

Extent of flooding from surface water

● High ● Medium ● Low ○ Very low ◆ Location you selected

Figure 5 - Flood Risk from Surface Water (extract from EA website)



Figure 6 - Hazard: 1 in 1000-year flood event (SFRA Extract)

#### 4.3 Flood Risk from Sewers

The SFRA contains maps for both internal and external sewer flooding. This is based on a watercompany held register of properties which have experienced sewer flooding due to hydraulic overload, or properties which are 'at risk' of sewer flooding more frequently than once in 20 years.

**Figure 7** shows that the site is situated outside of any areas with historical flooding events affecting any properties due to internal sewer flooding. **Figure 8** shows that the site is situated in an area where there is only 1 instance of recorded historical flooding events affecting any properties due to exterior sewer flooding.



Figure 7 – Internal Sewer Flooding (SFRA Extract)



Figure 8 – Exterior Sewer Flooding (SFRA Extract)

The development proposes to construction of a new basement. The basement is to be served by a pumped drainage system discharging via the existing gravity outfall to the public sewer in Belsize Crescent.

The most likely reason for sewer flooding onsite is due to capacity issues during heavy rainfalls within the public sewerage network. The pumped drainage system will protect the basement drainage system from any surcharges in the public sewer.

Therefore, the flood risk from sewers is considered low.

#### 4.4 Flood Risk from Groundwater Flooding

The SFRA contains a map showing historical records of groundwater flooding and areas of increased potential for elevated groundwater as shown in **Figure 9.** This shows that the site is not in or near an area of permeable superficial deposits, or of groundwater flooding incidents.



Figure 9 – Groundwater flood risk (SFRA Extract)

A site investigation was undertaken in Autumn 2022, with a separate technical report submitted in support of this application. As part of the investigation ground water monitoring was undertaken. Four window sample boreholes were tested across the site. All of the window samples were recorded as dry during all six visits between October 13th and November 17th 2022.

It is proposed waterproofing of the proposed basement structure is implemented in line with BS 8102. The resulting risk of flooding from groundwater is considered to be low.

#### 4.5 Summary

The site is situated in a Critical Drainage Area. Detailed surface water flood mapping shows the site is at low risk of surface water flooding.

Data available from the BGS, LB Camden SFRA, and from site investigations show that the site is at low risk of groundwater flooding. However it is recommended that waterproofing measures are implemented at basement level in line with BS EN 8102, with a detailed waterproofing strategy to be undertaken by specialists.

The site is considered to be at low risk from all other sources of flooding.

### 5.0 Existing Drainage Infrastructure

#### 5.1 Public Sewer Network

A Thames Water (TW) asset search is provided in **Appendix B**, with an extract provided in **Figure 10**.

As shown below, a combined sewer is located in Belsize Crescent which has a diameter of 965x635mm and runs southwest and northeast to join onto a combined sewer branch in Belsize Lane. The invert level of the sewer adjacent to the site is approximately 69.33m AOD

It considered that the proposed works at 13 Belsize Crescent will impede on the asset, nor the asset impede on the construction, due the significant depth of this combined trunk sewer.

It is anticipated that the property discharges via a combined connection to the combined sewer in Belsize Crescent. It is proposed to re-use the existing connection to the TW Asset.



Figure 10 - Thames Water Asset Map (Extract)

#### 5.2 Private Sewer Network

It is assumed the site is served by pipes that discharge the surface and the foul water runoff to the combined sewer under Belsize Crescent.

A CCTV drainage survey will be undertaken at the site to confirm the arrangement and condition of the existing below-ground drainage.

### 6.0 Proposed Drainage Arrangements

It is intended to re-use the existing combined outfalls to the public sewer for proposed foul and surface water drainage.

Foul and surface water drainage from groundfloor and above are proposed to be drained via the existing gravity outfall to the combined public sewer within Belsize Crescent. Appliances at basement level will be served with a pumped drainage system to the existing outfall of the site. This will also protect the basement level from sewer surcharge.

This will be designed in accordance with Building Regulations Part H.

Where new hardstanding surfaces are proposed, SuDs features such as permeable paving will be accommodated in order to aid surface water attenuation and not increase surface water discharge off-site.

It is proposed to retrofit a non-return valve to the existing outfall connection to the public sewer to protect the site drainage system from any surcharges in the public sewer.

### 7.0 Conclusion

This FRA and SuDS Strategy report has been prepared in accordance with local and national planning policy and guidance documents including LBC's SFRA, the London Plan (2021) and the NPPF (2019). The proposed development complies with local and national planning policy on flood risk and sustainable drainage.

This report confirmed that the development site is at low risk from all sources of flooding.

# APPENDIX A BGS INFORMATION

# APPENDIX B THAMES WATER ASSET MAP

# APPENDIX C LBC SFRA MAPPING



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Appendix C: Factual Report for Application 2023/0692/P



# 13 Belsize Crescent

Factual Report

January 2023 24022-A2SI-XX-XX-RP-X-0001-01



Project Name	13 Belsize Crescent
Project Number	24022
Client	Edmund Lehmann and Jennifer Nguyen
Document Name	Factual Report

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24022-A2SI-XX-XX-RP-X-0001-00	First Issue		00	WM	22/11/2022
24022-A2SI-XX-XX-RP-X-0001-01	Second Issue	Addition of CP Borehole	01	WM	06/01/2023

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- Appendix E: Geo-environmental testing results

### 1. Introduction

A2 Site Investigation Limited were instructed by Edmund Lehmann and Jennifer Nguyen to undertake a geotechnical and geoenvironmental ground investigation at 13 Belsize Crescent, London, NW3 5QU. The ground investigation was specified by A-Squared Studio who also acted as Investigation Supervisor.

This factual report describes the work undertaken and presents the findings to date.

### 2. Site Location

The site extent is shown in Figure 1. The site is located at National Grid Reference 526772, 184981 and falls within the administrative boundaries of the London Borough of Camden. The site, covering an area of approximately 0.02ha, comprises the terraced residential property of No.13 Belsize Crescent and associated private front and rear garden spaces.

The site is bounded by terraced residential properties to the northwest and southeast, with associated private gardens and further residential properties to the southwest. Belsize Crescent runs along the north-eastern site boundary, with residential properties beyond.

Belsize Lane high street lined with small commercial buildings is located approximately 60m east of the site, while Marie Curie Hospice is approximately 150m northeast. Belsize Park tube station is approximately 590m north-east of the site. The surrounding area is predominantly occupied by terraced residential properties, with several small commercial spaces and offices beyond.



Figure 2.1 Site location and extent marked in red

### 3. Proposed Development

At the time of writing, the proposed development comprises partial demolition of internal superstructure elements, combing the three flats into a single dwelling. The lower ground floor will be extended underneath the front garden comprising a small storage room. The floor slab will be replaced and underpinned approximately 0.3m below the existing ground floor level. A large single-storey basement will be constructed beneath the entire building footprint and extending underneath part of the front and rear garden. The

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basement will include a swimming pool, gym and bathrooms. The house will be accessible with an external platform lift to the lower ground floor and a small internal lift to all floors will be installed.

### 4. Anticipated Ground Conditions

From a review of available geological maps and memoirs, including the online British Geological Survey "Geology of Britain Viewer", the following geological sequence was anticipated.

#### Table 4.1 Anticipated geological sequence

Unit	Depth <sup>[1]</sup> (m bgl)	Thickness (m)	Description			
Made Ground	0.00	1.50	Variable anthropogenic deposits			
London Clay	1.50	90.00	Stiff brown clay with partings of silt fine sand			
Lambeth Group	90.00	105.00	Vertically and laterally variable sequences mainly of clay, some silty or sandy, with some sands and gravels, minor limestones and lignites and occasional sandstone and conglomerate			
Thanet Formation	105.00	110.00	Grey locally silty fine sand with a bed of fine to coarse flint gravel at the base			

1. Depth refers to top of stratum.

### 5. Purpose and Scope of the Investigation

A2 Site Investigation Limited undertook a ground investigation at the site over two phases, comprising:

#### Phase I (28.09.2022 - 29.09.2022)

- 4 no. modular dynamic sampler boreholes to depths of up to 6.0 m. 1 no. location in the ground floor level front garden, 1 no. in the property footprint and 2 no. in the rear garden.
- 1 no. hand pit with SPT in the front garden to determine material beneath the proposed storage structure.
- Installation of 3 no. gas/vapour monitoring wells (WS1, WS2, HP1).
- 2 no. structural trial pits on the party walls to determine existing foundation details.
- 3 no. shallow ground sample locations in the rear garden for additional contamination testing.
- Geotechnical and geo-environmental laboratory testing.
- Post-site work monitoring of ground gas (6 no. monitoring visits).

#### Phase II (12.12.2022 - 15.12.2022)

- 1 no. modular cable percussion borehole to a depth of 20.0 m bgl to facilitate in situ geotechnical testing.
- Geotechnical laboratory testing.

### 6. Limitations of Report

This report has been prepared in accordance with the specification provided by A-Squared Studio. The data reported relates to the specific locations where each exploratory hole was formed and may not represent the ground and groundwater conditions of the site

as a whole. Furthermore, although no groundwater was encountered during site works, it should be considered that groundwater levels may vary throughout the year due to seasonal conditions and other influences such as flooding and leaking mains, storm drainage and foul water systems.

### 7. Standards

The site investigation, soil descriptions and laboratory testing were undertaken in accordance with following standards

- UK Specification for Ground Investigation 2nd Edition, published by ICE Publishing (2012)
- BGS Geology of Britain Viewer: 2018. www.bgs.ac.uk. British Geological Survey
- British Standards Institution BS 5930:2015+A1:2020, Code of practice for site investigations.
- British Standards Institution BS 10175:2011+A2:2017, Investigation of potentially contaminated sites code of practice.
- British Standards Institution BS EN ISO 14688-1:2018, Geotechnical investigation and testing, classification of soil. Identification and description.
- British Standards Institution BS EN ISO 14688-2:2018, Geotechnical investigation and testing. Identification and classification of soil. Principle for a classification.
- British Standards Institution BS EN ISO 22475-1 : 2006 : Geotechnical investigation and testing Sampling methods and groundwater measurements Part 1 Technical principles for execution.

### 8. Ground Investigation Summary

#### 8.1. Fieldwork Overview

A walkover was conducted on the 12<sup>th</sup> September 2022 and confirmed the anticipated layout of the site.

Following a review of all available service information and site reconnaissance, all locations were scanned using Electromagnetic (CAT4+ & Genny) prior to breaking ground.

A Unexploded Ordnance Preliminary Risk Assessment (UXO PRA) was carried out by Brimstone Site Investigation, dated September 2022 (ref. PRA-22-1919). Based on the findings of this report, on site UXO support was not deemed necessary on site. However, due to the rapid turnaround of this project, the results of the UXO PRA were not available prior to the commencement of the Phase I site works. Therefore, UXO support was organised to attend site operations for Phase I only.

All works were supervised by a ground engineer. An exploratory hole location plan is shown in Appendix A.

#### 8.2. Boreholes

The modular dynamic sampler boreholes (WS1 – WS4) were progressed using a Nordmeyer LMSR drill rig with sampling to a maximum depth of 6.00 m bgl. Standard Penetration Tests (SPTs) were carried out in the boreholes at each metre.

The modular cable percussion borehole (BH01) was progressed using a Dando 1000 cut-down drill rig with geotechnical sampling to a maximum depth of 20.00 m bgl. SPTs were alternated with UT100s throughout the hole.

All soils encountered were logged on site and sub-sampled accordingly for geotechnical and geo-environmental laboratory analysis. Geotechnical samples only were collected within Phase II cable percussion works.

A standpipe was installed in each of the boreholes for monitoring of ground gas. Detailed exploratory hole logs can be found in Appendix B. Arisings were photographed, and are presented in Appendix B.

# 8.3. Trial Pits

A total of 2 No. hand excavated trial pits were completed to a maximum depth of 1.50 m bgl to determine the existing foundation structures.

All soils encountered were logged on site and samples recovered for geo-environmental laboratory analysis. Detailed logs and sketches are shown in Appendix B.

#### 8.4. Ground Gas Monitoring Installations

Ground gas monitoring installations were installed in all boreholes, comprising 50mm internal diameter PVC casing and well screen. Details are shown in Table 8.1.

#### Table 8.1 Ground Gas Monitoring Installations

Location Ref	Base of Borehole (m bgl)	Installation Diameter (mm)	Type of Installation	Top of Response Zone (m bgl)	Bottom of Response Zone (m bgl)	Strata
WS1	6.00	50	SP/G	0.50	1.00	Made Ground
WS2	6.00	50	SP/G	0.50	1.00	Made Ground
HP1	1.65	50	SP/G	0.50	1.00	Made Ground

Key

SP/G – Combined gas and water monitoring standpipe

### 9. Ground Conditions

#### 9.1. Encountered Geology

The following ground conditions were encountered at the site. The measurements were taken from the top of the existing exploratory holes (m bgl). Details are shown in Table 9.1.

#### Table 9.1 Ground Conditions Encountered

Unit	Minimum Depth (m bgl)	Maximum Depth (m bgl)	Thickness range (m)	Description
Concrete	0.00	0.08	0.07	Encountered in TP1, HP1, WS3 and WS4. Varying compositions.
Made Ground	0.00	1.40	1.28	Soft, brown, slightly gravelly, slightly sandy, silty CLAY. Sand is fine to coarse. Gravel is fine to medium, sub-angular brick, with occasional concrete, flint and mortar.
London Clay	0.20	6.00	20.45	Firm, orangish brown mottled light and dark grey CLAY. Occasional pockets of silt, coarse selenite crystals and shell fragments.

Detailed exploratory hole logs can be found in Appendix B.

### 10. Laboratory Testing

All laboratory testing was scheduled by A-squared Studio Engineers.

# 10.1. Geotechnical Testing

Geotechnical laboratory testing was undertaken by GSTL Limited, a United Kingdom Accreditation Service (UKAS) accredited laboratory, in accordance with relevant standards.

The following type and number of tests scheduled is shown in Table 10.1 and the results are presented in Appendix D.

#### Table 10.1 Geotechnical Testing

Test Description	Number of Tests
Moisture Content	8
4 Point Liquid & Plastic Limit	8
BRE Suite D (brownfield)	6
Triaxial - 100mm single stage	2

#### 10.2. Geo-environmental Testing

Selected soil and groundwater samples were sent for geo-environmental laboratory testing which was undertaken by i2 analytical LTD, a United Kingdom Accreditation Service (UKAS) accredited laboratory. ISO17025 and MCERTS accredited methods were specified where applicable and can be seen on the laboratory testing certificates presented in Appendix E.

Table 10.2 presents a summary of the scheduled tests;

#### Table 10.2 Geo-environmental Testing - Laboratory Analysis – Soils

Test Description	Number of Tests
A2SI Risk Assessment Suite (Soil) including Asbestos Screen/Identification and Total Organic Carbon	10

### 11. Ground Gas Monitoring

Six rounds of ground gas monitoring visits have been undertaken between 13/10/2022 and 17/11/2022. A summary is provided in Table 11.1. The results are presented in Appendix C.

#### 11.1. Ground Gas Monitoring

Gas monitoring was undertaken using a calibrated Gas Data GFM436 hand-held gas analyser and a calibrated MiniRae Lite ATEX Photo Ionisation Detector (PID) and a summary is shown in Table 11.1.

#### Table 11.1 Ground Gas/Vapour Monitoring Results

Exploratory Hole Reference	Monitoring Round Date	Minimum O2 (%)	Maximum CO2 (%I)	laximum Maximum CO <sub>2</sub> (%I) CH <sub>4</sub> (%)		CO (ppm)	Maximum PID (ppm)	Barometric Pressure (mb)	
WS1	13/10/2022	20.10	0.60	0.00	0.00	0.00	0.10	1003	

Exploratory Hole Reference	Monitoring Round Date	Minimum O2 (%)	Maximum CO2 (%l)	Maximum CH4 (%)	H₂S (ppm)	CO (ppm)	Maximum PID (ppm)	Barometric Pressure (mb)		
WS2	13/10/2022	19.90	0.90	0.00	0.00	0.00	0.30	1003		
HP1	13/10/2022	20.60	0.40	0.00	0.00	0.00	0.20	1003		
WS1	20/10/2022	19.70	0.80	0.00	0.00	0.00	0.20	998		
WS2	20/10/2022	19.60	1.00	0.00	0.00	0.00	0.40	998		
HP1	20/10/2022	20.30	0.60	0.00	0.00	0.00	0.30	998		
WS1	24/10/2022	20.50	0.50	0.00	0.00	0.00	0.10	1004		
WS2	24/10/2022	19.40	1.10	0.00	0.00	0.00	0.50	1004		
HP1	24/10/2022	20.20	0.60	0.00	0.00	0.00	0.20	1004		
WS1	03/11/2022	19.60	0.80	0.00	0.00	0.00	0.30	993		
WS2	03/11/2022	19.40	1.10	0.00	0.00	0.00	0.50	993		
HP1	HP1 03/11/2022		HP1 03/11/2022 2		0.70	0.00	0.00	0.00	0.30	993
HP1	10/11/2022	20.30	0.50	0.00	0.00	0.00	0.20	1012		
WS1	10/11/2022	19.90	0.60	0.00	0.00	0.00	0.10	1012		
WS2	10/11/2022	19.90	0.70	0.00	0.00	0.00	0.30	1012		
HP1	17/11/2022	20.40	0.30	0.00	0.00	0.00	0.10	976		
WS1	17/11/2022	19.90	0.50	0.00	0.00	0.00	0.20	976		
WS2	17/11/2022	20.10	0.60	0.00	0.00	0.00	0.30	976		

Appendix A: Exploratory Hole Location Plan



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Appendix B: Exploratory Hole Logs, Trial pit sketches and photographic record

F	Project 13 Belsize Crescent											<sup>Pit No</sup> EP1									
	lob No		Start	29-09-22	)	Ground	Level (m	above local	Co-Ordinates		Depth	n (m)									
	240	22	Finish	29-09-22	-	6.92 E 526,787				184,958.0		0.1	1m								
	Client Edm	und Lehi	mann 8	& Jennifer	. Na	uven					Shee	t 1 of	f 1								
		SAMPLES &	& TESTS	}						STRATA											
	Denth (m)	Туре	Т	Test		Test		Test		Test		Test		Reduced	Legend	Depth		Description			
	Doptin (ini)	No	Re	esult	Wa	Level		(Thickness)	Soft brown slightly gravelly sli	ightly sandy silty Cl	AV Sand	is fine to	coarse								
						68.82		(0.10) 0.10	Gravel is sub-angular, fine to	medium brick. (MA	DE GROU	ND)	coarse.								
0.10-0.10 ES1 VOC 0.3 ppm					-	Inal Pit Terminated at 0.	1m														
	General Remarks 1. Pit scanned with CAT & Genny 2. Hand pit to 1.20m bgl not necessary due to depth of pit. 3. Pit terminated at scheduled depth, intended for shallow environmental sampling. 4. Pit completed within No. 13 Belsize Crescent rear garden 5. No groundwater encountered 6. Weather is clear 7. Backfilled with arisings																				
	All dimensio Scale	ons in metres 1:6.25	Contr A2 S	ractor lite Investigatio	'n			Method/ Plant Use	Hand Excavated	Logged By Cl	M	Status	DRAFT								

Project     Trial Pit No       13 Belsize Crescent     EP2       Job No     Start 29-09-22       Ground Level (m above local     Co-Ordinates       Depth (m)     Co-Ordinates													
Job No	0 0010120 0	Start 29-09-22	2	Ground	Level (m	above local	Co-Ordinates		Depth	n (m)			
	24022	Finish 29-09-22	2	referen	ce point)	6.86	E 526,787.0 N	184,963.0		0.2	2m		
Client									Shee	t .			
E	dmund Leh	imann & Jennifei	' Ng	uyen	1					1 0	f 1		
	SAMPLES	& TESTS	4					STRATA					
Depth (r	n) Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness		Description					
0.20-0.20	ES1	VOC 0.4 ppm		68.66		- (0.20) 0.20	Grass over soft brown slightly coarse. Gravel is sub-angula	y gravelly slightly sa r, fine to medium br	ndy silty C ick. (MADE	LAY. San E GROUN	d is fine to D)		
-						-							
-						-							
-						-							
						-							
1. Pit sc 2. Hand 3. Pit ter 4. Pit co 5. No gr 6. Weat 7. Back	Seneral Remarks          1. Pit scanned with CAT & Genny         2. Hand pit to 1.20m bgl not necessary due to depth of pit.         3. Pit terminated at scheduled depth, intended for shallow environmental sampling.         4. Pit completed within No. 13 Belsize Crescent rear garden         5. No groundwater encountered         6. Weather is clear         7. Backfilled with arisings												
All dimensions in metres Scale 1:6.25     Contractor A2 Site Investigation     Method/ Plant Used     Logged By											DRAFT		

Project	Project       Project       13 Belsize Crescent       Job No     Start     29-09-22     Ground Level (m above local reference noint)     Co-Ordinates												
Job No		Start 29-09-22	2	Ground	Level (m	above local	Co-Ordinates		Depth	n (m)			
240	022	Finish 29-09-22	2	referen	ce point)	6.87	E 526,785.0 N	184,966.0		0.1	1m		
Client Edr	nund Lehi	mann & Jennifer	Ngi	uyen					Shee	t 1 o <sup>.</sup>	f 1		
	SAMPLES &	& TESTS						STRATA					
Depth (m)	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness		Description					
_				68.77		(0.10) 0.10	Grass over soft brown slightly rootlets. Sand is fine to coars (MADE GROUND)	y gravelly slightly s e. Gravel is fine to	andy silty C medium, su	LAY with ıb-angula	frequent ır brick.		
General F 1. Pit scann 2. Hand pit 3. Pit termir 4. Pit complete 5. No ground	ES1 ES1 Remarks ed with CAT & to 1.20m bgl nc iated at schedu eted within No.	VOC 0.2 ppm	of pit. allow	Trial Pit Terminated at 0.	.1m								
6. Weather 7. Backfilled	6. Weather is clear 7. Backfilled with arisings												
All dimens Scal	All dimensions in metres Scale 1:6.25     Contractor A2 Site Investigation     Method/ Plant Used     Logged By       CM												

Project	Trial Pit No TP1												
Job No		Start 28-09-22	)	Ground	d Level (m	above local	Co-Ordinates		Depth (m)				
24	022	Finish 28-09-22	2	referen	ce point)	6.67	E 526,792.0	N 184,977.0	0.6m				
Client	mund Lohi	mann 8 Ionnifor	Na						Sheet				
								QTDATA					
	SAIVIPLES (	X IESIS	a.	Poducod		Death		SIRAIA					
Depth (m)	No	Result	Wate	Level	Legend	(Thickness		Description					
0.10-0.10	ES1			68.60		0.07	Light grey CONCRETE. 50 diameter) flint and stone gr	% aggregate of angula ravel. (MADE GROUN	ar, coarse (up to 30 mm D)				
0.10	ES2	VOC 0.6 ppm				(0.53)	Soft to firm orangish brown to coarse. Gravel is sub-an rare clinker. (MADE GROU	ו slightly gravelly slight Igular to sub-rounded, ו(חאו)	ly sandy silty CLAY. Sand is fine fine to medium brick, mortar and				
- 0.40-0.00	LOZ			68.07		0.60	Trial Pit Torminated at	10.6m					
-						-		0.011					
-						-							
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27 - 						-							
						-							
General H	Remarks												
1. Pit scanr 2. Hand ex	ned with CAT & cavated to 1.20	Genny m bgl											
3. Pit termin 4. TP comp	nated at base of eleted within foo	f foundation tprint of No. 13 Belsize C	rescer	nt property.									
5. No grour 6. Weather	5. No groundwater encountered 5. Weather is clear												
7. Backfille	7. Backfilled with arisings												
All dimens	sions in metres	Contractor A2 Site Investigation	on			Method/ Plant Use	ed Hand Excavated	Logged By	Status DRAFT				
	0 1.01.20												

Project	Doloizo C	rooont							Trial Pit No	27		
Job No		Start 28	3-09-22	Groun	d Level (m	above local	Co-Ordinates		Depth (m)			
240	022	Finish 28	8-09-22	referei	nce point)	6.50	E 526,792.0 N	N 184,965.0	0.	78m		
Client	nund Loh	monn 9 la	nnifor N						Sheet	£ 1		
				guyen	1							
	SAMPLES	& IESIS						SIRAIA				
Depth (m)	l ype No	l est Result	Wate	Reduced Level	Legend	Depth (Thickness		Description				
0.10-0.10 0.10	ES1	VOC 0.8 pr	om	68.45		0.05/	Very loose light brown very Gravel is fine to coarse, ang (flint. (MADE GROUND)	gravelly very sandy s jular to sub-angular b	SILT. Sand is fine to prick, stone slab, co	o coarse. ncrete and		
0.30-0.30	ES3	VOC 0.6 pp	om			(0.73)	Soft orangish brown gravelly medium, sub-angular brick,	y sandy silty CLAY. S mortar and flint. (MA	Sand is fine. Gravel	is fine to WORKED		
0.50-0.70	B2			67.72		0.78	LONDON CLAY FORMATIC	JN)				
-						-	Trial Pit Terminated at (	0.78m				
-						-						
_												
-												
-						-						
-						-						
-												
-						-						
-						-						
_						-						
-						-						
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						-						
General F	Remarks											
1. Pit scann	ed with CAT &	Genny										
2. Hand exc 3. Pit termin	avated to 1.20 ated at base o	m bgl f foundation										
4. TP compl 5. No groun	I. TP completed within footprint of No. 13 Belsize Crescent property. 5. No groundwater encountered											
6. Weather i 7. Backfilled	is clear I with arisings											
A 11 - 11												
All dimens	· · · · · · · · · · · · · · · · · · ·	Contract-	r .		Mothead			Statuo				

# Borehole Log

Project											Borehole	No
13	Belsize (	Crescent									BH0 <sup>·</sup>	1
Job No	4022	Start 12-	12-22 12-22	Ground L reference	evel (m al point) 6	bove local .86	Co-Ordin E	nates 526,787	.0 N 18	34,963.0	Depth (m) 20m	
Client							SPT Ene	ergy Ratio		,	Sheet	
Ec	dmund Le	hmann & Jen	nifer Ngu	yen				7	'2%		1 of 3	6
SA	AMPLES & 1	ESTS							STRATA			ent/ ill
Depth (m)	Type No	Test Result	Reduced Sector	Legend	Depth (Thickness)				Description	I		Instrume Backf
- - - - - - -			68.06		(0.80) 0.80	Grass ov cobble co metal fra	er soft bro ontent. Gra gments. S	wn gravelly avel is sub-a and is fine to	slightly sand ingular fine t o coarse. (M	dy silty CLAY w to coarse brick IADE GROUNE	ith low to medium and mortar with rare ))	
- 1.00	D		67.66		- 1.20	Soft oran sub-angu (MADE C	ngeish bro ular to sub GROUND)	wn slightly g -rounded fin	ravelly slighted to medium	tly sandy silty ( n brick. Sand is	CLAY. Gravel is fine to coarse.	
- - 1.50-1.95 - 1.50 -	SPT SPT (s)	(1, 0, 0, 1, 1, 2) N = 4			<del>,</del> + + + +	Soft to fir CLAY FC	m orangis DRMATIOI	h brown and N)	d light grey s	ilty CLAY. (WE	ATHERED LONDON	
2.00 2.50-2.95	DUT	16 blows										
					(3.30)	3.00Fr m bgl.	equent po	ckets of fine	gravel size	slenite crystals	; (5x5mm) from 3.00	
- 3.50-3.95 3.50	SPT SPT (s)	(1, 2, 2, 2, 3, 3) N = 10				3.50O	ccasional	pockets of co	oarse gravel	l size selenite c	rystals from 3.50 m	
4.00	D		64.36		- 450							
- 4.50-4.95 -	UT	28 blows				Firm orangish brown mottled dark grey CLAY with occasional pockets of brown silt and fine gravel size selenite crystals (crystals 5x5mm). (LONDON CLAY FORMATION)						
- 5.00	0-4.95 UT 28 blows					6.00 P	,	rown from 6	00 m bal -	ockate of color	ite no longer procent	
6.00-6.45 - 6.00 	SPT SPT (s)	(3, 4, 4, 4, 4, 5) N = 17				6.70Be	ecoming d	ark grey fror	n 6.70 m bg	l.	ne no ionger present.	
- 7.00	D											
(.50-7.95		35 blows			* - * -							
8.00												
Bo	ring Progr	ons		Ch	iselling		Water	r Added	Concert D			
Date	Hole Depth (m)	Casing Depth Dia. mm	Water Depth (m)	Remarks	Fr	rom	То	Hours	From	То	General Rem	arks
12-12-22 12-12-22 12-12-22	12-12-22 0.00 0.00 150 Dry 12-12-22 2.50 1.50 150 Dry										1. Borehole scanned Genny 2. Hand excavated sta to 1.20m bgl 3. Borehole terminate scheduled depth 4. BH completed withi Belsize Crescent rear 5. Slow water seepag encountered at 17.90	with CAT & arter pit dug d at n No. 13 garden e m bgl.
All dime	nsions in metre ale 1:56.25	Contractor A2 Site Inv	estigation			Method/ Plant Use	d Moo	lular CP Ri	g Lo	ogged By	CM Status DR.	AFT

# Borehole Log

	Project	lalaiza C	raaaant									Borehole N	0
	IJ E	eisize C	rescent	<u></u>	0	Ground L	evel (m ał	ove local	Co Ordinatos		Dooth	BH01	
	240	22	Finish 14-1	2-2 2-2	2	reference	<sup>point)</sup> 6	.86	E 526,787.	.0 N 184,963.0	Deptr	20m	
	Client	und Loh	monn 9 lon	aifa	r Nau	( <b>o</b> n			SPT Energy Ratio	2%	Shee	t O st O	
l	Euli						[			2,3		2 01 3	
	SAM	PLES&TE	-515							STRATA			ment/ kfill
	Depth (m)	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)			Description			Instru Bac
	9.00 9.00-9.45 9.00	D SPT SPT (s)	(2, 3, 3, 4, 4, 4) N = 15				- - - - - - - -	Firm orar silt and fi FORMAT 9.00Be	ngish brown mottled da ne gravel size selenite FION) <i>(continued)</i> ecoming stiff from 9.00	ark grey CLAY with occasiona crystals (crystals 5x5mm). (L' m bgl, pockets of silt no longe	I pockets ONDON er preser	s of brown CLAY nt.	
-	10.00	D											
	- 10.50-10.95 	UT	38 blows				-						
-	11.00	D					-						
-	12.00 12.00-12.45 12.00	D SPT SPT (s)	(2, 2, 2, 4, 4, 5) N = 15				(15.50)						
	13.00	D					-						
	13.50-13.95	UT	65 blows				-						
-	14.00	D											
-	15.00 15.00-15.45 15.00	SPT SPT (s)	(2, 3, 4, 5, 5, 5) N = 19				-						
-	16.00	D	00 klassa				-						
VUZ1 U396	- 17.00		60 DIOWS										
W, Lelephone: UZU				Ţ			-						
don SE1 /X	Borin		ss and Water	Ob	Servatio	DNS Remarks	Fr	Chi	To Hours	Water Added	Gen	eral Rema	rks
essigation, 1 Westminster Bridge Hoad, L									1 2 2 1 3 3 5 6 6	. Boreho Genny . Hand e o 1.20m . Boreho cheduleo . BH con Gelsize C . Slow w ncounte	ble scanned wit excavated starte bgl ble terminated a d depth npleted within N rescent rear ga rater seepage red at 17.90 m	h CAT & er pit dug at No. 13 arden bgl.	
AZ SITE IN	All dimensio Scale	Il dimensions in metres     Contractor       Scale 1:56.25     A2 Site Investigation							d Modular CP Rig	Logged By CN	1	Status DRAF	Т

# Borehole Log

Ρ	roject 12	Poloizo	Cros	000	+											Borehole	No
J		Deisize		Start	ι 12_1	2-2	2	Ground L	evel (m a	bove local	Co-Ordi	nates			Dept	<u>BH0'</u>	
	24	4022	F	inish	14-1	2-2	2	reference	<sup>point)</sup> 6	.86	E	526,787.	.0 N	184,963.0		20m	
(	Client						ı				SPT En	ergy Ratio	00/		Shee	et	
	Ec	lmund L	.ehma	inn a	& Jen	nife	r Nguy	/en		1			Ζ%ο			3 of 3	
	SA	AMPLES 8	L TEST	S									STRAT	A			nent/ dill
	Depth (m)	Type No		Test Resul	t	Water	Reduced Level	Legend	Depth (Thickness	)			Descripti	on			Instrur Bacl
- 1	8.00 8.00-18.45 8.00	D SPT SPT (s)	(3,	4, 5, 6 N = 2	8, 6, 7) 24				-	17.901 Firm orar silt and fi FORMAT	00 mm cl ngish brov ne gravel 1ON) <i>(col</i>	aystone banc wn mottled da size selenite ntinued)	d. ark grey ( crystals	CLAY with occa (crystals 5x5m	asional pocket m). (LONDON	ts of brown I CLAY	
	9.00 9.50-19.95	D UT		71 blo	ows				-	19.00F and white	From 19.0 e shell fra	m bgl, slightl gments (10x5	y micace 5mm max	ous, with rare   <).	light brown bio	oturbation	
È.							48.86	× ×	20.00								
	Bo Date 14-12-22	ring Proc Hole Depth (m) 19.50	press a Depth 1.50	and <sup>1</sup> Casin	Water <sup>g</sup> Dia. mm 150		Servatic Water Depth (m) 19.4	DNS Remarks		Chi	selling To	Hours	Wat	rer Added	Gen 1. Borehu	eral Rem	vith CAT &
ssugation, i vvesummister pro-															to 1.20m 3. Boreh schedule 4. BH con Belsize 0 5. Slow v encounte	bgl ble terminated depth mpleted within Crescent rear vater seepage ered at 17.90	d at n No. 13 garden e <u>m bq</u> l.
	All dimer Sca	All dimensions in metres Scale 1:56.25 Contractor A2 Site Investigation								Method/ Plant Use	d <b>Mo</b>	dular CP Rig	J	Logged By	CM	Status DR/	AFT

### Borehole Log

Project 13	Bolsizo	Cresce	nt											Borehole	No
Job No	DEISIZE	Start	29-09	9-22	)	Ground L	evel (m a	bove local	Co-Ord	inates			Dept	<u>HP1</u> (m)	
24	1022	Finis	h 29-0	9-22		reference	point) 7	.69	E	526,796	.0 N	184,980.0		1.65r	n
Client					ı				SPT En	ergy Ratio	40/		Shee	et	
Ed	mund L	ehmann	& Jenr	nifer	<sup>•</sup> Nguy	ven				8	4%			1 of 2	1
SA	MPLES &	TESTS									STRA	TA			rent/ fill
Depth (m)	Type No	Te Res	st sult	Water	Reduced Level	Legend	Depth (Thickness	)			Descript	tion			Instrun Back
L					67.66 67.52		0.03	Pink COI	NCRETE	tile. 30% agg ROUND)	regate o	f fine, sub-rounded	l to angula	ar flint /	D 4
- 0.50-0.50 0.50-1.00 0.50	ES1 B2	VOC -	1.2 ppm				- - - - (1.03) -	Loose lig sub-angu Soft orar fine to cc flint. (MA	ht grey s ılar conci gish brov arse, anç DE GRO	ilty sandy GR, rete, flint and l wn gravelly sa gular to sub-ro UND)	AVEL ru brick. Ra andy silty bunded b	bble. Gravel is fine are glass fragments CLAY. Sand is fin- prick, concrete and	to coarse (MADE e to coars occasiona	GROUND) / e. Gravel is al rounded	
1.00		VOC ?	1.2 ppm		66.49		1.20	1.00 - 1.2 to coarse	20mod e, sub-ang	erate cobble o gular degrade	content b ed concre	between 1.00-1.20 ete.	m. Cobble	es are fine	
1.20-1.65 1.20	SPT3	(1, 1, 2 N	2, 2, 2, 3) = 9				- (0.45)	Soft orar	igish brov	wn silty CLAY	. (WEAT	HERED LONDON	CLAY FO	RMATION)	
-					66.04		- - 1.65								_
	ring Prog	ress and	1 Water	Obs	ervatic	nns		Ch	iselling	1	Wa	ter Added			
Date	Hole Depth (m)	Cas Depth	sing Dia. mm	De	Water epth (m)	Remarks	F	rom	То	Hours	Fron	n To	Ger	neral Rem	narks
													1. Pit sca Genny 2. Hand to 1.20m 3. Boreh schedule base of p 4. Comp Belsize ( 5. No gro	anned with C, excavated sta bgl ole terminate d depth, with bit leted within N Crescent fron oundwater en	AT & arter pit dug d at SPT at lo. 13 t garden countered
All dimer Sca	nsions in met ale 1:31.25	res Co A	ontractor 2 Site Inves	stigati	ion			Method/ Plant Use	d Ha	nd Excavated	d	Logged By		Status DR	AFT

# Borehole Log

Project	algorithm     Borehole No       13 Belsize Crescent     WS1												
13 Belsize Cre	escent						WS1						
Job No 24022	Start         28-09-22           Finish         28-09-22	2 G 2 <sup>re</sup>	Fround Lev eference p	vel (m above loo <sup>oint)</sup> 6.89	E 526,784.0	N 184,961.0	Depth (m) 6m						
Client		I			SPT Energy Ratio		Sheet						
Edmund Lehm	ann & Jennife	r Nguye	n		84%		1 of 1						
SAMPLES & TES	TS				STF	RATA		ent/ ill					
Depth (m) Type No	Test jag Result	Reduced Level L	_egend (T	Depth Thickness)	Desc	cription		Instrum Back					
0.00-0.50 B2 0.30-0.30 ES1 0.30 0.50-1.00 B4 1.00-1.00 ES3 1.00 SPT (s) ( 1.20-1.65 SPT5 1.20 SPT (s) ( 1.50-2.00 B6 1.50 SPT (s) ( 2.00-2.45 SPT7 2.00-2.50 B8 2.00 SPT (s) ( 3.00-3.45 SPT9 3.00-3.50 B10 3.00 SPT (s) ( 4.00-4.45 SPT11 4.00 SPT (s) ( 5.00-5.45 SPT12 5.00 SPT (s) ( 4.00-4.45 SPT12 5.00 SPT (s) ( 4.00-4.45 SPT12 5.00 SPT (s) ( 5.00-5.45 SPT (s) (s) ( 5.00-5.45 SPT (s) (s) ( 5.00-5.45 SPT (s)	VOC 0.1 ppm VOC 0.2 ppm VOC 0.3 ppm (1, 1, 1, 1, 1, 1) N = 4 VOC 0.4 ppm (2, 2, 2, 2, 3, 3, 3) N = 11 VOC 0.7 ppm (2, 2, 2, 2, 2, 2, 2) N = 8 (2, 2, 2, 3, 3, 3, 3) N = 12 (2, 2, 2, 2, 2, 2, 2) N = 8	67.89 67.49 66.39 66.39 66.39 66.39 66.39 66.39 66.39 66.39 66.39 66.39 66.39 66.39 67.49		(3.50) Grass cobbi 1.00 1.00 0.30 0.30 0.30 0.30 enco Soft LONI 2.50 6.00 6	over soft brown gravelly slight e content. Sand is fine to coarse concrete and rounded flint. Co IND) 0.50Metal bar approximatel 0.50 m bgl. 0.85Boulder of brick and m intered at 0.60 m bgl. orangish brown mottled grey sl is fine to coarse. Gravel is sub and mortar with rare clinker. (No 0 N CLAY FORMATION) 2.05Large pocket of coarse ter encountered at 2.00 m bgl orangish brown mottled light gr e selenite crystals approximate	tly sandy sty CLAY with r se. Gravel is fine to coarse i ly 20 mm diameter encou ortar approximately 250 r ightly gravelly slightly sar -angular to sub-rounded, MADE GROUND) grey slightly silty CLAY. (Net e selenite crystals approxi - rey CLAY. Occasional poo ely 40 mm. (LONDON CL	nedium low e sub angular porick. (MADE intered between mm diameter indy silty CLAY. fine to medium WEATHERED mately 50 mm ckets of silt and AY FORMATION)						
Boring Progress	and Water Obs	Servation: Water Depth (m)	Remarks	From	Chiselling V To Hours F	Vater Added From To 1 G 2 to 3 3 4 4 5	General Rem Borehole scanned v Jenny Hand excavated sta 1.20m bgl Borehole terminate cheduled depth WS completed with arden of No. 13 Bels rescent property. No groundwater en	marks with CAT & arter pit dug d at in rear ize countered					
All dimensions in metres Scale 1:62.5	Contractor A2 Site Investiga	tion		Metho Plant	l/ Ised Dynamic Sampler	Logged By	Status DR	AFT					

### Borehole Log

	Project 13 R	Borehole No           WS2           No         Start         28-09-22         Ground Level (m above local reference point)         Co-Ordinates         Depth (m)           24022         Finish         28-09-22         Ground Level (m above local reference point)         6.97         E 526,790.0         N 184,963.0         6m													
	Job No	010120 0	Start 28-0	9-2	2	Ground L	evel (m al	oove local	Co-Ordinates		Depth	<u>vvoz</u> (m)			
	240	22	Finish 28-0	9-2	2	reference	<sup>point)</sup> 6	.97	E 526,790.0	) N 184,963.0		6m			
	Client		0.1						SPT Energy Ratio	0/	Sheet				
	Edm	lund Leh	imann & Jeni	nite	r Nguy	/en			04	F /0		1 of 1			
	SAM	PLES & TE	ESTS						S	STRATA			fill		
	Depth (m)	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		C	Description			Instrum Back		
Ē	0.10-0.10 0.10	ES1	VOC 0.4 ppm		68.67		0.30	Grass ov coarse. (	er soft brown slightly gra Gravel is angular to roun	avelly slightly sandy sity CL/ ded, fine to medium brick, r	AY. Sand nortar and	is fine to di flint.			
Ē	0.50-1.00	B2	1000. pp		68.27		0.70	\Frequent	t rootlets. (MADE GROU	IND) idv siltv CLAY, Sand is fine	to coarse	Gravel is			
Ē	0.80-0.80 0.80	ES3	VOC 0.3 ppm			^^ *	-	angular,	fine to medium ceramic,	sub-angular brick and mor	tar. Rare	clinker			
Ę	1.00 1.20-1.65	SPT4	VOC 0.5 ppm			× × ×	(1 50)	Soft to fir	m orangish brown mottle	ed grey slightly silty CLAY.	(WEATHE	ERED /			
Ę	1.20		(1, 1, 1, 1, 1, 1) N = 4				(1.50)	LONDON	I CLAY FORMATION)						
Ē	1.50-2.00	B5 SDT6			66 77	<u> </u>	2 2 20								
Ē	2.00-2.45	3F10	(2, 2, 2, 3, 3, 3) N = 11		00.77	- <u>*</u>	2.20	Firm ora	ngish brown mottled ligh	t grey CLAY. Occasional po	ockets of s	silt and			
Ę	2.45		VOC 0.5 ppm				-	coarse s	elenite crystals approxin	nately 20 mm. (LONDON Cl	LAY FOR	MATION)			
Ē	2 00 2 45	SDT7					-					-			
È	3.00-3.50	B8	(1 1 1 2 2 3)				-								
Ę	0.00		N = 8				-					-			
E	4 00-4 45	SPTO					- (3.80)								
È	4.00	0113	(2, 2, 3, 3, 4, 4) N = 14				_ (3.00)					-			
Ē	4.45		VOC 0.5 ppm				-								
E	5 00-5 45	SPT10					-					-			
Ę	5.00		(2, 3, 3, 3, 4, 4) N = 14				-					-			
Ē							-					-			
-					62.97		6.00	Bore	hole Terminated at 6m						
Ę							-	20/0							
Ē							-								
F							-								
Ē							-								
Ē							-								
-							-								
Ē							-								
1390							-								
							-								
ne:							-								
							-								
šĽ									·						
	Borin	g Progre	Casing	Ob	Servatio Water	DNS		Ch	Iselling	VVater Added	Gene	eral Rem	arks		
	Date Hole	e Deptn (m)	Depth Dia. mm		Depth (m)	Rendiks	Fr	om	TO Hours	From To	1. Boreho	le scanned w	vith CAT &		
ge Koa											Genny Hand e	veavated sta	rter pit dua		
										l l t	o 1.20m l	ogl			
sums											s. Boreno schedulec	le terminated depth	at		
n, 1 We											1. WS cor Belsize Ci	npleted within rescent rear of	n No. 13 garden		
sugatio											5. No grou	undwater end	countered		
	All dimensio	ons in metres	Contractor					Method/		Logged By		Status			
AZ O	Scale	1:62.5	A2 Site Inve	stiga	tion			Plant Use	d Dynamic Sampler	CI	N	DRA	\FT		

# Borehole Log

Project	roject           Borehole No           13 Belsize Crescent         WS3           Ib No         Start         28-09-22         Ground Level (m above local         Co-Ordinates         Depth (m)													
13 E	seisize (		0.2	<b>o</b>	Ground I	evel (m al	oove local	Co-Ordinates		Depth	WS3			
240	)22	Finish 29-0	19-2 19-2	2	reference	<sup>e point)</sup> 6	67	E 526.793.0	N 184.974.0	Dehtil	6m			
Client						-		SPT Energy Ratio	- ,	Sheet				
Edm	nund Leł	nmann & Jen	nife	r Nguy	/en			849	%		1 of 1			
SAM	IPLES & T	ESTS						S	TRATA			ent/		
Depth (m)	Туре	Test	ater	Reduced	Leaend	Depth		De	escription			strume Backfi		
	No	Result	≥	Level		(Thickness)	Light gro		registe of sub-engular, and	roo flint ar		ů.		
				68.47				BROUND)	regate of sub-angular, coa	arse mint gra				
0.50-1.00	B1				× 		Soft to fir	m orangish brown slightly edium concrete and flint.	y gravelly silty CLAY. Grav (MADE GROUND)	vel is sub-a	ngular,			
- 0.80-0.80 - 0.80	ES2	VOC 1 ppm				* 	Firm oran	ngish brown mottled grey	slightly silty CLAY. (LONI	DON CLAY				
- 1.20-1.65 - 1.20	SPT3	(1, 1, 2, 2, 3, 3)				- - -								
1.50-2.00	B4	N = 10			× ×									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
	-3.00-3.45 SPT7 3.00-3.00 D8 SPT7 (5.80)													
- 3.00-3.45 - 3.00-3.00	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $													
- 3.00-3.50 - 3.00	3.00-3.50 B9 3.00 (2, 2, 3, 3, 3, 4) N = 13 Z													
N = 13         N = 13<														
4.00-4.45 4.00	SPT10	(2, 2, 3, 3, 4, 4)				۶ - + +	frequent	pockets of grey and yello	wish orange silt, approxin	nately 20 m	m. Rare			
		N = 14				1- 1- 1-	pockets of	of coarse selenite crystals	s, approximately 20 mm.					
- - 5.00-5.45	SPT11													
5.00 -		(1, 2, 3, 4, 4, 4) N = 15				-								
				62.67		± • 600								
-				02.01		- 0.00	Bore	hole Terminated at 6m						
-						-								
						-								
						-								
						-								
						-								
						-								
						<u>-</u>								
						-								
Borir	ng Progre	ess and Water	Ob	servatio	ons		Ch	selling	Water Added	~	1.5			
Date Hol	e Depth (m)	Casing Depth Dia. mm		Water Depth (m)	Remarks	Fr	om	To Hours	From To	Gene	ral Rema	arks		
										1. Borehole Genny	e scanned w	ith CAT &		
										2. Hand ex to 1.20m by	cavated star gl	rter pit dug		
										3. Borehole scheduled	e terminated depth	at		
										4. WS com Belsize Cre	pleted within	n No. 13 rint		
										5. No groui	ndwater enc	ountered		
All dimensi	ons in metre	s Contractor	otic	tion			Method/		Logged By	M	Status	ст		
Scale	9 1:62.5	AZ SITE INVE	suga	IUUI			Plant Use	u Dynamic Sampler		IVI	DKA	NF 1		
# A2 Site Investigation

## Borehole Log

	Project Borehole No														
	13	Beisize	Cresce		0.0	•	Cround	avel (m. e	hava laad					WS4	ł
		000	Start	29-0	9-2	2	reference	point)				404 070 0	Dept	h (m) 6m	
	24	UZZ	FINIS	n 29-0	9-Z	2		0	.07	E 520,78	13.U IN	164,979.0	01		
	Edr	nund Le	ehmanr	n & Jen	nife	r Nauv	ven			SPT Energy Ratio	84%		Snee	1 of 1	l
	201		TEQTQ		-	<u> </u>	-				OTD A	τл			
$\vdash$	UAI		-								SIRA	174			ment Skfill
	Depth (m)	l ype No	Res	est sult	Wate	Reduced Level	Legend	Depth (Thickness	)		Descript	tion			Bac
Ē	0.12-0.12	ES1				68.57 68.52		0.10	Light gre	y CONCRETE. 50% int gravel. (MADE G	aggregate ROUND)	of sub-angular to	rounded, r	medium to	
Ę	0.12	B2		0.8 ppm		68.37	<u></u>	0.30	Soft brow	vn gravelly sandy sil	ty CLAY. S	and is fine to coar	se. Gravel	is rounded	
F	0.80-0.80	ES3					<u> </u>	-	Soft to fi	ar, fine to coarse flin m orangish brown s	t and concr	ete. (MADE GROU	JND) avel is fine	to	
F	0.80 1.00		VOC VOC	0.6 ppm 1.4 ppm			× × ×	-	medium,	sub-angular concre	te and flint	. (MADE GROUNE	))		
Ē	1.20-1.65	SPT4	(1 1 1	1 1 1 1)			×	-	Firm ora	ngish brown mottled	grey slight	ly silty CLAY. (LO	NDON CLA	Y	
Ē	1.20		(1, 1, 1) N	=4				-		HON)					
F	2 00-2 45	SPT5						-							
E	2.00-2.00	D6	(1.1.5	) <u>) ) )</u>			<u> </u>	-							
F	2.00		(1, 1, 2 N	2, 2, 3, 3) = 10			<u> </u>	-							
F							× × ×	-							
F	3.00-3.45	SPT7	(2.2.5	) ) <u>) )</u>				(5.70)							
Ē	3.00		(2, 2, 2 N	= 10			×	-							
Ē							×	-							
F	4 00-4 45	SPT8					$\xrightarrow{\times} \xrightarrow{\times} \xrightarrow{\times}$	-	100 61	10  From  4.00  m br		amos cliabtly mica		acional to	
È	4.00		(2, 2, 3	3, 3, 4, 4)				-	frequent	pockets of grey and	yellowish o	prange silt, approx	imately 20	mm. Rare	
F	4.50-5.00	B9	N	= 14			<u> </u>	-	pockets	of coarse selenite cr	ystals, app	roximately 10 mm.			
Ę							<u> </u>	-							
E	5.00-5.45	SPT10	(2.2.4				× × × ×	-	5.00 - 6.0	00Pockets of yello	wish orang	je silt no longer pr	esent from	5.00 m.	
Ē	5.00		(2, 2, 2 N	2, 3, 3, 4) = 12				-							
È							×	-							
F						62.67	×	- 6.00	Bor	bolo Terminated at	6m				
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	Date H	ng Progi ole Depth (m)	Ca			Water	Remarks		rom	To Hours	Fron		Gen	eral Rem	narks
			Debru	via. mm		opui (iii)					-		1. Boreho	ole scanned	with CAT &
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								arter pit dug							
minste													3. Boreho	ole terminate	d at
west													4. WS co	mpleted with	in No. 13
ation, 1													Belsize C	Crescent from	t garden countered
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	All dimens	ions in metr	res Co	ontractor	otics	tion			Method/	d Dunomia Com	plor	Logged By	<u></u>	Status	Λ <u>Ε</u> Τ
۲Ľ	Scale 1:62.5         A2 Site Investigation         Plant Used         Dynamic Sampler         CM         DRAFT														

Report ID: A2SI AGS BH LOG FINAL || Project: 24022 13 BELSIZE CRESCENT.GPJ || Library: A2SI AGS 4\_0.GLB || Date: 17 January 2023













Figure 1. Position of WS1

Figure 2. WS1 arisings 0.0-6.0 m bgl.



Figure 3. WS2 arisings 0.0-6.0 m bgl.



Figure 4. WS3 arisings 0.0-6.0 m bgl.



Figure 5. WS4 arisings 0.0-6.0 m bgl.



Figure 6. HP1 arisings 0.0-1.2 m bgl.



Figure 7. TP1 completed to 0.6 m bgl.



Figure 8. TP2 completed to 0.78 m bgl.



Figure 9. Position of BH01.



Figure 10. BH01 samples 0.0 – 20.0 m bgl.

Appendix C: Ground Gas Monitoring Results

Project Number	24022	Install Depth (m)	1
Project Name	Belsize Crescent	Plain (m)	0.5
Borehole Number	HP01	Slotted (m)	0.5
Borehole Depth (m)	1.2		

1st Visit		Time (s)	Flow (I/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
Date	13/10/2022	60	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
Atmospheric Pressure (mb)	1003.00	90	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
Weather Conditions	Cloudy	120	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
Water Level (mbgl)	Dry	150	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.40	20.60	0.00	0.00	0.20	
2nd Visit		Time (s)	Flow (I/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	СМ	30	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
Date	20/10/2022	60	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
Atmospheric Pressure (mb)	998.00	90	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
Weather Conditions	Rainy	120	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.60	20.30	0.00	0.00	0.30	
3rd Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.50	20.20	0.00	0.00	0.20	
Date	26/10/2022	60	0.00	0.00	0.60	20.20	0.00	0.00	0.20	
Atmospheric Pressure (mb)	1004.00	90	0.00	0.00	0.60	20.20	0.00	0.00	0.20	
Weather Conditions	Cloudy	120	0.00	0.00	0.60	20.20	0.00	0.00	0.20	
Water Level (mbgl)	Dry	150	0.00	0.00	0.60	20.20	0.00	0.00	0.20	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.60	20.20	0.00	0.00	0.20	
4th Visit		Time (s)	Flow (l/h)	/%/\ (% v/v)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
Date	03/11/2022	60	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
Atmospheric Pressure (mb)	993.00	90	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
Weather Conditions	Cloudy	120	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.70	20.00	0.00	0.00	0.30	
5th Visit		l ime (s)	Flow (I/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
Date	10/11/2022	60	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
Atmospheric Pressure (mb)	1012.00	90	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
Weather Conditions	Overcast	120	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
Water Level (mbgl)	Dry	150	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.50	20.30	0.00	0.00	0.20	
6th Visit			Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.30	20.40	0.00	0.00	0.10	
Date	17/11/2022	60	0.00	0.00	0.30	20.40	0.00	0.00	0.10	
Atmospheric Pressure (mb)	976.00	90	0.00	0.00	0.30	20.40	0.00	0.00	0.10	
Weather Conditions	Overcast	120	0.00	0.00	0.30	20.40	0.00	0.00	0.10	
Water Level (mbgl)	Dry	150	0.00	0.00	0.30	20.40	0.00	0.00	0.10	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.30	20.40	0.00	0.00	0.10	

Project Number	24022	Install Depth (m)	1
Project Name	Belsize Crescent	Plain (m)	0.5
Borehole Number	WS01	Slotted (m)	0.5
Borehole Depth (m)	6		

1st Visit			Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	H S (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
Date	13/10/2022	60	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
Atmospheric Pressure (mb)	1003.00	90	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
Weather Conditions	Cloudy	120	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
Water Level (mbgl)	Dry	150	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.60	20.10	0.00	0.00	0.10	
2nd Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	CM	30	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
Date	20/10/2022	60	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
Atmospheric Pressure (mb)	998.00	90	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
Weather Conditions	Rainy	120	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
Water Level (mbgl)	Dry	150	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.80	19.70	0.00	0.00	0.20	
3rd Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
Date	24/10/2022	60	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
Atmospheric Pressure (mb)	1004.00	90	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
Weather Conditions	Cloudy	120	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
Water Level (mbgl)	Dry	150	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.50	20.50	0.00	0.00	0.10	
4th Visit		l ime (s)	Flow (l/h)	/%∆ (% v/v)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
Date	03/11/2022	60	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
Atmospheric Pressure (mb)	993.00	90	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
Weather Conditions	Cloudy	120	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.80	19.60	0.00	0.00	0.30	
5th Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
Date	10/11/2022	60	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
Atmospheric Pressure (mb)	1012.00	90	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
Weather Conditions	Overcast	120	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
Water Level (mbgl)	Dry	150	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.60	19.90	0.00	0.00	0.10	
6th Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.50	19.90	0.00	0.00	0.20	
Date	17/11/2022	60	0.00	0.00	0.50	19.90	0.00	0.00	0.20	
Atmospheric Pressure (mb)	976.00	90	0.00	0.00	0.50	19.90	0.00	0.00	0.20	
Weather Conditions	Overcast	120	0.00	0.00	0.50	19.90	0.00	0.00	0.20	
Water Level (mbgl)	Dry	150	0.00	0.00	0.50	19.90	0.00	0.00	0.20	
Base of Well (mbgl)	0.98	180	0.00	0.00	0.50	19.90	0.00	0.00	0.20	

Project Number	24022	Install Depth (m)	1
Project Name	Belsize Crescent	Plain (m)	0.5
Borehole Number	WS02	Slotted (m)	0.5
Borehole Depth (m)	6		

1st Visit			Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
Date	13/10/2022	60	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
Atmospheric Pressure (mb)	1003.00	90	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
Weather Conditions	Cloudy	120	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.90	19.90	0.00	0.00	0.30	
2nd Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	CM	30	0.00	0.00	1.00	19.60	0.00	0.00	0.30	
Date	20/10/2022	60	0.00	0.00	1.00	19.60	0.00	0.00	0.30	
Atmospheric Pressure (mb)	998.00	90	0.00	0.00	1.00	19.60	0.00	0.00	0.30	
Weather Conditions	Rainy	120	0.00	0.00	1.00	19.60	0.00	0.00	0.40	
Water Level (mbgl)	Dry	150	0.00	0.00	1.00	19.60	0.00	0.00	0.40	
Base of Well (mbgl)	1.00	180	0.00	0.00	1.00	19.60	0.00	0.00	0.40	
3rd Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.80	19.80	0.00	0.00	0.40	
Date	24/10/2022	60	0.00	0.00	0.80	19.80	0.00	0.00	0.40	
Atmospheric Pressure (mb)	1004.00	90	0.00	0.00	0.80	19.80	0.00	0.00	0.40	
Weather Conditions	Cloudy	120	0.00	0.00	0.80	19.80	0.00	0.00	0.40	
Water Level (mbgl)	Dry	150	0.00	0.00	0.80	19.80	0.00	0.00	0.40	
Base of Well (mbgl)	1.00	180	0.00		0.80	19.80	0.00	0.00	0.40	
4th Visit		Time (s)	Flow (l/h)	/%∆\ (% v/v)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
Date	03/11/2022	60	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
Atmospheric Pressure (mb)	993.00	90	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
Weather Conditions	Cloudy	120	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
Water Level (mbgl)	Dry	150	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
Base of Well (mbgl)	1.00	180	0.00	0.00	1.10	19.40	0.00	0.00	0.50	
5th Visit		l ime (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
Date	10/11/2022	60	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
Atmospheric Pressure (mb)	1012.00	90	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
Weather Conditions	Overcast	120	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.70	19.90	0.00	0.00	0.30	
6th Visit		Time (s)	Flow (l/h)	Methane Content (%)	Carbon Dioxide (% v/v)	Oxygen (% v/v)	HS (ppm)	CO (ppm)	VOC (ppm)	Comments
Engineer	FA	30	0.00	0.00	0.60	20.10	0.00	0.00	0.30	
Date	17/11/2022	60	0.00	0.00	0.60	20.10	0.00	0.00	0.30	
Atmospheric Pressure (mb)	976.00	90	0.00	0.00	0.60	20.10	0.00	0.00	0.30	
Weather Conditions	Overcast	120	0.00	0.00	0.60	20.10	0.00	0.00	0.30	
Water Level (mbgl)	Dry	150	0.00	0.00	0.60	20.10	0.00	0.00	0.30	
Base of Well (mbgl)	1.00	180	0.00	0.00	0.60	20.10	0.00	0.00	0.30	

Appendix D: Geotechnical Laboratory Testing





### **Contract Number: 61711**

Client Ref: **PO1283** Client PO:

Laboratory Report

> Date Received: 04-10-2022 Date Completed: 15-10-2022 Report Date: 15-10-2022

Client: A2 Site Investigation Limited Broom House, 39/43 London Road, Hadleigh, Benfleet, Essex SS7 2QL

Contract Title: **13 Belsize Crescent** For the attention of: **ALL JOBS** 

**Test Description** 

**Moisture Content** BS 1377:1990 - Part 2 : 3.2 - \* UKAS

**4 Point Liquid & Plastic Limit** BS 1377:1990 - Part 2 : 4.3 & 5.3 - \* UKAS

Disposal of samples for job

Notes: Observations and Interpretations are outside the UKAS Accreditation

- \* denotes test included in laboratory scope of accreditation
- # denotes test carried out by approved contractor
- @ denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

#### Approved Signatories:

Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director) Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) Wayne Honey (Human Resources/ Health and Safety Coordinator)

GEO Site & Testing Services Ltd Units 3-4, Heol Aur, Dafen, Llanelli, Carmarthenshire, Wales SA14 8QN Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

This report has been checked and approved by:



Brendan Evans Office Administrator

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Contract Number         61711           Projest Name         13 Belsize Crescent           Date Tested         11/10/2022           DescRiPTIONS             Sample Mode         Sample         Tope (m)         Descriptions           W81         1         D         2.00         2.45         Brown sity slightly clasky CLAY           W82         1         D         2.00         2.45         Brown sity CLAY           W83         1         D         2.00         2.45         Brown sity CLAY           W83         1         D         2.00         2.45         Brown sity CLAY           W83         1         D         3.00         3.45         Brown sity CLAY           W84         1         D         5.00         5.45         Brown sity CLAY           W84         1	GEOTECHNICAL SITE & TESTIN	G LABORATORIES	NATI	JRAL M	OIST BS	FURE, L PLAS 1377:199	IQUID LIMIT, PLASTIC LIMIT AND STICITY INDEX 90 - Part 2 : 4.3 & 5.3 )	
Project Name         13 Belsize Crescent           Date Tested         11/10/2022           DESCRIPTIONS           Sample Reference         Number Type         Depth (m)         Descriptions           WS2         1         D         2.00         2.45         Brown ally slightly clarky CLAY           WS2         1         D         2.00         2.45         Brown ally slightly clarky CLAY           WS3         1         D         4.00         2.44         Brown ally CLAY           WS3         1         D         2.00         3.45         Brown ally CLAY           WS4         1         D         5.00         3.45         Brown ally CLAY           WS4         1         D         2.00         2.00         2.00           Low         2.00         2.00         2.00         2.00	Contract Number						61711	
Date Tested         11/10/2021           DESCRIPTIONS           Sample+fole Reference         Sample Number         Depth (m)         Descriptions           WS2         1         D         2.00         -         2.46         Brown sity slightly chally CLAY           WS3         1         D         2.00         -         2.46         Brown sity CLAY           WS3         1         D         2.00         -         2.46         Brown sity CLAY           WS3         1         D         4.00         -         4.46         Brown sity CLAY           WS4         1         D         3.00         -         3.46         Brown sity CLAY           WS4         1         D         5.00         -         5.46         Brown sity CLAY           WS4         1         D         0.00         -         6.46         Brown sity CLAY           WS4         1         D         -         -         -         -         -           U         -         -         -         -         -         -         -           U         -         -         -         -         -         -         -         -         - </td <td>Project Name</td> <td></td> <td></td> <td></td> <td></td> <td>13 B</td> <td>elsize Crescent</td> <td></td>	Project Name					13 B	elsize Crescent	
DESCRIPTIONS           Sample Hole Reference         Sample Number         Type Type         Depth (m)         Descriptions           WS1         1         D         2.00         -         2.45         Brown silly slightly clashly CLAV           WS3         1         D         2.00         -         2.45         Brown slightly clashly CLAV           WS3         1         D         4.00         -         4.45         Brown slightly clashly CLAV           WS3         1         D         4.00         -         4.45         Brown slightly clashly	Date Tested					1	11/10/2022	
Sample/hole Reference         Sample Type         Depth (m)         Descriptions           WS1         1         D         2.00         -         2.46         Brown silly slightly cluby CLAY           WS3         1         D         2.00         -         2.46         Brown silly CLAY           WS3         1         D         4.00         -         4.45         Brown silly CLAY           WS4         1         D         5.00         -         5.45         Brown silly CLAY           WS4         1         D         5.00         -         5.45         Brown silly CLAY           WS4         1         D         5.00         -         6.45         Brown silly CLAY           WS4         1         D         5.00         -         6.45         Brown silly CLAY           WS4         1         D         5.00         -         -         -						DES	SCRIPTIONS	
WS1         1         D         2.00         -         2.45         Brown silty CLAY           WS2         1         D         120         -         1.65         Brown silty CLAY           WS3         1         D         2.00         -         2.45         Brown silty CLAY           WS3         1         D         4.00         -         4.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           Image: State	Sample/Hole Reference	Sample Number	Sample Type	D	epth (r	n)	Descriptions	
WS2         1         D         1.20         -         1.65         Brown diaye SILT           WS3         1         D         4.00         -         4.45         Brown sity CLAY           WS4         1         D         3.00         -         3.45         Brown sity CLAY           WS4         1         D         5.00         -         5.45         Brown sity CLAY           WS4         1         D         5.00         -         5.45         Brown sity CLAY           WS4         1         D         5.00         -         5.45         Brown sity CLAY           WS4         1         D         -         -         -         -           Image: State S	WS1	1	D	2.00	-	2.45	Brown silty slightly chalky	/ CLAY
Wis3         1         D         2.00         -         2.43         Brown sity CLAY           Wis4         1         D         3.00         -         3.45         Brown sity CLAY           Wis4         1         D         5.00         -         5.45         Brown sity CLAY           Wis4         1         D         5.00         -         5.45         Brown sity CLAY           Wis4         1         D         5.00         -         5.45         Brown sity CLAY           Wis4         1         D         5.00         -         5.45         Brown sity CLAY           Wis4         1         D         -         -         -         -         -           Image: State	WS2	1	D	1.20	-	1.65	Brown silty CLAY	r
WS4         1         D         3.00         -         3.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           WS4         1         D         5.00         -         5.45         Brown silty CLAY           U         L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L         L         L         L           L         L         L <thl< th=""> <thl< th=""> <thl< th=""></thl<></thl<></thl<>	WS3	1	D	2.00	-	2.45	Brown clayey SIL Brown silty CLAY	
W84         1         D         5.00         -         6.45         Brown silly CLAY           Image: Second	WS4	1	D	3.00	-	3.45	Brown silty CLAY	
	WS4	1	D	5.00	-	5.45	Brown silty CLAY	
					-			
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Operator

Ethan Harper







### Contract Number: 63501

Client Ref: 24022 Client PO:

Laboratory Report

Date Received: 20-12-2022 Date Completed: 12-01-2023

Client: A2 Site Investigation Limited Broom House, 39/43 London Road, Hadleigh, Benfleet, Essex **SS7 2QL** 

Contract Title: 13 Belsize Crescent For the attention of: ALL JOBS

Report Date: 12-01-2023

This report has been checked and approved by:



Brendan Evans Office Administrator

Disposal of samples for job	1
Quick Undrained Triaxial Compression test - single specimen at one confining pressure (100mm or 38mm diameter) BS 1377:1990 - Part 7 : 8 - * UKAS	2
BRE Reduced Suite includes pH, water & acid soluble sulphate and total sulphur Sub-contracted Test	2
<b>4 Point Liquid &amp; Plastic Limit</b> BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	2
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	2
Samples Received - @ Non Accredited Test	32
Test Description	Qty

Notes: Observations and Interpretations are outside the UKAS Accreditation

- \* denotes test included in laboratory scope of accreditation
- # denotes test carried out by approved contractor
- @ denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

#### Approved Signatories:

Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director) Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) Wayne Honey (Human Resources/ Health and Safety Coordinator)

GEOTECHNICAL SITE & TESTING LABORATORIES	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX ( BS 1377:1990 - Part 2 : 4.3 & 5.3 )	
Contract Number	63501	
Project Name	13 Belsize Crescent	
Date Tested	11/01/2023	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	D	epth (i	m)	Descriptions
BH01		D	6.00	-		Brown CLAY
BH01		D	10.00	-		Brown CLAY
				-		
				-		
				-		
				-		
				-		
				-		
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				-		
				-		

Operator

Clayton Jenkins

	GSTI
GEOTECHNICAL	SITE & TESTING LABORATORIES

#### NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377:1990 - Part 2 : 4.3 & 5.3)

Contract Number

### 63501

Project Name

13 Belsize Crescent

#### 11/01/2023





Moisture Content (%)	33
Bulk Density (Mg/m <sup>3</sup> )	1.90
Dry Density (Mg/m <sup>3</sup> )	1.42
Specimen Length (mm)	209.1
Specimen Diamteter (mm)	104.1
Cell Pressure (kPa)	94.5
Deviator Stress (kPa)	151
Undrained Shear Strength (kPa)	75
Failure Strain (%)	8
Mode Of Failure	Plastic
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43





Moisture Content (%)	32
Bulk Density (Mg/m <sup>3</sup> )	1.94
Dry Density (Mg/m <sup>3</sup> )	1.47
Specimen Length (mm)	209.7
Specimen Diamteter (mm)	103.4
Cell Pressure (kPa)	154.5
Deviator Stress (kPa)	193
Undrained Shear Strength (kPa)	97
Failure Strain (%)	7
Mode Of Failure	Plastic
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43







### ANALYTICAL TEST REPORT

Contract no: 117369 Contract name: 13 Belsize Crescent **Client reference:** PO1283 Geo Site and Testing Services Clients name: Clients address: Unit 3 and 4 Heol Aur Dafen Industrial Estate, Dafen Llanelli, Carmarthenshire SA14 8QN Samples received: 05 January 2023 Analysis started: 05 January 2023 Analysis completed: 11 January 2023 Report issued: 11 January 2023

Key

- U UKAS accredited test
- M MCERTS & UKAS accredited test
- \$ Test carried out by an approved subcontractor
- I/S Insufficient sample to carry out test
- N/S Sample not suitable for testing

Approved by:

ANeashand-Bourd

Abbie Neasham-Bourn Senior Reporting Administrator

### SOILS

Lab number			117369-1	117369-2
Sample id			BH01	BH01
Depth (m)			4.00	6.00-6.45
Sample Type			D	SPT
Date sampled			-	-
Test	Method	Units		
рН	CE004 <sup>U</sup>	units	7.6	7.7
Sulphate (2:1 water soluble)	CE061 <sup>U</sup>	mg/l SO <sub>4</sub>	3135	3304
Sulphate (acid extractable)	CE062 <sup>U</sup>	mg/kg SO <sub>4</sub>	29638	13210
Sulphate (acid extractable)	CE062 <sup>U</sup>	% w/w SO <sub>4</sub>	2.96	1.32
Sulphur (total)	CE119	mg/kg S	10063	3673
Sulphur (total)	CE119	% w/w S	1.01	0.37

### METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	рН	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO <sub>4</sub>
CE062	Sulphate (acid extractable)	HCl extract, analysed by ICP-OES	Dry	U	100	mg/kg SO <sub>4</sub>
CE062	Sulphate (acid extractable)	HCl extract, analysed by ICP-OES	Dry	U	0.01	% w/w $SO_4$
CE119	Sulphur (total)	Aqua regia digest, analysed by ICP-OES	Dry		100	mg/kg S
CE119	Sulphur (total)	Aqua regia digest, analysed by ICP-OES	Dry		0.01	% w/w S

### **DEVIATING SAMPLE INFORMATION**

#### Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

#### Key

- N No (not deviating sample)
- Y Yes (deviating sample)
- NSD Sampling date not provided
- NST Sampling time not provided (waters only)
- EHT Sample exceeded holding time(s)
- IC Sample not received in appropriate containers
- HP Headspace present in sample container
- NCF Sample not chemically fixed (where appropriate)
- OR Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
117369-1	BH01	4.00	Y	All (NSD)
117369-2	BH01	6.00-6.45	Y	All (NSD)

### **ADDITIONAL INFORMATION**

#### Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.





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#### Analytical Report Number : 22-14052

Project / Site name:	12 Belsize Crescent	Samples received on:	16/12/2022
Your job number:	24022	Samples instructed on/ Analysis started on:	20/12/2022
Your order number:	PO1282-I2-02	Analysis completed by:	28/12/2022
Report Issue Number:	1	Report issued on:	28/12/2022
Samples Analysed:	2 soil samples		

Elźbieta Suchy Miogazy Specjateth Działu Analiz Raportów Signed:

Elżbieta Suchy Junior Reporting Specialist **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

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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: 22-14052 Project / Site name: 12 Belsize Crescent Your Order No: P01282-12-02

Lab Sample Number		2538508	2538509		
Sample Reference				BH01 (BRE)	BH01 (BRE)
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	9.00
Date Sampled				13/12/2022	13/12/2022
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	19
Total mass of sample received	kg	0.001	NONE	0.5	0.5

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.7	8.2
Total Sulphate as SO4	%	0.005	MCERTS	0.178	0.191
Water Soluble SO4 16nr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.83	0.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	833	902
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	15	96
Total Sulphur	%	0.005	MCERTS	0.093	0.814
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0

#### Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	250	330
Magnesium (leachate equivalent)	mg/l	2.5	NONE	130	170

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





#### Analytical Report Number : 22-14052 Project / Site name: 12 Belsize Crescent

\* 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 *
2538508	BH01 (BRE)	None Supplied	1	Brown clay.
2538509	BH01 (BRE)	None Supplied	9	Brown clay.





#### Analytical Report Number : 22-14052 Project / Site name: 12 Belsize Crescent

#### Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	w	NONE
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
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.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCI followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP- OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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 no 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.





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### Analytical Report Number : 22-87638

Project / Site name:	13 Belsize Crescent	Samples received on:	03/10/2022
Your job number:	24022	Samples instructed on/ Analysis started on:	03/10/2022
Your order number:	PO1285 I2 02	Analysis completed by:	09/10/2022
Report Issue Number:	1	Report issued on:	10/10/2022
Samples Analysed:	4 soil samples		

Sucley Signed:

Elżbieta Suchy Junior Reporting Specialist 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

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

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: 22-87638 Project / Site name: 13 Belsize Crescent

Your	Order	NO:	PO1285	12 02

Lab Sample Number		2445811	2445812	2445813	2445814		
Sample Reference				WS1	WS2	WS3	WS4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-2.50	1.50-2.00	3.00-3.50	4.50-5.00
Date Sampled				28/09/2022	28/09/2022	28/09/2022	28/09/2022
Time Taken				0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	17	19	18
Total mass of sample received	kg	0.001	NONE	1	1	1	1

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.7	7.7	7.6	7.4
Total Sulphate as SO4	%	0.005	MCERTS	5.31	0.057	4.98	0.678
water Soluble SO4 16nr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	3.1	0.34	2.4	2.8
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	3140	336	2400	2820
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	77	4.1	15	21
Total Sulphur	%	0.005	MCERTS	2.66	0.028	1.9	0.365
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0

#### Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	760	48	420	620
Magnesium (leachate equivalent)	mg/l	2.5	NONE	380	24	210	310

U/S = Unsuitable Sample I/S = Insufficient Sample





#### Analytical Report Number : 22-87638 Project / Site name: 13 Belsize Crescent

\* 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 *
2445811	WS1	None Supplied	2.00-2.50	Brown clay and sand.
2445812	WS2	None Supplied	1.50-2.00	Brown clay.
2445813	WS3	None Supplied	3.00-3.50	Brown clay.
2445814	WS4	None Supplied	4.50-5.00	Brown clay.





#### Analytical Report Number : 22-87638 Project / Site name: 13 Belsize Crescent

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
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
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.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCI followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP- OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' 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.

Appendix E: Geo-environmental testing results





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### Analytical Report Number : 22-87424

Project / Site name:	13 Belsize crescent	Samples received on:	30/09/2022
Your job number:	24022	Samples instructed on/ Analysis started on:	30/09/2022
Your order number:	PO1282 I2 01	Analysis completed by:	07/10/2022
Report Issue Number:	1	Report issued on:	07/10/2022
Samples Analysed:	10 soil samples		

Jym Signed:

Adam Fenwick Technical Reviewer For & on behalf of i2 Analytical Ltd.

asbestos - 6 months from reporting

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

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

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: 22-87424 Project / Site name: 13 Belsize crescent

Your Order No: PO1282 I2 01

Lab Sample Number				2444415	2444416	2444417	2444418	2444419
Sample Reference				Garden 1	Garden 2	Garden 3	TP1	TP2
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)				0.10	0.20	0.10	0.10	0.10
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	11	11	19	18
Total mass of sample received	kg	0.001	NONE	1.1	1.1	1.1	0.9	0.9
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI	MWI	MWI	MWI

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.5	7.8	7.9	8.7	7.9
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	44	26	30	340	2300
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.022	0.013	0.015	0.17	1.2
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	22.2	12.8	15.2	171	1170
Organic Matter (automated)	%	0.1	MCERTS	8.4	3.7	4.9	0.2	0.5
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.049	0.022	0.029	< 0.0010	0.0028
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	4.9	2.2	2.9	< 0.1	0.3

#### Speciated PAHs

Speciated FAIIS								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.69	0.66	0.88	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	1.4	1.7	1.8	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	1.3	1.5	1.6	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.91	1.1	0.87	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.1	1.1	1.2	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.4	1.5	1.4	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.5	0.74	0.63	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.99	1.2	1.1	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.6	0.67	0.63	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.71	0.77	0.69	< 0.05	< 0.05
Total PAH Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	9.7	10.9	10.8	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	24	25	18	14	15
Barium (aqua regia extractable)	mg/kg	1	MCERTS	220	410	350	67	92
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	1.4	1	0.95	1.4
Boron (water soluble)	mg/kg	0.2	MCERTS	2.5	0.5	0.3	1.3	2.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.7	0.9	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	U/S	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	U/S	33	36	46	41
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	34	37	46	41
Copper (aqua regia extractable)	mg/kg	1	MCERTS	75	120	65	15	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	760	1200	1700	44	82
Manganese (agua regia extractable)	ma/ka	1	MCERTS	200	270	370	200	230
······································	iiig/kg		HOLINIO	290	370	370	290	230
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.5	1.4	0.6	< 0.3	< 0.3





#### Analytical Report Number: 22-87424 Project / Site name: 13 Belsize crescent Your Order No: P01282 I2 01

Lab Sample Number				2444415	2444416	2444417	2444418	2444419
Sample Reference				Garden 1	Garden 2	Garden 3	TP1	TP2
Sample Number				None Supplied				
Depth (m)				0.10	0.20	0.10	0.10	0.10
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	25	20	19	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	45	60	51	71	65
Zinc (agua regia extractable)	mg/kg	1	MCERTS	500	610	590	210	70





#### Analytical Report Number: 22-87424 Project / Site name: 13 Belsize crescent

Your	Order	NO:	P01282	12 01

Lab Sample Number				2444415	2444416	2444417	2444418	2444419
Sample Reference				Garden 1	Garden 2	Garden 3	TP1	TP2
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				0.10	0.20	0.10	0.10	0.10
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

#### **Monoaromatics & Oxygenates**

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC35 - EC40 EH_CU_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub>	mg/kg mg/kg	0.001	MCERTS MCERTS	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS 1D,AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS 1D,AR</sub> TPH-CWG - Aromatic >EC8 - EC10 <sub>HS,1D,AR</sub>	mg/kg mg/kg mg/kg	0.001 0.001 0.001	MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC8 - EC10 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>	mg/kg mg/kg mg/kg mg/kg	0.001 0.001 0.001 1	MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC7 - EC8 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{EH_{,CU_{2},D_{AR}}}$ TPH-CWG - Aromatic >EC12 - EC16 $_{EH,CU_{2},D_{AR}}$	mg/kg mg/kg mg/kg mg/kg	0.001 0.001 0.001 1 2	MCERTS MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC7 - EC8 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{EH_{,CU_{1D},AR}}$ TPH-CWG - Aromatic >EC12 - EC16 $_{EH_{,CU_{1D},AR}}$ TPH-CWG - Aromatic >EC16 - EC21 $_{EH_{,CU_{1D},AR}}$	mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 11	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 11	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10
$\label{eq:transformatic} > EC5 - EC7 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC7 - EC8 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC8 - EC10 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC10 - EC12 _ {H_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC12 - EC16 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC16 - EC21 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC16 - EC21 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC21 - EC35 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC21 - EC35 _ {BH_,CU_,ID_,AR} \\ \end{array}$	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS	<0.001 <0.001 <0.001 <1.0 <2.0 11 18	<0.001 <0.001 <0.001 <1.0 <2.0 11 25	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 21	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 19	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 13
TPH-CWG - Aromatic >EC5 - EC7 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC12 - EC16 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC16 - EC21 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC21 - EC35 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC3 - EC30 $_{H,CU,1D,AR}$	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10 10 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS NONE	<0.001 <0.001 <0.001 <1.0 <2.0 11 18 <10	<0.001 <0.001 <0.001 <1.0 <2.0 11 25 <10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 21 < 10	<0.001 <0.001 <0.001 <1.0 <2.0 <10 19 <10	<0.001 <0.001 <0.001 <1.0 <2.0 <10 13 <10

U/S = Unsuitable Sample I/S = Insufficient Sample




Lab Sample Number		2444420	2444421	2444422	2444423	2444424		
Sample Reference				WS1	WS2	WS3	WS4	HP1
Sample Number				None Supplied				
Depth (m)	0.30	0.10	0.80	0.12	0.50			
Date Sampled	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	7.4	19	9.8	17
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	1.1
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI	MWI	MWI	MWI

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.6	7.9	8.2	11.4	9.4
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	24	56	930	250	260
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.012	0.028	0.47	0.12	0.13
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	11.9	27.8	467	123	132
Organic Matter (automated)	%	0.1	MCERTS	4.6	4	0.3	1.1	0.8
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.027	0.023	0.0017	0.0066	0.0048
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.7	2.3	0.2	0.7	0.5

#### Speciated PAHs

Lead (aqua regia extractable)

Manganese (aqua regia extractable)

Molybdenum (aqua regia extractable)

Mercury (aqua regia extractable)

mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	0.67	0.72	< 0.05	0.53	0.3
mg/kg	0.05	MCERTS	< 0.05	0.22	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	1.6	2.1	< 0.05	2.2	0.82
mg/kg	0.05	MCERTS	1.5	1.8	< 0.05	2	0.74
mg/kg	0.05	MCERTS	0.9	1.4	< 0.05	1	0.39
mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.56
mg/kg	0.05	MCERTS	1.5	2.1	< 0.05	1.5	0.55
mg/kg	0.05	MCERTS	0.52	0.68	< 0.05	0.71	0.23
mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.45
mg/kg	0.05	MCERTS	0.57	0.85	< 0.05	0.75	0.26
mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	0.71	0.88	< 0.05	1	0.32
mg/kg	0.8	MCERTS	10.3	14	< 0.80	12.5	4.62
mg/kg	1	MCERTS	20	24	14	16	14
mg/kg	1	MCERTS	320	510	88	280	94
mg/kg	0.06	MCERTS	1.1	1.6	1.6	1	1.2
mg/kg	0.2	MCERTS	0.9	1.2	0.9	0.4	1.5
mg/kg	0.2	MCERTS	0.9	1.4	< 0.2	< 0.2	< 0.2
mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
mg/kg	1	NONE	32	38	50	25	48
mg/kg	1	MCERTS	33	38	50	25	48
mg/kg	1	MCERTS	90	130	18	39	24
	mg/kg mg/kg	mg/kg         0.05           mg/kg         0.2           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1	mg/kg         0.05         MCERTS           mg/kg         0.8         MCERTS           mg/kg         1         MCERTS           mg/kg         0.2         MCERTS           mg/k	mg/kg         0.05         MCERTS         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05

mg/kg

mg/kg

mg/kg

mg/kg

1

1

0.3

0.25

MCERTS

MCERTS

MCERTS

MCERTS

830

380

0.8

1.4

1700

490

1.5

1.7

27

220

< 0.3

0.49

440

320

0.8

0.97

210

190

< 0.3

0.83





Lab Sample Number		2444420	2444421	2444422	2444423	2444424		
Sample Reference		WS1	WS2	WS3	WS4	HP1		
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.30	0.10	0.80	0.12	0.50			
Date Sampled	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	28	37	19	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	54	67	77	53	72
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	480	830	74	550	90





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Lab Sample Number		2444420	2444421	2444422	2444423	2444424				
Sample Reference				WS1	WS2	WS3	WS4	HP1		
Sample Number				None Supplied						
Depth (m)				0.30	0.10	0.80	0.12	0.50		
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022		
Time Taken				None Supplied						
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status							
Monoaromatics & Oxygenates										
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Petroleum Hydrocarbons			105070							
TPH-CWG - Aliphatic >EC5 - EC6 <sub>HS_1D_AL</sub>	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8 <sub>HS_1D_AL</sub>	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_{1D}AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >ECID - ECI2 <sub>EH_CU_ID_AL</sub>	mg/kg	1	MCEDIC	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCEDTC	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic > EC21 EC21 EC2E	mg/kg	0	MCEDTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_{CU_1D_{AL}}}$	ma/ka	10	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0		
				< 10	< 10	< 10	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7 HS 1D AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8 HS 1D AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10 HS 1D AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>	mg/kg	1	MCERTS	7	< 1.0	< 1.0	2.4	1.8		
TPH-CWG - Aromatic >EC12 - EC16 <sub>EH_CU_1D_AR</sub>	mg/kg	2	MCERTS	8.6	< 2.0	< 2.0	7.3	6.4		
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	14	12	< 10	11	< 10		
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	34	27	< 10	24	12		
TPH-CWG - Aromatic >EC35 - EC40 <sub>EH_CU_1D_AR</sub>	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10		
TPH Total C5 - C40 <sub>EH_CU+HS_1D_TOTAL</sub>	mg/kg	10	MCERTS	64	39	< 10	45	21		

U/S = Unsuitable Sample I/S = Insufficient Sample





\* 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 *
2444415	Garden 1	None Supplied	0.1	Brown loam and sand with gravel and vegetation.
2444416	Garden 2	None Supplied	0.2	Brown loam with gravel and vegetation.
2444417	Garden 3	None Supplied	0.1	Brown loam with gravel and vegetation.
2444418	TP1	None Supplied	0.1	Brown clay and sand with gravel and brick.
2444419	TP2	None Supplied	0.1	Brown clay and sand with gravel and brick.
2444420	WS1	None Supplied	0.3	Brown loam with gravel and brick.
2444421	WS2	None Supplied	0.1	Brown loam and gravel with brick and vegetation.
2444422	WS3	None Supplied	0.8	Light brown clay and sand.
2444423	WS4	None Supplied	0.12	Brown loam and clay with rubble and gravel
2444424	HP1	None Supplied	0.5	Brown clay and sand with gravel.





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

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Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	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
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.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Fraction Organic Carbon FOC Automated	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method	L009	D	MCERTS
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
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE





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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' 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.

#### Information in Support of Analytical Results

#### List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total





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# Analytical Report Number : 22-87424

Project / Site name:	13 Belsize crescent	Samples received on:	30/09/2022
Your job number:	24022	Samples instructed on/ Analysis started on:	30/09/2022
Your order number:	PO1282 I2 01	Analysis completed by:	07/10/2022
Report Issue Number:	1	Report issued on:	07/10/2022
Samples Analysed:	10 soil samples		

Jym Signed:

Adam Fenwick Technical Reviewer For & on behalf of i2 Analytical Ltd.

asbestos - 6 months from reporting

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

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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.





Your Order No: PO1282 I2 01

Lab Sample Number		2444415	2444416	2444417	2444418	2444419		
Sample Reference				Garden 1	Garden 2	Garden 3	TP1	TP2
Sample Number				None Supplied				
Depth (m)	0.10	0.20	0.10	0.10	0.10			
Date Sampled	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	11	11	19	18
Total mass of sample received	kg	0.001	NONE	1.1	1.1	1.1	0.9	0.9
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI	MWI	MWI	MWI

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.5	7.8	7.9	8.7	7.9
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	44	26	30	340	2300
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.022	0.013	0.015	0.17	1.2
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	22.2	12.8	15.2	171	1170
Organic Matter (automated)	%	0.1	MCERTS	8.4	3.7	4.9	0.2	0.5
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.049	0.022	0.029	< 0.0010	0.0028
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	4.9	2.2	2.9	< 0.1	0.3

### Speciated PAHs

Speciated FAIIS								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.69	0.66	0.88	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	1.4	1.7	1.8	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	1.3	1.5	1.6	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.91	1.1	0.87	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.1	1.1	1.2	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.4	1.5	1.4	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.5	0.74	0.63	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.99	1.2	1.1	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.6	0.67	0.63	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.71	0.77	0.69	< 0.05	< 0.05
Total PAH Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	9.7	10.9	10.8	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	24	25	18	14	15
Barium (aqua regia extractable)	mg/kg	1	MCERTS	220	410	350	67	92
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	1.4	1	0.95	1.4
Boron (water soluble)	mg/kg	0.2	MCERTS	2.5	0.5	0.3	1.3	2.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.7	0.9	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	U/S	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	U/S	33	36	46	41
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	34	37	46	41
Copper (aqua regia extractable)	mg/kg	1	MCERTS	75	120	65	15	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	760	1200	1700	44	82
Manganese (agua regia extractable)	ma/ka	1	MCERTS	200	270	370	200	230
······································	iiig/kg		HOLINIO	290	370	370	290	230
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.5	1.4	0.6	< 0.3	< 0.3





Lab Sample Number				2444415	2444416	2444417	2444418	2444419
Sample Reference				Garden 1	Garden 2	Garden 3	TP1	TP2
Sample Number				None Supplied				
Depth (m)				0.10	0.20	0.10	0.10	0.10
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	25	20	19	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable) mg/kg 1 MCERTS				45	60	51	71	65
Zinc (agua regia extractable)	mg/kg	1	MCERTS	500	610	590	210	70





Your	Order	NO:	P01282	12 01

Lab Sample Number			2444415	2444416	2444417	2444418	2444419
Sample Reference		Garden 1	Garden 2	Garden 3	TP1	TP2	
Sample Number	None Supplied						
Depth (m)		0.10	0.20	0.10	0.10	0.10	
Date Sampled	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022		
Time Taken			None Supplied				
Analytical Parameter (Soil Analysis)							

#### **Monoaromatics & Oxygenates**

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC35 - EC40 EH_CU_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub>	mg/kg mg/kg	0.001	MCERTS MCERTS	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS 1D,AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS 1D,AR</sub> TPH-CWG - Aromatic >EC8 - EC10 <sub>HS,1D,AR</sub>	mg/kg mg/kg mg/kg	0.001 0.001 0.001	MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001	< 0.001 < 0.001 < 0.001
TPH-CWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC8 - EC10 <sub>HS_1D_AR</sub> TPH-CWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>	mg/kg mg/kg mg/kg mg/kg	0.001 0.001 0.001 1	MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0	< 0.001 < 0.001 < 0.001 < 1.0
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC7 - EC8 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{EH_{,CU_{2},D_{AR}}}$ TPH-CWG - Aromatic >EC12 - EC16 $_{EH,CU_{2},D_{AR}}$	mg/kg mg/kg mg/kg mg/kg	0.001 0.001 0.001 1 2	MCERTS MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC7 - EC8 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS_{1D},AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{EH_{,CU_{1D},AR}}$ TPH-CWG - Aromatic >EC12 - EC16 $_{EH_{,CU_{1D},AR}}$ TPH-CWG - Aromatic >EC16 - EC21 $_{EH_{,CU_{1D},AR}}$	mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 11	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 11	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10
$\label{eq:transformatic} > EC5 - EC7 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC7 - EC8 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC8 - EC10 _{HS_,ID_,AR} \\ TPH-CWG - Aromatic > EC10 - EC12 _ {H_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC12 - EC16 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC16 - EC21 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC16 - EC21 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC21 - EC35 _ {BH_,CU_,ID_,AR} \\ TPH-CWG - Aromatic > EC21 - EC35 _ {BH_,CU_,ID_,AR} \\ \end{array}$	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS	<0.001 <0.001 <0.001 <1.0 <2.0 11 18	<0.001 <0.001 <0.001 <1.0 <2.0 11 25	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 21	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 19	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 13
TPH-CWG - Aromatic >EC5 - EC7 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC8 - EC10 $_{HS,1D,AR}$ TPH-CWG - Aromatic >EC10 - EC12 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC12 - EC16 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC16 - EC21 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC21 - EC35 $_{H,CU,1D,AR}$ TPH-CWG - Aromatic >EC3 - EC30 $_{H,CU,1D,AR}$	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.001 0.001 1 2 10 10 10	MCERTS MCERTS MCERTS MCERTS MCERTS MCERTS NONE	<0.001 <0.001 <0.001 <1.0 <2.0 11 18 <10	<0.001 <0.001 <0.001 <1.0 <2.0 11 25 <10	< 0.001 < 0.001 < 0.001 < 1.0 < 2.0 < 10 21 < 10	<0.001 <0.001 <0.001 <1.0 <2.0 <10 19 <10	<pre>&lt; 0.001 &lt; 0.001 &lt; 0.001 &lt; 1.0 &lt; 2.0 &lt; 10 13 &lt; 10</pre>

U/S = Unsuitable Sample I/S = Insufficient Sample





Lab Sample Number				2444420	2444421	2444422	2444423	2444424
Sample Reference				WS1	WS2	WS3	WS4	HP1
Sample Number				None Supplied				
Depth (m)				0.30	0.10	0.80	0.12	0.50
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken	None Supplied							
Analytical Parameter (Soil Analysis)								
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	7.4	19	9.8	17
Total mass of sample received kg 0.001 NONE				0.9	0.9	0.9	0.9	1.1
Asbestos in Soil	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected		
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI	MWI	MWI	MWI

#### **General Inorganics**

pH - Automated	pH Units	N/A	MCERTS	7.6	7.9	8.2	11.4	9.4
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	24	56	930	250	260
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.012	0.028	0.47	0.12	0.13
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	11.9	27.8	467	123	132
Organic Matter (automated)	%	0.1	MCERTS	4.6	4	0.3	1.1	0.8
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.027	0.023	0.0017	0.0066	0.0048
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.7	2.3	0.2	0.7	0.5

#### Speciated PAHs

Lead (aqua regia extractable)

Manganese (aqua regia extractable)

Molybdenum (aqua regia extractable)

Mercury (aqua regia extractable)

mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	0.67	0.72	< 0.05	0.53	0.3
mg/kg	0.05	MCERTS	< 0.05	0.22	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	1.6	2.1	< 0.05	2.2	0.82
mg/kg	0.05	MCERTS	1.5	1.8	< 0.05	2	0.74
mg/kg	0.05	MCERTS	0.9	1.4	< 0.05	1	0.39
mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.56
mg/kg	0.05	MCERTS	1.5	2.1	< 0.05	1.5	0.55
mg/kg	0.05	MCERTS	0.52	0.68	< 0.05	0.71	0.23
mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.45
mg/kg	0.05	MCERTS	0.57	0.85	< 0.05	0.75	0.26
mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05	< 0.05	< 0.05
mg/kg	0.05	MCERTS	0.71	0.88	< 0.05	1	0.32
mg/kg	0.8	MCERTS	10.3	14	< 0.80	12.5	4.62
mg/kg	1	MCERTS	20	24	14	16	14
mg/kg	1	MCERTS	320	510	88	280	94
mg/kg	0.06	MCERTS	1.1	1.6	1.6	1	1.2
mg/kg	0.2	MCERTS	0.9	1.2	0.9	0.4	1.5
mg/kg	0.2	MCERTS	0.9	1.4	< 0.2	< 0.2	< 0.2
mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
mg/kg	1	NONE	32	38	50	25	48
mg/kg	1	MCERTS	33	38	50	25	48
mg/kg	1	MCERTS	90	130	18	39	24
	mg/kg mg/kg	mg/kg         0.05           mg/kg         0.2           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1           mg/kg         1	mg/kg         0.05         MCERTS           mg/kg         0.8         MCERTS           mg/kg         1         MCERTS           mg/kg         0.2         MCERTS           mg/k	mg/kg         0.05         MCERTS         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05         < 0.05           mg/kg         0.05         MCERTS         < 0.05	mg/kg         0.05         MCERTS         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05

mg/kg

mg/kg

mg/kg

mg/kg

1

1

0.3

0.25

MCERTS

MCERTS

MCERTS

MCERTS

830

380

0.8

1.4

1700

490

1.5

1.7

27

220

< 0.3

0.49

440

320

0.8

0.97

210

190

< 0.3

0.83





Lab Sample Number				2444420	2444421	2444422	2444423	2444424
Sample Reference				WS1	WS2	WS3	WS4	HP1
Sample Number		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)	0.30	0.10	0.80	0.12	0.50			
Date Sampled	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	28	37	19	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	MCERTS	54	67	77	53	72		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	480	830	74	550	90





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Lab Sample Number				2444420	2444421	2444422	2444423	2444424
Sample Reference				WS1	WS2	WS3	WS4	HP1
Sample Number				None Supplied				
Depth (m)				0.30	0.10	0.80	0.12	0.50
Date Sampled				29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)		Limit of detection	Accreditation Status					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6 <sub>HS_1D_AL</sub>	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 <sub>HS_1D_AL</sub>	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 <sub>HS_1D_AL</sub>	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 <sub>EH_CU_1D_AL</sub>	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 <sub>EH_CU_1D_AL</sub>	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 <sub>EH_CU_ID_AL</sub>	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_{CU_{1D}AL}}$	mg/kg	0 10	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
	mg/ kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 HS 1D AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $HS_{1D}$ AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 HS 1D AR	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 EH CU 1D AR	mg/kg	1	MCERTS	7	< 1.0	< 1.0	2.4	1.8
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	8.6	< 2.0	< 2.0	7.3	6.4
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	14	12	< 10	11	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	34	27	< 10	24	12
TPH-CWG - Aromatic >EC35 - EC40 <sub>EH_CU_1D_AR</sub>	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH Total C5 - C40 <sub>EH_CU+HS_1D_TOTAL</sub>	mg/kg	10	MCERTS	64	39	< 10	45	21

U/S = Unsuitable Sample I/S = Insufficient Sample





\* 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 *
2444415	Garden 1	None Supplied	0.1	Brown loam and sand with gravel and vegetation.
2444416	Garden 2	None Supplied	0.2	Brown loam with gravel and vegetation.
2444417	Garden 3	None Supplied	0.1	Brown loam with gravel and vegetation.
2444418	TP1	None Supplied	0.1	Brown clay and sand with gravel and brick.
2444419	TP2	None Supplied	0.1	Brown clay and sand with gravel and brick.
2444420	WS1	None Supplied	0.3	Brown loam with gravel and brick.
2444421	WS2	None Supplied	0.1	Brown loam and gravel with brick and vegetation.
2444422	WS3	None Supplied	0.8	Light brown clay and sand.
2444423	WS4	None Supplied	0.12	Brown loam and clay with rubble and gravel
2444424	HP1	None Supplied	0.5	Brown clay and sand with gravel.





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

	T				· · · · · · · · · · · · · · · · · · ·
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	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
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.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	w	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Fraction Organic Carbon FOC Automated	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method	L009	D	MCERTS
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
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE





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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' 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.

#### Information in Support of Analytical Results

#### List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total





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# Analytical Report Number : 22-14052

Project / Site name:	12 Belsize Crescent	Samples received on:	16/12/2022
Your job number:	24022	Samples instructed on/ Analysis started on:	20/12/2022
Your order number:	PO1282-I2-02	Analysis completed by:	28/12/2022
Report Issue Number:	1	Report issued on:	28/12/2022
Samples Analysed:	2 soil samples		

Elźbieta Suchy Miogazy Specjateth Działu Analiz Raportów Signed:

Elżbieta Suchy Junior Reporting Specialist **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

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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.





Lab Sample Number				2538508	2538509
Sample Reference	BH01 (BRE)	BH01 (BRE)			
Sample Number				None Supplied	None Supplied
Depth (m)				1.00	9.00
Date Sampled				13/12/2022	13/12/2022
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	19
Total mass of sample received	kg	0.001	NONE	0.5	0.5

#### General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	8.2
Total Sulphate as SO4	%	0.005	MCERTS	0.178	0.191
water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.83	0.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	833	902
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	15	96
Total Sulphur	%	0.005	MCERTS	0.093	0.814
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0

#### Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	250	330
Magnesium (leachate equivalent)	mg/l	2.5	NONE	130	170

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





\* 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 *
2538508	BH01 (BRE)	None Supplied	1	Brown clay.
2538509	BH01 (BRE)	None Supplied	9	Brown clay.





#### Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	w	NONE
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
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.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCI followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP- OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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 no 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.



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