing)

This section will be completed following completion of laboratory geotechnical testing which is currently ongoing.

5.5 Moisture Content and Atterberg Limits

This section will be completed following completion of laboratory geotechnical testing which is currently ongoing.



6.0 TIER 2 GENERIC QUANTITATIVE CONTAMINATED LAND RISK ASSESSMENT

6.1 Human Health

The long term (chronic) toxicity risk to human health is assessed by utilising appropriate and conservative generic assessment criteria (GAC) to determine whether potentially unacceptable risks may be present.

6.1.1 Communal Garden Areas

To undertake the Tier 2 assessment within the context of the proposed communal garden areas, EPS has determined that the most appropriate GAC values available will be those based upon a public open space (residential). Soil organic matter concentrations varied between 1.0% and 2.7% with an average of 1.67%. However, in order to provide a conservative assessment, where applicable GAC based on Soil Organic Matter content of 1% has been utilised.

The following assessment, summarised in Table 6.1 below, has primarily adopted the S4UL (Suitable for Use Levels) reference values published by LQM/CIEH in 2015. Currently, no published GAC value is available for Cyanide and therefore EPS has utilised the Environmental Agency Contaminated Land Exposure Assessment Tool (CLEA v1.06) to derive the relevant GAC for this proposed land use. Due to the absence of a published lead GAC for direct use within the planning regime, the 2014 Defra C4SL (Category 4 Screening Level) has been used as this value is considered to incorporate the latest toxicological, bio-accessibility and exposure modelling research to date.

Table 6.1 Summary of Generic Human Health Toxicity Assessment for Public Open Space (Residential) End Use

Determinant	Units	GAC	GAC Source	No.	[mc]	Location	Primary Pathways	Assessment
Inorganics								
Arsenic	mg/kg	79	(i)	6	21		1	No Further Action
Cadmium	mg/kg	120	(i)	6	1		1, 2	
Chromium	mg/kg	1,500	(i)	6	42		1, 2, 3	
Chromium (VI)	mg/kg	7.7	(i)	6	<1.8		1, 2, 3	
Copper	mg/kg	12,000	(i)	6	180		1, 2	
Lead	mg/kg	630	(ii)	6	750	WS103 ES1	1, 2	Further Action
Mercury [Inorganic]	mg/kg	120	(i)	6	1.3		1, 2	No Further Action
Nickel	mg/kg	230	(i)	6	60		1	
Selenium	mg/kg	1,100	(i)	6	1.5		1, 2	
Zinc	mg/kg	81,000	(i)	6	2300		1, 2	
Cyanide (Total)	mg/kg	34	(iii)	6	<1.0		1	
Asbestos	-	D.	-	6	D	WS103 ES1	3	Further Action
Organics – PAHs and Phenol								
Phenols	mg/kg	440	(i)	6	<1.0		2	No Further Action
Acenaphthene	mg/kg	15,000	(i)	6	0.35		2	
Acenaphthylene	mg/kg	15,000	(i)	6	0.07		2	
Anthracene	mg/kg	74,000	(i)	6	0.71		2	
Benzo(a) Anthracene	mg/kg	29	(i)	6	2.9		1	
Benzo(a)Pyrene	mg/kg	35	(i)	6	3.4		1	

Determinant	Units	GAC	GAC Source	No.	[mc]	Location	Primary Pathways	Assessment	
Benzo(b) Fluoranthene	mg/kg	7.2	(i)	6	3.8		1	No Further Action	
Benzo(ghi) Perylene	mg/kg	640	(i)	6	2	-	1		
Benzo(k) Fluoranthene	mg/kg	190	(i)	6	1.7	-	1		
Chrysene	mg/kg	57	(i)	6	2.9		1		
Dibenzo(a,h) Anthracene	mg/kg	0.57	(i)	6	0.52	-	1		
Fluoranthene	mg/kg	3,100	(i)	6	5.8	-	1, 2		
Fluorene	mg/kg	9,900	(i)	6	0.22	-	2		
Indeno (123-cd)Pyrene	mg/kg	82	(i)	6	1.9	-	1		
Naphthalene	mg/kg	4,900	(i)	6	0.34	-	4		
Phenanthrene	mg/kg	3,100	(i)	6	3	-	2		
Pyrene	mg/kg	7,400	(i)	6	5.2	-	1, 2		
BTEX									
Benzene	ug/kg	72,000	(i)	6	<5.0	-	1		
Toluene	ug/kg	56,000,000	(i)	6	<5.0	-	1		
EthylBenzene	ug/kg	24,000,000	(i)	6	<5.0	-	1		
M-Xylene	ug/kg	41,000,000	(i)	6	<8.0	-	1		
P-Xylene	ug/kg	41,000,000	(i)	6	<8.0	-	1		
O-Xylene	ug/kg	41,000,000	(i)	6	<5.0	-	1		
Methyl tert-Butyl Ether	ug/kg	120,000	(iv)	6	<5.0	-	1		
TPH									
Aliphatic EC5-6	mg/kg	570,000	(i)	6	<0.010	-	4	No Further Action	
Aliphatic EC6-8	mg/kg	600,000	(i)	6	<0.010	-	4		
Aliphatic EC8-10	mg/kg	13,000	(i)	6	<0.010	-	4		
Aliphatic EC10-12	mg/kg	13,000	(i)	6	<1.0	-	4		
Aliphatic EC12-16	mg/kg	13,000	(i)	6	<2.0	-	4		
Aliphatic EC16-35	mg/kg	250,000	(i)	6	<8.0	-	4		
Aromatic EC5-7	mg/kg	56,000	(i)	6	<0.010	-	1, 4		
Aromatic EC7-8	mg/kg	56,000	(i)	6	<0.010	-	1, 4		
Aromatic EC8-10	mg/kg	5,000	(i)	6	<0.020	-	1		
Aromatic EC10-12	mg/kg	5,000	(i)	6	<1.0	-	1		
Aromatic EC12-16	mg/kg	5,100	(i)	6	<2.0	-	1		
Aromatic EC16-21	mg/kg	260	(i)	6	13	-	1		
Aromatic EC21-35	mg/kg	3,800	(i)	6	30	-	1		

Key

[mc] Maximum Concentration Recorded

D. Detected

N.D. None Detected (Limit of Detection = <0.0001%)

Primary Pathways

1 Ingestion of soil and indoor dust and / or oral background exposure;

2 Consumption of home-grown produce and attached soil;

3 Inhalation of dust (background and indoor);

4 Inhalation of vapour (background and indoor);

Generic Assessment Criteria (GAC) Source

(i) LQM/CIEH Suitable For Use Level (S4UL) (2015);

(ii) CL:AIRE Category 4 Screening Levels (C4SL);

(iii) CLEA 1.06 Derived Value; and

(iv) EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment (2010).

In cases where the concentration is below the limit of detection (LOD) and the LOD is greater than the screening criteria, this has not been considered as an exceedance.



The result of this direct comparison indicates that the screening criteria has been exceeded for the following determinants:

- ▶ **Asbestos:**
 - Fragment of chrysotile asbestos cement identified within WS103 at 0.50 – 0.60mbgl.
- ▶ **Lead:**
 - 750mg/kg within WS103 at 0.50 – 0.60mbgl.

Given that no asbestos was encountered within any of the other 5 samples analysed, the fragment of chrysotile asbestos cement encountered within WS103 at 0.50 – 0.60mbgl is considered to be an isolated occurrence. Furthermore, asbestos bound within cement has low potential to release fibres unless disturbed and the location where the ACM fragment was encountered (WS103) is noted to be within an area of proposed hardstanding. As such, it is not considered that asbestos within the soils underlying the site pose a significant risk to human health. However, the presence of further fragments of asbestos containing materials (ACM) elsewhere on site cannot be discounted.

The lead exceedance (750mg/kg) is considered relatively marginal, with the concentrations within all other samples analysed being well below the adopted assessment criteria (630mg/kg). Furthermore, the location where the ACM fragment was encountered (WS103) is noted to be within an area of proposed hardstanding. As such, it is not considered that lead within the soils represents a significant risk to human health within the proposed communal garden areas.

6.1.2 Area of Growing Garden

To undertake the Tier 2 assessment within the context of the proposed growing garden area, EPS has determined that the most appropriate GAC values available will be those based upon an Allotment. Soil organic matter concentrations varied between 1.0% and 2.7% with an average of 1.67%. However, in order to provide a conservative assessment, where applicable GAC based on Soil Organic Matter content of 1% has been utilised.

The following assessment, summarised in Table 6.2, has primarily adopted the S4UL (Suitable for Use Levels) reference values published by LQM/CIEH in 2015. Currently, no published GAC value is available for cyanide and therefore EPS has utilised the Environmental Agency Contaminated Land Exposure Assessment Tool (CLEA v1.06) to derive the relevant GAC for this proposed land use. Due to the absence of a published lead GAC for direct use within the planning regime, the 2014 Defra C4SL (Category 4 Screening Level) has been used as this value is considered to incorporate the latest toxicological, bio-accessibility and exposure modelling research to date.

Table 6.2 Summary of Generic Human Health Toxicity Assessment for Allotment End Use

Determinant	Units	GAC	GAC Source	No.	[mc]	Location / Strata	Primary Pathways	Assessment
Inorganics								
Arsenic	mg/kg	43	(i)	6	21		1	No Further Action
Cadmium	mg/kg	1.9	(i)	6	1		1, 2	
Chromium	mg/kg	18,000	(i)	6	42		1, 2, 3	
Chromium (VI)	mg/kg	1.8	(i)	6	<1.8		1, 2, 3	
Copper	mg/kg	520	(i)	6	180		1, 2	



Determinant	Units	GAC	GAC Source	No.	[mc]	Location / Strata	Primary Pathways	Assessment
Lead	mg/kg	80	(ii)	6	750	WS101 ES1 WS102 ES1 WS103 ES1 HP104 ES1	1, 2	Further Action
Mercury [Inorganic]	mg/kg	21	(i)	6	1.3		1, 2	No Further Action
Nickel	mg/kg	53	(i)	6	60		1	
Selenium	mg/kg	88	(i)	6	1.5		1, 2	
Zinc	mg/kg	620	(i)	6	2,300	WS103 ES1	1, 2	Further Action
Cyanide (Total)	mg/kg	34	(iii)	6	<1.0		1	No Further Action
Asbestos	-	D.	-	6	D	WS103 ES1	3	Further Action
Organics – PAHs and Phenols								
Phenols	mg/kg	23	(i)	6	<1.0		2	No Further Action
Acenaphthene	mg/kg	34	(i)	6	0.35		2	
Acenaphthylene	mg/kg	28	(i)	6	0.07		2	
Anthracene	mg/kg	380	(i)	6	0.71		2	
Benzo(a) Anthracene	mg/kg	2.9	(i)	6	2.9	WS102 ES1	1	Further Action
Benzo(a)Pyrene	mg/kg	0.97	(i)	6	3.4	WS101 ES1 WS102 ES1 WS103 ES1 HP104 ES1	1	
Benzo(b) Fluoranthene	mg/kg	0.99	(i)	6	3.8	WS101 ES1 WS102 ES1 WS103 ES1 HP104 ES1	1	
Benzo(ghi) Perylene	mg/kg	290	(i)	6	2	-	1	No Further Action
Benzo(k) Fluoranthene	mg/kg	37	(i)	6	1.7	-	1	
Chrysene	mg/kg	4.1	(i)	6	2.9		1	
Dibenzo(a,h) Anthracene	mg/kg	0.14	(i)	6	0.52	WS101 ES1 WS102 ES1 WS103 ES1 HP104 ES1	1	Further Action
Fluoranthene	mg/kg	52	(i)	6	5.8	-	1, 2	No Further Action
Fluorene	mg/kg	27	(i)	6	0.22	-	2	
Indeno (123-cd)Pyrene	mg/kg	9.5	(i)	6	1.9	-	1	
Naphthalene	mg/kg	4.1	(i)	6	0.34	-	4	
Phenanthrene	mg/kg	15	(i)	6	3	-	2	
Pyrene	mg/kg	110	(i)	6	5.2	-	1, 2	
BTEX								
Benzene	ug/kg	17	(i)	6	<5.0	-	1	No Further Action
Toluene	ug/kg	22,000	(i)	6	<5.0	-	1	
EthylBenzene	ug/kg	16,000	(i)	6	<5.0	-	1	
M-Xylene	ug/kg	31,000	(i)	6	<8.0	-	1	
P-Xylene	ug/kg	29,000	(i)	6	<8.0	-	1	
O-Xylene	ug/kg	28,000	(i)	6	<5.0	-	1	
Methyl tert-Butyl Ether	ug/kg	23,000	(iv)	6	<5.0	-	1	
TPH								
Aliphatic EC5-6	mg/kg	730	(i)	6	<0.010	-	4	No Further Action
Aliphatic EC6-8	mg/kg	2,300	(i)	6	<0.010	-	4	

Determinant	Units	GAC	GAC Source	No.	[mc]	Location / Strata	Primary Pathways	Assessment
Aliphatic EC8-10	mg/kg	320	(i)	6	<0.010	-	4	
Aliphatic EC10-12	mg/kg	2,200	(i)	6	<1.0	-	4	
Aliphatic EC12-16	mg/kg	11,000	(i)	6	<2.0	-	4	
Aliphatic EC16-35	mg/kg	260,000	(i)	6	<8.0	-	4	
Aromatic EC5-7	mg/kg	13	(i)	6	<0.010	-	1, 4	
Aromatic EC7-8	mg/kg	22	(i)	6	<0.010	-	1, 4	
Aromatic EC8-10	mg/kg	8.6	(i)	6	<0.020	-	1	
Aromatic EC10-12	mg/kg	13	(i)	6	<1.0	-	1	
Aromatic EC12-16	mg/kg	23	(i)	6	<2.0	-	1	
Aromatic EC16-21	mg/kg	46	(i)	6	13	-	1	
Aromatic EC21-35	mg/kg	370	(i)	6	30	-	1	

Key

[mc] Maximum Concentration Recorded

D. Detected

N.D. None Detected (Limit of Detection = <0.0001%)

Primary Pathways

- 1 Ingestion of soil and indoor dust and / or oral background exposure;
- 2 Consumption of home-grown produce and attached soil;
- 3 Inhalation of dust (background and indoor);
- 4 Inhalation of vapour (background and indoor);

Generic Assessment Criteria (GAC) Source

- (i) LQM/CIEH Suitable For Use Level (S4UL) (2015);
- (ii) CL:AIRE Category 4 Screening Levels (C4SL);
- (iii) CLEA 1.06 Derived Value; and
- (iv) EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment (2010).

The result of this direct comparison for an allotment indicates that the screening criteria has been exceeded for the following determinants:

► **Asbestos:**

- Fragment of chrysotile asbestos cement identified within WS103 at 0.50 – 0.60mbgl.

► **Lead:**

- 190mg/kg within WS101 at 0.80mbgl;
- 480mg/kg within WS102 at 0.50mbgl;
- 750mg/kg within WS103 at 0.50 – 0.60mbgl; and
- 190mg/kg within HP104 at 0.50 – 0.60mbgl.

► **Zinc:**

- 2,300mg/kg within WS103 at 0.50 – 0.60mbgl.

► **Benzo(a)anthracene:**

- 2.9mg/kg within WS102 at 0.50mbgl.

► **Benzo(a)pyrene:**

- 1.7mg/kg within WS101 at 0.80mbgl;
- 3.4mg/kg within WS102 at 0.50mbgl;
- 2.5mg/kg within WS103 at 0.50 – 0.60mbgl; and
- 1.3 mg/kg within HP104 at 0.50 – 0.60mbgl.

► **Benzo(b)Fluoranthene:**

- 2.0mg/kg within WS101 at 0.80mbgl;
- 3.8mg/kg within WS102 at 0.50mbgl;
- 2.8mg/kg within WS103 at 0.50 – 0.60mbgl; and
- 1.4 mg/kg within HP104 at 0.50 – 0.60mbgl.



► **Dibenzo(a,h)Anthracene:**

- 0.28mg/kg within WS101 at 0.80mbgl;
- 0.52mg/kg within WS102 at 0.50mbgl;
- 0.34mg/kg within WS103 at 0.50 – 0.60mbgl; and
- 0.22mg/kg within HP104 at 0.50 – 0.60mbgl.

As detailed within section 6.1.1 above, the fragment of chrysotile asbestos cement encountered within WS103 is considered to be an isolated occurrence and therefore not considered to pose a significant risk to human health.

However, the exceedances of lead, zinc and several PAH species are considered to present a potentially significant risk within the growing garden area, assuming that plants will be grown for human consumption within this area.

6.1.3 Polychlorinated Biphenyls (PCB)

The concentrations of PCBs encountered within the soil sample collected from WS101, located in close proximity to the electricity substation, were all below the limit of detection. As such, it is not considered that PCB contamination within the soils presents a significant risk to human health.

6.2 Controlled Waters

Given the distance of the Moselle Brook from the site (c.375m) and the absence of gross contamination identified during the investigation, it is not considered that contamination originating from on site could viably impact the river.

Nearby historic BGS borehole records indicate that the thickness of the London Clay Formation within the area of the site is greater than 20m. The anticipated presence of a significant thickness of impermeable clay anticipated to be present beneath the site will act as an aquiclude preventing the downward migration of contaminants towards the sensitive aquifers present at greater depth. Furthermore, no gross contamination has been identified within the soils underlying the site. As such, it is considered that contaminants within soils underlying the site do not pose a significant risk to groundwater.

6.3 Ground Gas

Given the relatively minimal thickness of made ground encountered and the relatively low concentrations of organic matter identified within the soils, it is not considered that a credible source of land gas is present.

6.4 Drinking Water Supply

All concentrations of relevant contaminants encountered fall below the UKWIR thresholds for polyethylene water pipes and as such it is considered that there is no significant risk posed to drinking water supply from contamination on site.



6.5 Developed Conceptual Site Model

EPS has utilised the above investigation findings to develop the site Conceptual Site Model (CSM) and identify unacceptable risks to receptors within the study area as detailed in Table 6.3, below:

Table 6.3 Developed Conceptual Site Model

Source	Containment	Receptors	Migration Pathway	Risk
Made Ground – associated with historical development of the site including railway sidings, coal yard and more recently residential development and electrical substation.	On-site	Future Site Users	Direct contact, ingestion and inhalation	It is not considered that contaminants within the soils underlying the site pose a significant risk to human health within the proposed communal gardens. However, the risk posed within the proposed growing garden area will require mitigation.
			Migration of ground gas into buildings	No credible source identified.
		Drinking Water Supply	Permeation into water supply pipes	No significant risk identified.
		Controlled Waters	Lateral and vertical groundwater movement via natural or artificial flow paths	No significant risk identified.



7.0 GEOTECHNICAL ASSESSMENT

This section will be completed following completion of laboratory geotechnical testing which is currently ongoing.



8.0 CONCLUSIONS

Based on the findings of this report, the following conclusions can be made:

8.1 Contaminated Land

- ▶ The presence of a fragment chrysotile asbestos cement encountered a single soil sample is considered to be an isolated occurrence and it is not considered to pose a significant risk to human health;
- ▶ It is considered that contaminants within the soils do not represent a significant risk to human health within the proposed communal garden areas;
- ▶ However, exceedances of lead, zinc and several PAH species are considered to present a potentially significant risk within the growing garden area, assuming that plants will be grown for human consumption within this area;
- ▶ It considered that contaminants within soils underlying the site do not pose a significant risk to controlled waters;
- ▶ Given the relatively minimal thickness of made ground encountered and the relatively low concentrations of organic matter identified within the soils, it is not considered that a credible source of land gas is present; and
- ▶ No significant risk posed to drinking water supply has been identified from contamination on site.

8.2 Geotechnical

This section will be completed following completion of laboratory geotechnical testing which is currently ongoing.



9.0 RECOMMENDATIONS

- ▶ Consideration should be given to possibility for further asbestos to be present within the soils underlying the site and appropriate measures taken to identify and manage any asbestos that may be encountered during groundworks;
- ▶ Assuming that plants will be grown for human consumption within the proposed growing garden area, the risk to human health should be addressed either by the use of raised planters separated from existing soils, or the installation of clean cover within this area;
- ▶ Depending on the nature and design of the proposed growing garden, a **Remediation Strategy and Verification Plan** may be required in order to detail how the risk to human health should be addressed within this area; and
- ▶ Whilst no significant risk to drinking water supply has been identified, it would be prudent to install new drinking water supply using barrier pipe given the history of the site.

END OF REPORT



APPENDIX 1 – LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed by EPS and the Client.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources using the information it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land contamination which are enforced by the local authority and the Environment Agency. Limitations associated with land contamination are complex and requires advice from legal professionals.
4. Reasonable effort has been made to obtain an overview of the site conditions. However, during the site visit, an attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. In addition to the above EPS note that when investigating, or developing, potentially contaminated land it is important to recognise that sub-surface conditions may vary spatially and also with time. The absence of certain ground, gas, and contamination or groundwater conditions at the positions tested is not a guarantee that such conditions do not exist anywhere across the site. Due to the presence of existing buildings and structures access could not be made to all areas. Different ground conditions may be identified following the removal of the buildings or hard standing.
7. Site sensitivity assessments (where applicable) have been made based on available information at the time of the investigation and are ultimately for the decision of the regulatory authorities.
8. Where mention has been made (where applicable) to the identification of Japanese Knotweed and other invasive species and asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute a full and proper survey.
9. Where applicable, the executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the full report.
10. This report presents an interpretation of the geotechnical information established by excavation, observation and testing. Whilst every effort is made in interpretative reporting to assess the soil conditions over the Site it should be noted that natural strata vary from point to point and that man made deposits are subject to an even greater degree of variability. Groundwater conditions are dependent on seasonal and other factors. Consequently, there may be conditions not revealed by this investigation.
11. EPS cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by EPS is owned by them and it is not to be reproduced, published or adapted without written consent. Complete copies of the report and plans or documents may be reproduced, published or adapted without written consent. However, copies of the report and plans or documents may be made and distributed by the client as is expected in dealing with matters related to its commission. If the client passes copies of the report to other parties for information, the whole report should be copied, and professional liability or warranties shall be extended to other parties by EPS in this connection without their written agreement thereto by EPS.
12. Rather, this investigation has been undertaken to provide a preliminary characterisation of the existing sub-surface geotechnical characteristics and make up the findings of this study are our best interpretation of the data collected within the scope of work and agreed budget. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.
13. This investigation has been undertaken to reasonably characterise existing sub-surface conditions and the findings of this study are our best interpretation of the data collected, within the scope of work and agreed budget. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.



APPENDIX 2 – GENERAL GLOSSARY

TERMS

AST	Above Ground Storage Tank
BGS	British Geological Survey
BSI	British Standards Institute
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CIEH	Chartered Institute of Environmental Health
CIRIA	Construction Industry Research Association
CLEA	Contaminated Land Exposure Assessment
CSM	Conceptual Site Model
DNAPL	Dense Non-Aqueous Phase Liquid (chlorinated solvents, PCB)
DWS	Drinking Water Standard
EA	Environment Agency
EQS	Environmental Quality Standard
GAC	General Assessment Criteria
GL	Ground Level
GSV	Gas Screening Value
HCV	Health Criteria Value
ICSM	Initial Conceptual Site Model
LNAPL	Light Non-Aqueous Phase Liquid (petrol, diesel, kerosene)
ND	Not Detected
LMRL	Lower Method Reporting Limit
NR	Not Recorded
PAH	Poly Aromatic Hydrocarbon
PCB	Poly-Chlorinated Biphenyl
PID	Photo Ionisation Detector
QA	Quality Assurance
SGV	Soil Guideline Value
SPH	Separate Phase Hydrocarbon
Sp.TPH (CWG)	Total Petroleum Hydrocarbon (Criteria Working Group)
SPT	Standard Penetration Test
SVOC	Semi Volatile Organic Compound
UST	Underground Storage Tank
VCCs	Vibro Concrete Columns
VOC	Volatile Organic Compound
WTE	Water Table Elevation



APPENDIX 3

ENGINEERING LOGS





Site

Barbara Hucklesbury Close

Number
WS101

Excavation Method

Drive-in Windowless Sampler

Dimensions

Location

Northwest of site

Ground Level (mOD)

Dates

27/04/2026

Client

Aspire Commercial Contractors

Engineer

Tim Conibear

Job
Number
P1407

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.08)	Block paving. (MADE GROUND)		
					(0.08)			
					(0.10)	Yellow bedding SAND. (MADE GROUND)		
					(0.18)			
					(0.22)	Reinforced Concrete. (MADE GROUND)		
					0.40			
					(0.50)	Slightly dry and friable brown slightly sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is very angular to rounded fine to coarse flint, brick, concrete, ceramic and glass. Cobbles are subangular brick and concrete. (MADE GROUND)		
0.80-0.80	ES1				0.90			
1.00-1.00	D1					Soft grey and reddish brown slightly gravelly SILT / CLAY. Gravel is subangular to well rounded fine to coarse flint and siltstone. (SUPERFICIAL DEPOSITS)		
1.20-1.20	ES2				(0.70)	...between 1.00m and 1.30bgl: grey with dark staining and natural organic odour.		
1.30	HSV 72kPa					...below 1.30mbgl: gravelly.		
1.50-1.50	D2				1.60			
1.60	HSV 72kPa					Firm to stiff greyish brown and light grey CLAY with occasional relic rootlets and subrounded fine to medium siltstone gravel. (LONDON CLAY FORMATION)		
1.80	HSV 104kPa							
1.80-1.80	D3							
2.10	HSV 100kPa					...below 2.00mbgl: stiff with lenses of orange silt and fine sand.		
2.20-2.20	D4							
2.30	HSV 110kPa							
2.50	HSV 108kPa							
2.70	HSV 112kPa							
2.70-2.70	D5							
2.90	HSV 114kPa							
3.20	HSV 136kPa				(3.40)	...below 3.00mbgl: stiff to very stiff with frequent up to fine gravel sized selenite crystals.		
3.50	HSV 136kPa							
3.70	HSV 112kPa							
3.90	HSV 132kPa					...below 4.00mbgl: stiff with no relic rootlets.		
					5.00			

Remarks

1. Specialist utilities clearance undertaken at surface using a cable avoidance tool (CAT) and signal generator (genny) prior to breaking ground.
2. Service inspection pit excavated to 1.20 mbgl using insulated hand digging tools.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

Scale
(approx)

1:25

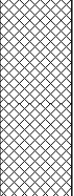
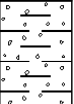
Logged
By

TC

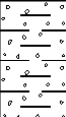
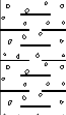
Figure No.

P1407.WS101



						Site Barbara Hucklesbury Close		Number WS102	
Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Aspire Commercial Contractors		Job Number P1407	
		Location North of site.		Dates 27/04/2026		Engineer Tim Conibear		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50-0.50	ES1				0.05	Block paving. (MADE GROUND)			
					0.10	Concrete. (MADE GROUND)			
					(0.80)	Very soft to soft dark grey slightly gravelly SILT / CLAY. Gravel is subangular to subrounded fine to coarse brick and concrete. (MADE GROUND)			
					0.90	Soft greyish brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to well rounded fine to coarse flint. (SUPERFICIAL DEPOSITS)			
1.40-1.40	D1				1.60	Firm greyish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to medium siltstone. (LONDON CLAY FORMATION)			
1.50	HSV 88kPa					...below 2.00mbgl: becomes firm to stiff greyish brown and light grey with occasional relic rootlets and no siltstone gravel.			
1.70	HSV 80kPa								
1.90	HSV 84kPa								
1.90-1.90	D2								
2.10	HSV 112kPa								
2.30	HSV 116kPa								
2.30-2.30	D3								
2.50	HSV 108kPa								
2.70	HSV 104kPa								
2.90	HSV 96kPa								
3.10	HSV 104kPa					...below 3.00mbgl: stiff with frequent up to fine gravel sized selenite crystals and occasional lenses of silt and fine sand.			
3.30	HSV 100kPa				(3.40)				
3.50	HSV 144kPa					...below 3.50mbgl: stiff to very stiff.			
3.70	HSV 116kPa								
3.80-3.80	D4								
3.90	HSV 156kPa					...below 4.00mbgl: very stiff.			
4.30	HSV 120kPa								
4.70	HSV 152kPa								
					5.00				
Remarks 1. Specialist utilities clearance undertaken at surface using a cable avoidance tool (CAT) and signal generator (genny) prior to breaking ground. 2. Service inspection pit excavated to 1.20 mbgl using insulated hand digging tools. 3. No groundwater encountered. 4. Hole backfilled with arisings upon completion.								Scale (approx) 1:25	Logged By TC
								Figure No. P1407.WS102	



						Site Barbara Hucklesbury Close		Number WS103	
Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Aspire Commercial Contractors		Job Number P1407	
		Location South of site.		Dates 27/04/2026		Engineer Tim Conibear		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.50-0.60	ES1				(0.80)	Grass over dark grey slightly silty sandy GRAVEL with low cobble content and frequent roots and rootlets. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint, brick, concrete, wood and clinker. Cobbles are subangular brick and concrete. (MADE GROUND)			
					0.80	...at 0.70mbgl: rare subangular cobble of brittle white material.			
1.00-1.20	D1				(0.40)	Firm greyish brown gravelly CLAY with occasional rootlets. Gravel is subangular to rounded fine to coarse flint. (SUPERFICIAL DEPOSITS)			
1.30 1.40	HSV 76kPa HSV 76kPa				1.20 (0.30)	Soft to firm greyish brown slightly gravelly CLAY with occasional relic rootlets. Gravel is subrounded to rounded fine to medium siltstone. (LONDON CLAY FORMATION)			
1.60 1.60-1.60	HSV 108kPa D2				1.50	Firm greyish brown, orangish brown and bluish grey CLAY with occasional subrounded fine to medium siltstone gravel, relic rootlets and silt pockets. (LONDON CLAY FORMATION)			
1.80	HSV 116kPa								
2.00	HSV 116kPa								
2.10	HSV 116kPa					...below 2.00mbgl: firm to stiff with no siltstone gravel.			
2.30 2.30-2.30 2.40	HSV 72kPa D3 HSV 92kPa								
2.70	HSV 84kPa					...below 2.50mbgl: stiff with lenses of soft orange silt and fine sand.			
2.90	HSV 116kPa								
3.00-3.00	D4					...below 3.00mbgl: occasional up to coarse sand sized selenite crystals.			
3.20	HSV 128kPa				(3.50)				
3.40 3.40-3.40	HSV 128kPa D5								
3.60	HSV 152kPa					...below 3.50mbgl: stiff to very stiff.			
3.80	HSV 104kPa								
4.20	HSV 156kPa					...below 4.00mbgl: no relic rootlets or bluish grey.			
4.50	HSV 136kPa								
4.80	HSV 156kPa								
					5.00				
Remarks 1. Specialist utilities clearance undertaken at surface using a cable avoidance tool (CAT) and signal generator (genny) prior to breaking ground. 2. Service inspection pit to excavated to 1.20 mbgl using insulated hand digging tools. 3. No groundwater encountered. 4. Hole backfilled with arisings upon completion.							Scale (approx) 1:25	Logged By TC	
							Figure No. P1407.WS103		



Site

Barbara Hucklesbury Close

Trial Pit
Number
HP104

Excavation Method

Excavated with insulated
hand pitting tools.

Dimensions

Ground Level (mOD)

Client

Aspire Commercial Contractors

Job
Number
P1407

Location

North of site.

Dates

27/04/2026

Engineer

Tim Conibear

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50-0.60	ES1				(0.10)	Grass overlying topsoil. (TOPSOIL)		
					0.10	Dark greyish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is very angular to well rounded fine to coarse flint, concrete, clinker and ceramic. (MADE GROUND)		
					(0.50)			
					0.60	Stiff grey slightly sandy slightly gravelly SILT / CLAY with natural organic odour. Sand is fine to coarse. Gravel is subangular to well rounded fine to coarse flint and red brick. (MADE GROUND)		
					(0.50)			
					1.10	Complete at 1.10m		

Plan

.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.

Remarks

Specialist utilities clearance undertaken using a cable avoidance tool (CAT) and signal generator (genny) prior to breaking ground.
Hole excavated using insulated hand digging tools.
No groundwater encountered.
Backfilled with arisings upon completion.

Scale (approx)

1:10

Logged By

TC

Figure No.

P1407.HP104



eps consulting

Site

Barbara Hucklesbury Close

Trial Pit
Number
HP105

Excavation Method

Excavated using insulated
hand digging tools.

Dimensions

Ground Level (mOD)

Client

Aspire Commercial Contractors

Job
Number
P1407

Location

Southeast of site.

Dates

27/04/2026

Engineer

Tim Conibear

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.30	ES1				(0.10)	Grass overlying topsoil (TOPSOIL)		
					0.10	Soft slightly friable brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to well rounded fine to coarse flint, brick and charcoal. (MADE GROUND)		
					(0.70)	...below 0.30: soft to firm with less sand and gravel,		
					0.80 (0.20)	Soft to firm light brown slightly gravelly CLAY with occasional rootlets. Gravel is subangular to well rounded fine to coarse flint. (Natural?)		
			Seepage(1) at 1.00m.	1.00	Complete at 1.00m			▽1

Plan

.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.

Remarks

Location CAT scanned prior to excavation.
Hand dug inspection pit to 1.00 m.
Slight seepage near base at 1.00.
Hole terminated at 1.00mbgl due to potential for drainage to be present at 1.60mbgl.
Backfilled with arisings upon completion.

Scale (approx)

1:10

Logged By

TC

Figure No.

P1407.HP105

APPENDIX 4

RESULTS OF CHEMICAL LABORATORY ANALYSIS



EPS Consulting
39 East Drive
Carshalton
Surrey
SM5 4PA

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t:

t: 01923 225404

e: tim@epsconsulting.co.uk; stuart@epsconsulting.co.uk

f: 01923 237404

e: info-i2analytical@normecgroup.com

Analytical Report Number : 26-022746

Project / Site name:	Barbara Hucklesbury Close	Samples received on:	29/04/2026
Your job number:	P1407	Samples instructed on/ Analysis started on:	30/04/2026
Your order number:	PO1407-05-I2-BHC	Analysis completed by:	12/05/2026
Report Issue Number:	1	Report issued on:	12/05/2026
Samples Analysed:	6 soil samples		



Signed:

Rachel Chappell
Key Account Manager
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

Excel copies of reports are only valid when accompanied by this PDF certificate.

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.

Analytical Report Number: 26-022746
Project / Site name: Barbara Hucklesbury Close
Your Order No: PO1407-05-I2-BHC

Lab Sample Number	904919	904920	904921	904922	904923
Sample Reference	WS101 - ES1	WS101 - ES2	WS102 - ES1	WS103 - ES1	HP104 - ES1
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)	0.80	1.20	0.50	0.50-0.60	0.50-0.60
Date Sampled	27/04/2026	27/04/2026	27/04/2026	27/04/2026	27/04/2026
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	14	16	19	15	13
Total mass of sample received	kg	0.1	NONE	0.8	0.7	0.7	0.7	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	CAD	CAD	KJK	WIK	WIK
Analysis completed	N/A	N/A	N/A	12/05/2026	12/05/2026	12/05/2026	12/05/2026	12/05/2026
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	-	-	-	Asbestos Cement	-
---	------	-----	-----------	---	---	---	-----------------	---

General Inorganics

Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Organic Matter	%	0.1	MCERTS	1.8	1	2.7	1.9	1.4
Organic Matter (automated)	%	0.1	MCERTS	2.9	2.2	2.8	3.6	3.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.34	0.1	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.07	< 0.05	0.07	< 0.05	0.07
Acenaphthene	mg/kg	0.05	MCERTS	0.09	< 0.05	0.35	0.3	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.08	< 0.05	0.22	0.2	0.06
Phenanthrene	mg/kg	0.05	MCERTS	1.3	< 0.05	3	3	1
Anthracene	mg/kg	0.05	MCERTS	0.23	< 0.05	0.43	0.71	0.32
Fluoranthene	mg/kg	0.05	MCERTS	3.3	< 0.05	5.8	5	2.2
Pyrene	mg/kg	0.05	MCERTS	2.9	< 0.05	5.2	4.3	2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	< 0.05	2.9	2.4	1.3
Chrysene	mg/kg	0.05	MCERTS	1.6	< 0.05	2.9	2.3	1.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	2	< 0.05	3.8	2.8	1.4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.8	< 0.05	1.7	1.4	0.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.7	< 0.05	3.4	2.5	1.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.88	< 0.05	1.9	1.4	0.72
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.28	< 0.05	0.52	0.34	0.22
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1	< 0.05	2	1.5	0.82

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	17.9	< 0.80	34.4	28.2	13.3
-----------------------------	-------	-----	-----------	------	--------	------	------	------

Analytical Report Number: 26-022746
Project / Site name: Barbara Hucklesbury Close
Your Order No: PO1407-05-I2-BHC

Lab Sample Number	904919	904920	904921	904922	904923
Sample Reference	WS101 - ES1	WS101 - ES2	WS102 - ES1	WS103 - ES1	HP104 - ES1
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)	0.80	1.20	0.50	0.50-0.60	0.50-0.60
Date Sampled	27/04/2026	27/04/2026	27/04/2026	27/04/2026	27/04/2026
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	14	13	21	19	15
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	0.2	0.4	1	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	42	37	37	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	54	20	79	180	100
Lead (aqua regia extractable)	mg/kg	1	MCERTS	190	15	480	750	190
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.7	< 0.3	1.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	18	30	54	60
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.5	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	190	54	300	2300	160

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	13	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	26	< 10	18	30	< 10
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	26	< 10	18	43	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-

Analytical Report Number: 26-022746
 Project / Site name: Barbara Hucklesbury Close
 Your Order No: PO1407-05-I2-BHC

Lab Sample Number				904919	904920	904921	904922	904923
Sample Reference				WS101 - ES1	WS101 - ES2	WS102 - ES1	WS103 - ES1	HP104 - ES1
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)				0.80	1.20	0.50	0.50-0.60	0.50-0.60
Date Sampled				27/04/2026	27/04/2026	27/04/2026	27/04/2026	27/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Test Limit of detection	Test Accreditation Status		
Total PCBs				mg/kg	0.007	MCERTS	< 0.007	-

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

Analytical Report Number: 26-022746
Project / Site name: Barbara Hucklesbury Close
Your Order No: PO1407-05-I2-BHC

Lab Sample Number	904924			
Sample Reference	HP105 - ES1			
Sample Number	None Supplied			
Water Matrix	N/A			
Depth (m)	0.20-0.30			
Date Sampled	27/04/2026			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Mass of stone >10mm	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	13
Total mass of sample received	kg	0.1	NONE	0.7

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	WIK
Analysis completed	N/A	N/A	N/A	12/05/2026
Actinolite detected	Type	N/A	ISO 17025	-
Amosite detected	Type	N/A	ISO 17025	-
Anthophyllite detected	Type	N/A	ISO 17025	-
Chrysotile detected	Type	N/A	ISO 17025	-
Crocidolite detected	Type	N/A	ISO 17025	-
Tremolite detected	Type	N/A	ISO 17025	-

Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-
---	------	-----	-----------	---

General Inorganics

Total Cyanide	mg/kg	1	MCERTS	< 1.0
Organic Matter	%	0.1	MCERTS	1.2
Organic Matter (automated)	%	0.1	MCERTS	1.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0
----------------------------	-------	---	--------	-------

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.13
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.27
Pyrene	mg/kg	0.05	MCERTS	0.26
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.13
Chrysene	mg/kg	0.05	MCERTS	0.17
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.13
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.11
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.12
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.08
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.09

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.48
-----------------------------	-------	-----	-----------	------

Analytical Report Number: 26-022746
Project / Site name: Barbara Hucklesbury Close
Your Order No: PO1407-05-I2-BHC

Lab Sample Number	904924			
Sample Reference	HP105 - ES1			
Sample Number	None Supplied			
Water Matrix	N/A			
Depth (m)	0.20-0.30			
Date Sampled	27/04/2026			
Time Taken	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	14
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	42
Copper (aqua regia extractable)	mg/kg	1	MCERTS	40
Lead (aqua regia extractable)	mg/kg	1	MCERTS	74
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	38
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.3
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	150

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-
PCB Congener 52	mg/kg	0.001	MCERTS	-
PCB Congener 101	mg/kg	0.001	MCERTS	-
PCB Congener 118	mg/kg	0.001	MCERTS	-
PCB Congener 138	mg/kg	0.001	MCERTS	-
PCB Congener 153	mg/kg	0.001	MCERTS	-
PCB Congener 180	mg/kg	0.001	MCERTS	-



Analytical Report Number: 26-022746
 Project / Site name: Barbara Hucklesbury Close
 Your Order No: PO1407-05-I2-BHC

Lab Sample Number				904924
Sample Reference				HP105 - ES1
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.20-0.30
Date Sampled				27/04/2026
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)				Units Test Limit of detection Test Accreditation Status
Total PCBs				mg/kg 0.007 MCERTS -

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

Analytical Report Number : 26-022746

Project / Site name: Barbara Hucklesbury Close

* 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 *
904919	WS101 - ES1	None Supplied	0.8	Brown loam and clay with gravel
904920	WS101 - ES2	None Supplied	1.2	Brown clay and loam with gravel
904921	WS102 - ES1	None Supplied	0.5	Brown loam and clay with gravel and vegetation
904922	WS103 - ES1	None Supplied	0.50-0.60	Brown loam and sand with gravel and vegetation
904923	HP104 - ES1	None Supplied	0.50-0.60	Brown loam and sand with gravel and vegetation
904924	HP105 - ES1	None Supplied	0.20-0.30	Brown clay and loam with gravel and vegetation

Analytical Report Number : 26-022746

Project / Site name: Barbara Hucklesbury Close

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
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	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
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
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
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

Analytical Report Number : 26-022746

Project / Site name: Barbara Hucklesbury Close

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

APPENDIX 7

RESULTS OF GEOTEHCNICAL LABORATORY ANALYSIS (PENDING)



APPENDIX 6

SITE WALKOVER PHOTOGRAPHS



PHOTOGRAPH 1: SIDE ACCESS ADJACENT TO BUNGALOW 1.



PHOTOGRAPH 2: ELECTRICITY SUBSTATION IN NORTHWEST OF SITE



PHOTOGRAPH 3 – FOOTPATH ACCESS TO BUNGALOWS 1-5



PHOTOGRAPH 4 – FRONT OF BUNGALOWS



APPENDIX 7

SITE INVESTIGATION PHOTOGRAPHS



PHOTOGRAPH 1: WS101 AT 1.20 – 2.00MBGL



PHOTOGRAPH 2: WS101 AT 2.00 – 5.00MBGL



PHOTOGRAPH 3: WS101 BACKFILLED AND RE-INSTATED



PHOTOGRAPH 4: WS102 AT 1.20 – 4.00MBGL



PHOTOGRAPH 5: WS102 AT 4.00 – 5.00MBGL



PHOTOGRAPH 6: WS102 BACKFILLED AND RE-INSTATED



PHOTOGRAPH 7: WS103 AT 1.20 - 2.00MBGL



PHOTOGRAPH 8: WS103 AT 2.00 - 3.00MBGL



PHOTOGRAPH 9: WS103 AT 3.00 - 4.00MBGL



PHOTOGRAPH 10: WS103 AT 4.00 - 5.00MBGL



PHOTOGRAPH 11: WS103 BACKFILLED AND REINSTATED



PHOTOGRAPH 12: HP104



PHOTOGRAPH 13: HP104 BACKFILLED AND RE-INSTATED



PHOTOGRAPH 14: HP105



PHOTOGRAPH 15: HP105



PHOTOGRAPH 16: HP105 BACKFILLED AND RE-INSTATED

