A2 Site Investigation

13 Belsize Crescent

Factual Report

March 2023

24022-A2SI-XX-XX-RP-X-0001-02

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
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24022-A2SI-XX-XX-RP-X-0001-01	Third Issue	-	02	KG	31/03/2023

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1. Introduction

A2 Site Investigation Limited were instructed by Edmund Lehmann and Jennifer Nguyen to undertake a geotechnical and geo-environmental 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. 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 single-storey basement will be constructed beneath the entire building footprint and extending underneath part of the front and rear garden. The 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[1] (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 12th 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

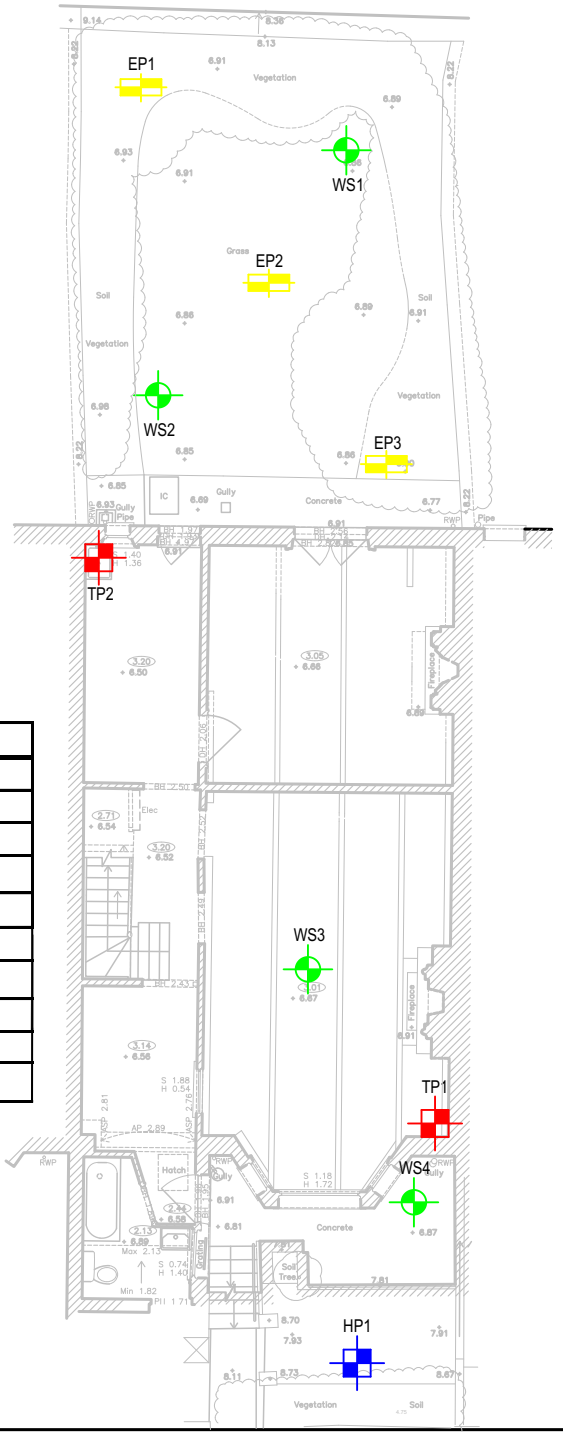
Gas monitoring was undertaken using a calibrated Gas Data GFM436 hand-held gas analyser and a calibrated MiniRae Lite ATEX Photo Ionisation Detector (PID) and a summary is shown in Table 11.1.

Table 11.1 Ground Gas/Vapour Monitoring Results

Exploratory Hole Reference	Monitoring Round Date	Minimum O_2 (%)	Maximum CO_2 (%l)	Maximum CH_4 (%)	H_2S (ppm)	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 O_2 (%)	Maximum CO_2 (%l)	Maximum CH_4 (%)	H_2S (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	03/11/2022	20.00	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



Location ID	Northing	Easting	mOD
EP1	184,958.0	526,787.0	6.92
EP2	184,963.0	526,787.0	6.86
EP3	184,966.0	526,785.0	6.87
WS1	184,961.0	526,784.0	6.89
WS2	184,963.0	526,790.0	6.97
WS3	184,974.0	526,793.0	6.67
WS4	184,979.0	526,793.0	6.67
HP1	184,980.0	526,796.0	6.89
TP1	184,977.0	526,792.0	6.67
TP2	184,965.0	526,792.0	6.50

Key:

- Hand Pit
- Trial Pit
- Window Sample Borehole
- Environmental pit

Rev	Date	By	Chkd	Appd
00	21/11/22	CM	AB	AB

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Client
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Project Title
13 Belsize Crescent

Drawing Title
Exploratory Hole Location Map

A2SI Project Number	Rev
24022	00

Drawing Number
24022-A2SI-XX-XX-DR-Y-0001-00

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

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				BH01
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	12-12-22 / 14-12-22	68.86	E 526,787.0 N 184,963.0	20m
Client		SPT Energy Ratio		Sheet
Edmund Lehmann & Jennifer Nguyen		72%		1 of 3

SAMPLES & TESTS							STRATA	
Depth (m)	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description	Instrument/ Backfill
						(0.80)	Grass over soft brown gravelly slightly sandy silty CLAY with low to medium cobble content. Gravel is sub-angular fine to coarse brick and mortar with rare metal fragments. Sand is fine to coarse. (MADE GROUND)	
				68.06		0.80		
1.00	D			67.66		1.20	Soft orangeish brown slightly gravelly slightly sandy silty CLAY. Gravel is sub-angular to sub-rounded fine to medium brick. Sand is fine to coarse. (MADE GROUND)	
1.50-1.95 1.50	SPT SPT (s)	(1, 0, 0, 1, 1, 2) N = 4					Soft to firm orangish brown and light grey silty CLAY. (WEATHERED LONDON CLAY FORMATION)	
2.00	D							
2.50-2.95	UT	16 blows				(3.30)		
							3.00 ...Frequent pockets of fine gravel size slenite crystals (5x5mm) from 3.00 m bgl.	
3.50-3.95 3.50	SPT SPT (s)	(1, 2, 2, 2, 3, 3) N = 10					3.50 ...Occasional pockets of coarse gravel size selenite crystals from 3.50 m bgl. 3.70 ...Rare claystone fragments from 3.70 m bgl (<50mm).	
4.00	D							
				64.36		4.50		
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	D							
6.00	D						6.00 ...Becoming brown from 6.00 m bgl, pockets of selenite no longer present.	
6.00-6.45 6.00	SPT SPT (s)	(3, 4, 4, 4, 4, 5) N = 17						
							6.70 ...Becoming dark grey from 6.70 m bgl.	
7.00	D							
7.50-7.95	UT	35 blows						
8.00	D							

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks
12-12-22	0.00	0.00	150	Dry	
12-12-22	2.50	1.50	150	Dry	

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. BH completed within No. 13 Belsize Crescent rear garden
5. Slow water seepage encountered at 17.90 m bgl.

All dimensions in metres Scale 1:56.25	Contractor A2 Site Investigation	Method/ Plant Used Modular CP Rig	Logged By CM	Status DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				BH01
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	12-12-22 / 14-12-22	68.86	E 526,787.0 N 184,963.0	20m
Client			SPT Energy Ratio	Sheet
Edmund Lehmann & Jennifer Nguyen			72%	2 of 3

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA	Instrument/ Backfill
Depth (m)	Type No	Test Result					Description	
9.00	D						Firm orangish brown mottled dark grey CLAY with occasional pockets of brown silt and fine gravel size selenite crystals (crystals 5x5mm). (LONDON CLAY FORMATION) *(continued)*	
9.00-9.45	SPT							
9.00	SPT (s)	(2, 3, 3, 4, 4, 4) N = 15						
							9.00 ...Becoming stiff from 9.00 m bgl, pockets of silt no longer present.	
10.00	D							
10.50-10.95	UT	38 blows						
11.00	D							
12.00	D							
12.00-12.45	SPT					(15.50)		
12.00	SPT (s)	(2, 2, 2, 4, 4, 5) N = 15						
13.00	D							
13.50-13.95	UT	65 blows						
14.00	D							
15.00	D							
15.00-15.45	SPT							
15.00	SPT (s)	(2, 3, 4, 5, 5, 5) N = 19						
16.00	D							
16.50-16.95	UT	60 blows						
17.00	D							

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. BH completed within No. 13 Belsize Crescent rear garden
5. Slow water seepage encountered at 17.90 m bgl.

All dimensions in metres Scale 1:56.25	Contractor	Method/ Plant Used	Logged By	Status
	A2 Site Investigation	Modular CP Rig	CM	DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				BH01
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	12-12-22 / 14-12-22	68.86	E 526,787.0 N 184,963.0	20m
Client			SPT Energy Ratio	Sheet
Edmund Lehmann & Jennifer Nguyen			72%	3 of 3

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
18.00	D						17.90 ...100 mm claystone band. Firm orangish brown mottled dark grey CLAY with occasional pockets of brown silt and fine gravel size selenite crystals (crystals 5x5mm). (LONDON CLAY FORMATION) *(continued)*	
18.00-18.45	SPT							
18.00	SPT (s)	(3, 4, 5, 6, 6, 7) N = 24						
19.00	D						19.00 ...From 19.0 m bgl, slightly micaceous, with rare light brown bioturbation and white shell fragments (10x5mm max).	
19.50-19.95	UT	71 blows						
				48.86		20.00		
20.00	D						----- *Borehole Terminated at 20m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks
14-12-22	19.50	1.50	150	19.4	

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. BH completed within No. 13 Belsize Crescent rear garden
5. Slow water seepage encountered at 17.90 m bgl.

All dimensions in metres Scale 1:56.25	Contractor	Method/ Plant Used	Logged By	Status
	A2 Site Investigation	Modular CP Rig	CM	DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				HP1
Job No	Start 29-09-22 / Finish 29-09-22	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022		67.69	E 526,796.0 N 184,980.0	1.65m
Client			SPT Energy Ratio	Sheet
Edmund Lehmann & Jennifer Nguyen			84%	1 of 1

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
Depth (m)	Type No	Test Result						
				67.66		0.03	Pink CONCRETE tile. 30% aggregate of fine, sub-rounded to angular flint gravel. (MADE GROUND)	
				67.52		0.17	Loose light grey silty sandy GRAVEL rubble. Gravel is fine to coarse, sub-angular concrete, flint and brick. Rare glass fragments. (MADE GROUND)	
0.50-0.50 0.50-1.00 0.50	ES1 B2	VOC 1.2 ppm				(1.03)	Soft orangish brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded brick, concrete and occasional rounded flint. (MADE GROUND)	
1.00		VOC 1.2 ppm						
				66.49		1.20	1.00 - 1.20 ...moderate cobble content between 1.00-1.20 m. Cobbles are fine to coarse, sub-angular degraded concrete.	
1.20-1.65 1.20	SPT3	(1, 1, 2, 2, 2, 3) N = 9				(0.45)	Soft orangish brown silty CLAY. (WEATHERED LONDON CLAY FORMATION)	
				66.04		1.65	----- *Borehole Terminated at 1.65m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Pit scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth, with SPT at base of pit
4. Completed within No. 13 Belsize Crescent front garden
5. No groundwater encountered

All dimensions in metres Scale 1:31.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By	Status DRAFT

A2 Site Investigation

Borehole Log

Project					Borehole No
13 Belsize Crescent					WS1
Job No	Start	28-09-22	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Finish	28-09-22	68.89	E 526,784.0 N 184,961.0	6m
Client				SPT Energy Ratio	Sheet
Edmund Lehmann & Jennifer Nguyen				84%	1 of 1

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
0.00-0.50	B2						Grass over soft brown gravelly slightly sandy sity CLAY with medium low cobble content. Sand is fine to coarse. Gravel is fine to coarse sub angular brick, concrete and rounded flint. Cobbles are fine to coarse brick. (MADE GROUND)	
0.30-0.30	ES1							
0.30		VOC 0.1 ppm				(1.00)		
0.50-1.00	B4							
0.50		VOC 0.2 ppm		67.89		1.00	0.30 - 0.50 ...Metal bar approximately 20 mm diameter encountered between 0.30 - 0.50 m bgl.	
1.00-1.00	ES3							
1.00		VOC 0.3 ppm		67.49		1.40	0.60 - 0.85 ...Boulder of brick and mortar approximately 250 mm diameter encountered at 0.60 m bgl.	
1.20-1.65	SPT5							
1.20	SPT (s)	(1, 1, 1, 1, 1, 1) N = 4					Soft, orangish brown mottled grey slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium brick and mortar with rare clinker. (MADE GROUND)	
1.50-2.00	B6							
1.50		VOC 0.4 ppm				(1.10)		
2.00-2.45	SPT7							
2.00-2.50	B8							
2.00	SPT (s)	(2, 2, 2, 3, 3, 3) N = 11		66.39		2.50	Soft to firm orangish brown mottled grey slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)	
2.00		VOC 0.7 ppm					2.00 - 2.05 ...Large pocket of coarse selenite crystals approximately 50 mm diameter encountered at 2.00 m bgl.	
3.00-3.45	SPT9						Firm orangish brown mottled light grey CLAY. Occasional pockets of silt and coarse selenite crystals approximately 40 mm. (LONDON CLAY FORMATION)	
3.00-3.50	B10							
3.00	SPT (s)	(2, 2, 2, 2, 2, 2) N = 8						
4.00-4.45	SPT11							
4.00	SPT (s)	(2, 2, 3, 3, 3, 3) N = 12				(3.50)		
5.00-5.45	SPT12							
5.00	SPT (s)	(2, 2, 2, 2, 2, 2) N = 8						
				62.89		6.00		
							----- *Borehole Terminated at 6m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. WS completed within rear garden of No. 13 Belsize Crescent property.
5. No groundwater encountered

All dimensions in metres Scale 1:62.5	Contractor A2 Site Investigation	Method/ Plant Used Dynamic Sampler	Logged By CM	Status DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				WS2
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	28-09-22 / 28-09-22	68.97	E 526,790.0 N 184,963.0	6m
Client			SPT Energy Ratio	Sheet
Edmund Lehmann & Jennifer Nguyen			84%	1 of 1

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
0.10-0.10	ES1			68.67		0.30	Grass over soft brown slightly gravelly slightly sandy sity CLAY. Sand is fine to coarse. Gravel is angular to rounded, fine to medium brick, mortar and flint. Frequent rootlets. (MADE GROUND)	
0.10		VOC 0.4 ppm						
0.50-1.00	B2			68.27		0.70	Soft orangish brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is angular, fine to medium ceramic, sub-angular brick and mortar. Rare clinker and glass fragments. (MADE GROUND)	
0.80-0.80	ES3							
0.80		VOC 0.3 ppm						
1.00		VOC 0.5 ppm						
1.20-1.65	SPT4					(1.50)	Soft to firm orangish brown mottled grey slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)	
1.20		(1, 1, 1, 1, 1, 1) N = 4						
1.50-2.00	B5							
2.00-2.45	SPT6			66.77		2.20		
2.00		(2, 2, 2, 3, 3, 3) N = 11					Firm orangish brown mottled light grey CLAY. Occasional pockets of silt and coarse selenite crystals approximately 20 mm. (LONDON CLAY FORMATION)	
2.45		VOC 0.5 ppm						
3.00-3.45	SPT7							
3.00-3.50	B8							
3.00		(1, 1, 1, 2, 2, 3) N = 8						
4.00-4.45	SPT9					(3.80)		
4.00		(2, 2, 3, 3, 4, 4) N = 14						
4.45		VOC 0.5 ppm						
5.00-5.45	SPT10							
5.00		(2, 3, 3, 3, 4, 4) N = 14						
				62.97		6.00		
							----- *Borehole Terminated at 6m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. WS completed within No. 13 Belsize Crescent rear garden
5. No groundwater encountered

All dimensions in metres Scale 1:62.5	Contractor	Method/ Plant Used	Logged By	Status
	A2 Site Investigation	Dynamic Sampler	CM	DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				WS3
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	28-09-22 / 29-09-22	68.67	E 526,793.0 N 184,974.0	6m
Client		SPT Energy Ratio		Sheet
Edmund Lehmann & Jennifer Nguyen		84%		1 of 1

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
				68.59		0.08	Light grey CONCRETE. 40% aggregate of sub-angular, coarse flint gravel. (MADE GROUND)	
				68.47		0.20	Soft to firm orangish brown slightly gravelly silty CLAY. Gravel is sub-angular, fine to medium concrete and flint. (MADE GROUND)	
0.50-1.00	B1						Firm orangish brown mottled grey slightly silty CLAY. (LONDON CLAY FORMATION)	
0.80-0.80	ES2							
0.80		VOC 1 ppm						
1.20-1.65	SPT3							
1.20		(1, 1, 2, 2, 3, 3) N = 10						
1.50-2.00	B4							
1.50-1.50	ES5							
1.50		VOC 0.8 ppm						
2.00-2.45	SPT6							
2.00		(1, 1, 2, 2, 2, 2) N = 8						
3.00-3.45	SPT7					(5.80)		
3.00-3.00	D8							
3.00-3.50	B9							
3.00		(2, 2, 3, 3, 3, 4) N = 13						
3.00		VOC 0.8 ppm						
3.50		VOC 1.5 ppm					4.00 - 6.00 ...From 4.00 m bgl, clay becomes slightly micaceous. Occasional to frequent pockets of grey and yellowish orange silt, approximately 20 mm. Rare pockets of coarse selenite crystals, approximately 20 mm.	
4.00-4.45	SPT10							
4.00		(2, 2, 3, 3, 4, 4) N = 14						
5.00-5.45	SPT11							
5.00		(1, 2, 3, 4, 4, 4) N = 15						
				62.67		6.00		
							----- *Borehole Terminated at 6m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. WS completed within No. 13 Belsize Crescent footprint
5. No groundwater encountered

All dimensions in metres Scale 1:62.5	Contractor A2 Site Investigation	Method/ Plant Used Dynamic Sampler	Logged By CM	Status DRAFT

A2 Site Investigation

Borehole Log

Project				Borehole No
13 Belsize Crescent				WS4
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	29-09-22 / 29-09-22	68.67	E 526,793.0 N 184,979.0	6m
Client		SPT Energy Ratio		Sheet
Edmund Lehmann & Jennifer Nguyen		84%		1 of 1

SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description	Instrument/ Backfill
0.12-0.12	ES1			68.57		0.10	Light grey CONCRETE. 50% aggregate of sub-angular to rounded, medium to coarse flint gravel. (MADE GROUND)	
0.12		VOC 0.8 ppm		68.52		0.15	Soft brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is rounded to angular, fine to coarse flint and concrete. (MADE GROUND)	
0.50-1.00	B2			68.37		0.30	Soft to firm orangish brown slightly gravelly silty CLAY. Gravel is fine to medium, sub-angular concrete and flint. (MADE GROUND)	
0.80-0.80	ES3						Firm orangish brown mottled grey slightly silty CLAY. (LONDON CLAY FORMATION)	
0.80		VOC 0.6 ppm						
1.00		VOC 1.4 ppm						
1.20-1.65	SPT4							
1.20		(1, 1, 1, 1, 1, 1) N = 4						
2.00-2.45	SPT5							
2.00-2.00	D6							
2.00		(1, 1, 2, 2, 3, 3) N = 10						
3.00-3.45	SPT7					(5.70)		
3.00		(2, 2, 2, 2, 3, 3) N = 10						
4.00-4.45	SPT8						4.00 - 6.00 ...From 4.00 m bgl, clay becomes slightly micaceous. Occasional to frequent pockets of grey and yellowish orange silt, approximately 20 mm. Rare pockets of coarse selenite crystals, approximately 10 mm.	
4.00		(2, 2, 3, 3, 4, 4) N = 14						
4.50-5.00	B9							
5.00-5.45	SPT10						5.00 - 6.00 ...Pockets of yellowish orange silt no longer present from 5.00 m.	
5.00		(2, 2, 2, 3, 3, 4) N = 12						
				62.67		6.00	----- *Borehole Terminated at 6m* -----	

Boring Progress and Water Observations

Date	Hole Depth (m)	Casing Depth	Casing Dia. mm	Water Depth (m)	Remarks

Chiselling

From	To	Hours

Water Added

From	To

General Remarks

1. Borehole scanned with CAT & Genny
2. Hand excavated starter pit dug to 1.20m bgl
3. Borehole terminated at scheduled depth
4. WS completed within No. 13 Belsize Crescent front garden
5. No groundwater encountered

All dimensions in metres Scale 1:62.5	Contractor A2 Site Investigation	Method/ Plant Used Dynamic Sampler	Logged By CM	Status DRAFT

A2 Site Investigation

Trial Pit Log

Project				Trial Pit No
13 Belsize Crescent				Garden 1
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Start 29-09-22 Finish 29-09-22	68.92	E 526,787.0 N 184,958.0	0.1m
Client				Sheet
Edmund Lehmann & Jennifer Nguyen				1 of 1

SAMPLES & TESTS			Water				STRATA
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	Description
				68.82		(0.10) 0.10	Soft brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is sub-angular, fine to medium brick. (MADE GROUND)
0.10-0.10 0.10	ES1	VOC 0.3 ppm					----- *Trial 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 dimensions in metres Scale 1:6.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By CM	Status DRAFT

A2 Site Investigation

Trial Pit Log

Project				Trial Pit No
13 Belsize Crescent				Garden 2
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Start 29-09-22 Finish 29-09-22	68.86	E 526,787.0 N 184,963.0	0.2m
Client				Sheet
Edmund Lehmann & Jennifer Nguyen				1 of 1

SAMPLES & TESTS			Water				STRATA
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	Description
						(0.20)	Grass over soft brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is sub-angular, fine to medium brick. (MADE GROUND)
				68.66		0.20	
0.20-0.20 0.20	ES1	VOC 0.4 ppm					----- *Trial Pit Terminated at 0.2m* -----

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 dimensions in metres Scale 1:6.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By CM	Status DRAFT

A2 Site Investigation

Trial Pit Log

Project				Trial Pit No
13 Belsize Crescent				Garden 3
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Start 29-09-22 Finish 29-09-22	68.87	E 526,785.0 N 184,966.0	0.1m
Client				Sheet
Edmund Lehmann & Jennifer Nguyen				1 of 1

SAMPLES & TESTS			Water				STRATA
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	Description
				68.77		(0.10) 0.10	Grass over soft brown slightly gravelly slightly sandy silty CLAY with frequent rootlets. Sand is fine to coarse. Gravel is fine to medium, sub-angular brick. (MADE GROUND)
0.10-0.10 0.10	ES1	VOC 0.2 ppm					----- *Trial 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 dimensions in metres Scale 1:6.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By CM	Status DRAFT

A2 Site Investigation

Trial Pit Log

Project				Trial Pit No
13 Belsize Crescent				TP1
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Start 28-09-22 Finish 28-09-22	68.67	E 526,792.0 N 184,977.0	0.6m
Client				Sheet
Edmund Lehmann & Jennifer Nguyen				1 of 1

SAMPLES & TESTS			Water				STRATA
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	Description
				68.60		0.07	Light grey CONCRETE. 50% aggregate of angular, coarse (up to 30 mm diameter) flint and stone gravel. (MADE GROUND)
0.10-0.10 0.10	ES1	VOC 0.6 ppm				(0.53)	Soft to firm orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium brick, mortar and rare clinker. (MADE GROUND)
0.40-0.60	ES2			68.07		0.60	
							----- *Trial Pit Terminated at 0.6m* -----

General Remarks

1. Pit scanned with CAT & Genny
2. Hand excavated to 1.20 m bgl
3. Pit terminated at base of foundation
4. TP completed within footprint of No. 13 Belsize Crescent property.
5. No groundwater encountered
6. Weather is clear
7. Backfilled with arisings

All dimensions in metres Scale 1:31.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By CM	Status DRAFT

A2 Site Investigation

Trial Pit Log

Project				Trial Pit No
13 Belsize Crescent				TP2
Job No	Start / Finish	Ground Level (mOD)	Co-Ordinates	Depth (m)
24022	Start 28-09-22 Finish 28-09-22	68.50	E 526,792.0 N 184,965.0	0.78m
Client				Sheet
Edmund Lehmann & Jennifer Nguyen				1 of 1

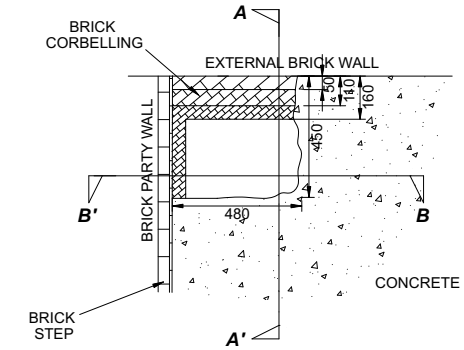
SAMPLES & TESTS			Water	Reduced Level	Legend	Depth (Thickness)	STRATA Description
0.10-0.10 0.10 0.30-0.30 0.30 0.50-0.70	ES1 ES3 B2	 VOC 0.8 ppm VOC 0.6 ppm 		68.45		0.05	Very loose light brown very gravelly very sandy SILT. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular brick, stone slab, concrete and flint. (MADE GROUND)
						(0.73)	Soft orangish brown gravelly sandy silty CLAY. Sand is fine. Gravel is fine to medium, sub-angular brick, mortar and flint. (MADE GROUND - REWORKED LONDON CLAY FORMATION)
				67.72		0.78	----- *Trial Pit Terminated at 0.78m* -----

General Remarks

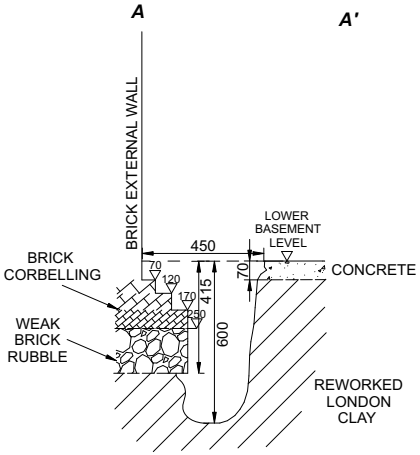
1. Pit scanned with CAT & Genny
2. Hand excavated to 1.20m bgl
3. Pit terminated at base of foundation
4. TP completed within footprint of No. 13 Belsize Crescent property.
5. No groundwater encountered
6. Weather is clear
7. Backfilled with arisings

All dimensions in metres Scale 1:31.25	Contractor A2 Site Investigation	Method/ Plant Used Hand Excavated	Logged By CM	Status DRAFT

TP1 PLAN VIEW

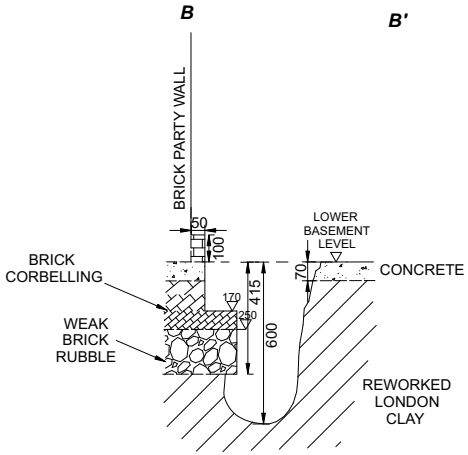


TP1 SECTION A-A'



No groundwater encountered

TP1 SECTION B-B'



No groundwater encountered

TP1 PHOTOGRAPH

0 500mm 1000mm

Rev	Date	By	Chkd	Appd
00	03/10/22	CM	RB	DS

A2 Site Investigation

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Project Title
13 Belsize Crescent

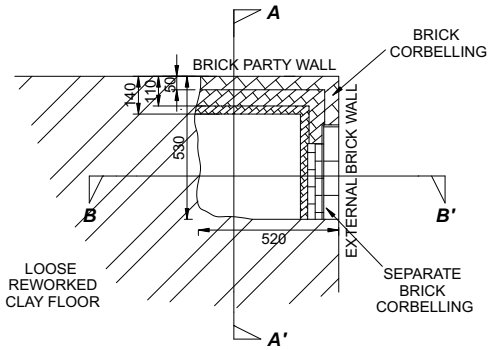
Drawing Title
TP1

A2SI Project Number
24022

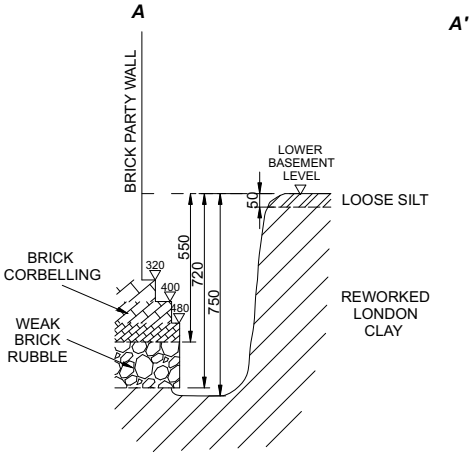
Rev
00

Drawing Number
24022-A2SI-XX-XX-DR-Y-0001-00

TP2 PLAN VIEW

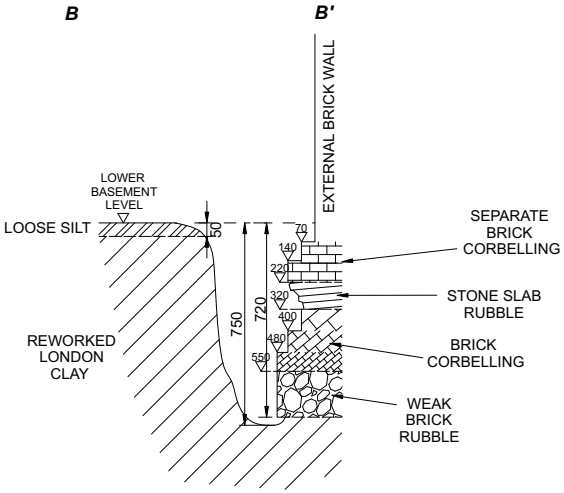


TP2 SECTION A-A'



No groundwater encountered

TP2 SECTION B-B'



No groundwater encountered

TP2 PHOTOGRAPH

0 500mm 1000mm

Rev	Date	By	Chkd	Appd
00	03/10/22	CM	RB	DS

A2 Site Investigation

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Project Title
13 Belsize Crescent

Drawing Title
TP2

A2SI Project Number
24022

Rev
00

Drawing Number
24022-A2SI-XX-XX-DR-Y-0002-00

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 (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	0.40	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 (l/h)**	**Methane Content (%)**	**Carbon Dioxide (% v/v)**	**Oxygen (% v/v)**	**H S (ppm)**	**CO (ppm)**	**VOC (ppm)**	**Comments**
Engineer	CM	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)**	**H S (ppm)**	**CO (ppm)**	**VOC (ppm)**	**Comments**
Engineer	FA	30	0.00	0.00	0.50	20.20	0.00	0.00	0.20	
Date	24/10/2022	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)**	**Methane Content (% v/v)**	**Carbon Dioxide (% v/v)**	**Oxygen (% v/v)**	**H S (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		**Time (s)**	**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	0.50	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		**Time (s)**	**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	0.30	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		**Time (s)**	**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)**	**H S (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)**	**H S (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		**Time (s)**	**Flow (l/h)**	**Methane Content (% v/v)**	**Carbon Dioxide (% v/v)**	**Oxygen (% v/v)**	**H S (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)**	**H S (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)**	**H S (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		**Time (s)**	**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	0.90	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)**	**H S (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)**	**H S (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	0.00	0.80	19.80	0.00	0.00	0.40	
4th Visit		**Time (s)**	**Flow (l/h)**	**Methane Content (% v/v)**	**Carbon Dioxide (% v/v)**	**Oxygen (% v/v)**	**H S (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		**Time (s)**	**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	0.70	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)**	**H S (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

Will Moody
A2 Site Investigation Limited
1 Westminster Bridge Road
London
SE1 7XW

e: will.moody@a2-si.com

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

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

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		

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: 22-87638
Project / Site name: 13 Belsize Crescent
Your Order No: PO1285 I2 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 16hr 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% HCl 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.

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES A PHENNA GROUP COMPANY

Contract Number: 61711

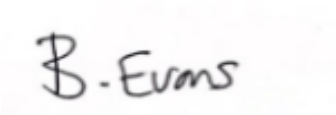
Client Ref: **PO1283**
Client PO:

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**

This report has been checked and approved by:



Brendan Evans
Office Administrator

Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	6
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	6
Disposal of samples for job	1

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

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

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

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

Contract Number	61711
Project Name	13 Belsize Crescent
Date Tested	11/10/2022

DESCRIPTIONS

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
WS1	1	D	2.00	-	2.45	Brown silty slightly chalky CLAY
WS2	1	D	1.20	-	1.65	Brown silty CLAY
WS3	1	D	2.00	-	2.45	Brown clayey SILT
WS3	1	D	4.00	-	4.45	Brown silty CLAY
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

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377:1990 - Part 2 : 4.3 & 5.3)	
Contract Number	61711	
Project Name	13 Belsize Crescent	
Date Tested	11/10/2022	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
WS1	1	D	2.00	-	2.45	23	72	19	53	100	CV Very High Plasticity
WS2	1	D	1.20	-	1.65	25	36	23	13	100	CI Intermediate Plasticity
WS3	1	D	2.00	-	2.45	29	34	25	9	100	ML Low Plasticity
WS3	1	D	4.00	-	4.45	30	46	25	21	100	CI Intermediate Plasticity
WS4	1	D	3.00	-	3.45	31	78	24	54	100	CV Very High Plasticity
WS4	1	D	5.00	-	5.45	28	59	25	34	100	CH High Plasticity
				-							
				-							
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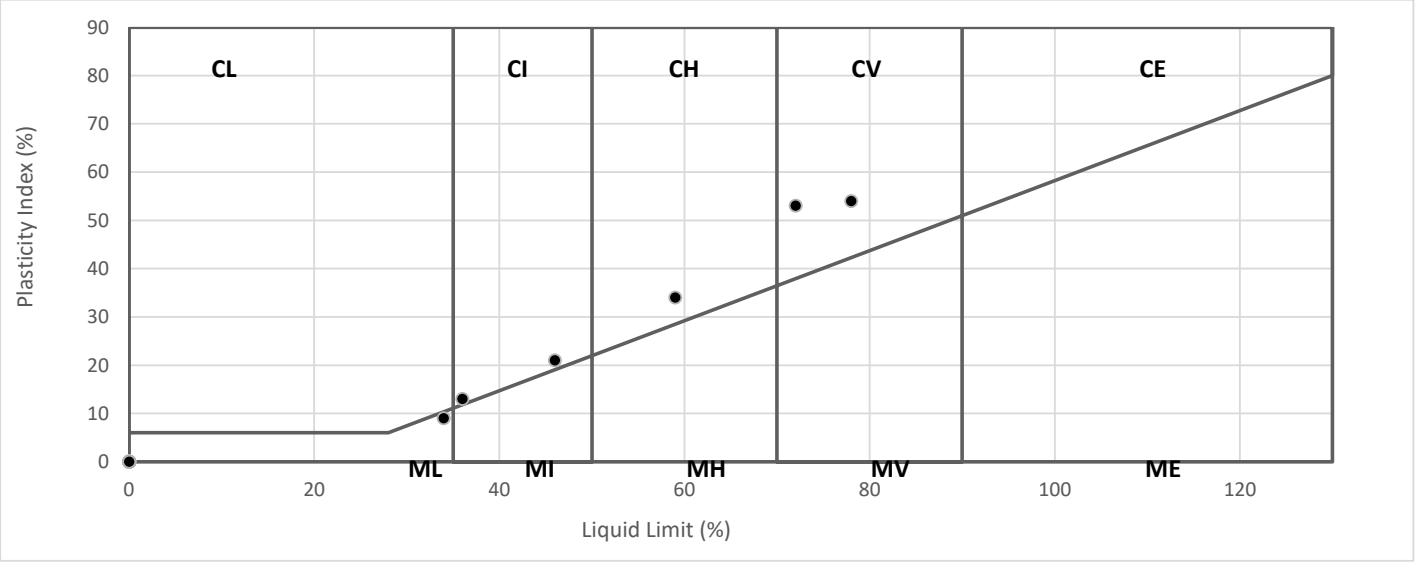
Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:1999+A2:2010



Operator
Ethan Harper

UKAS TESTING
2788

Appendix E: Geo-environmental testing results

Will Moody
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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		

Signed:

Adam Fenwick
Technical Reviewer
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: 22-87424
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	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	Type	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

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 (aqua regia extractable)	mg/kg	1	MCERTS	290	370	370	290	230
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.5	1.4	0.6	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.9	1.4	1	0.8	1.1

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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**					
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 (aqua regia extractable)	mg/kg	1	MCERTS	500	610	590	210	70

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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 >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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	11	11	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	18	25	21	19	13
TPH-CWG - Aromatic >EC35 - EC40 $_{EH\_CU\_1D\_AR}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH Total C5 - C40 $_{EH\_CU+HS\_1D\_TOTAL}$	mg/kg	10	MCERTS	29	36	21	19	13

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

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Project / Site name: 13 Belsize crescent
Your Order No: PO1282 I2 01

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**					
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	Type	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								
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	0.67	0.72	< 0.05	0.53	0.3
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.22	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	1.6	2.1	< 0.05	2.2	0.82
Pyrene	mg/kg	0.05	MCERTS	1.5	1.8	< 0.05	2	0.74
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.9	1.4	< 0.05	1	0.39
Chrysene	mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.56
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.5	2.1	< 0.05	1.5	0.55
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.52	0.68	< 0.05	0.71	0.23
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.1	1.5	< 0.05	1.4	0.45
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.57	0.85	< 0.05	0.75	0.26
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.71	0.88	< 0.05	1	0.32
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	10.3	14	< 0.80	12.5	4.62
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	24	14	16	14
Barium (aqua regia extractable)	mg/kg	1	MCERTS	320	510	88	280	94
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	1.6	1.6	1	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.2	0.9	0.4	1.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.9	1.4	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	32	38	50	25	48
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	33	38	50	25	48
Copper (aqua regia extractable)	mg/kg	1	MCERTS	90	130	18	39	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	830	1700	27	440	210
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	380	490	220	320	190
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.8	1.5	< 0.3	0.8	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.4	1.7	0.49	0.97	0.83

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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	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**					
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 >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 $_{EH\_CU\_1D\_AR}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH Total C5 - C40 $_{EH\_CU+HS\_1D\_TOTAL}$	mg/kg	10	MCERTS	64	39	< 10	45	21

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Analytical Report Number : 22-87424
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 *
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.

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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 (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

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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	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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