



TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

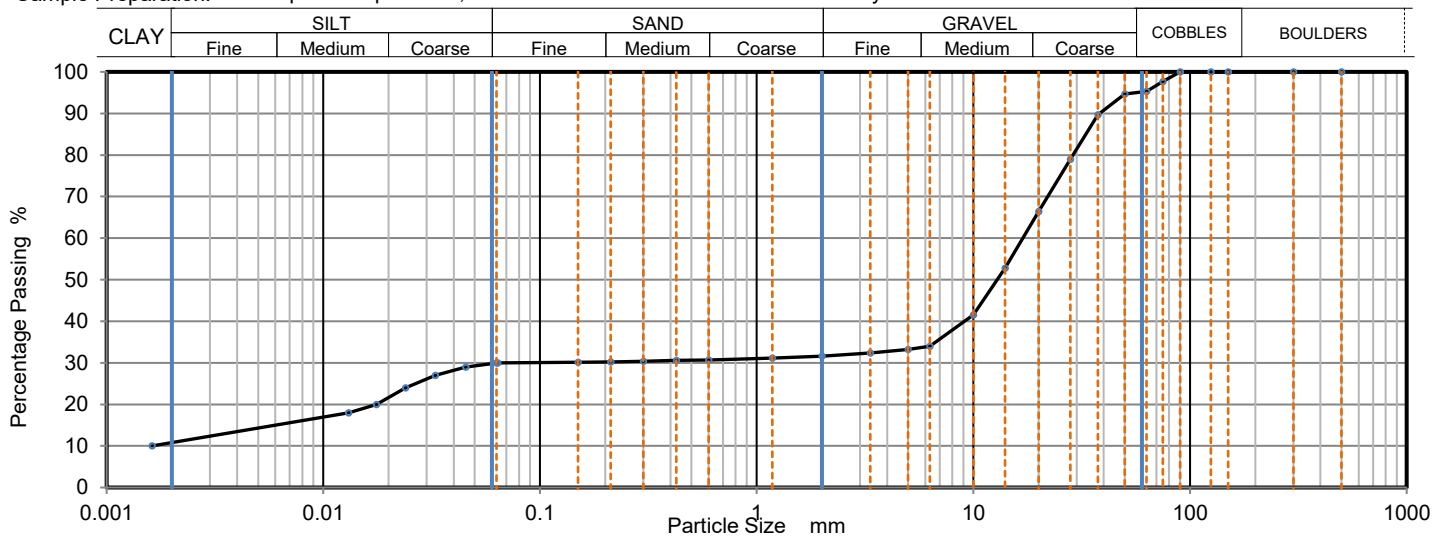
Client: Endeavour Drilling
Client Address: Unit 7 Mapledale Industrial Estate, Maldon Road,
Chelmsford, CM3 6LD
Contact: Matthew Rust
Site Address: STANTEC, Southleigh Road
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: J5443
Job Number: 23-51526-1
Date Sampled: 31/07/2023
Date Received: 15/08/2023
Date Tested: 22/08/2023
Sampled By: Client- MR

Test Results:

Laboratory Reference: 2784027
Hole No.: TP115
Sample Reference: Not Given
Sample Description: Brown clayey GRAVEL with fragments of flintstone
Sample Preparation: Sample was quartered, oven dried at 106.1 °C and broken down by hand.

Depth Top [m]: 1.70
Depth Base [m]: 2.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0637	30
300	100	0.0454	29
150	100	0.0329	27
125	100	0.0240	24
90	100	0.0175	20
75	98	0.0131	18
63	95	0.0106	15
50	95		
37.5	90		
28	79		
20	66		
14	53		
10	42		
6.3	34		
5	33		
3.35	32	Particle density (assumed) 2.65 Mg/m ³	
2	32		
1.18	31		
0.6	31		
0.425	31		
0.3	30		
0.212	30		
0.15	30		
0.063	30		

Sample Proportions	% dry mass
Very coarse	5
Gravel	64
Sand	2
Silt	18
Clay	11

Grading Analysis	
D100	mm 90
D60	mm 16.9
D30	mm 0.103
D10	mm
Uniformity Coefficient	> 10000
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



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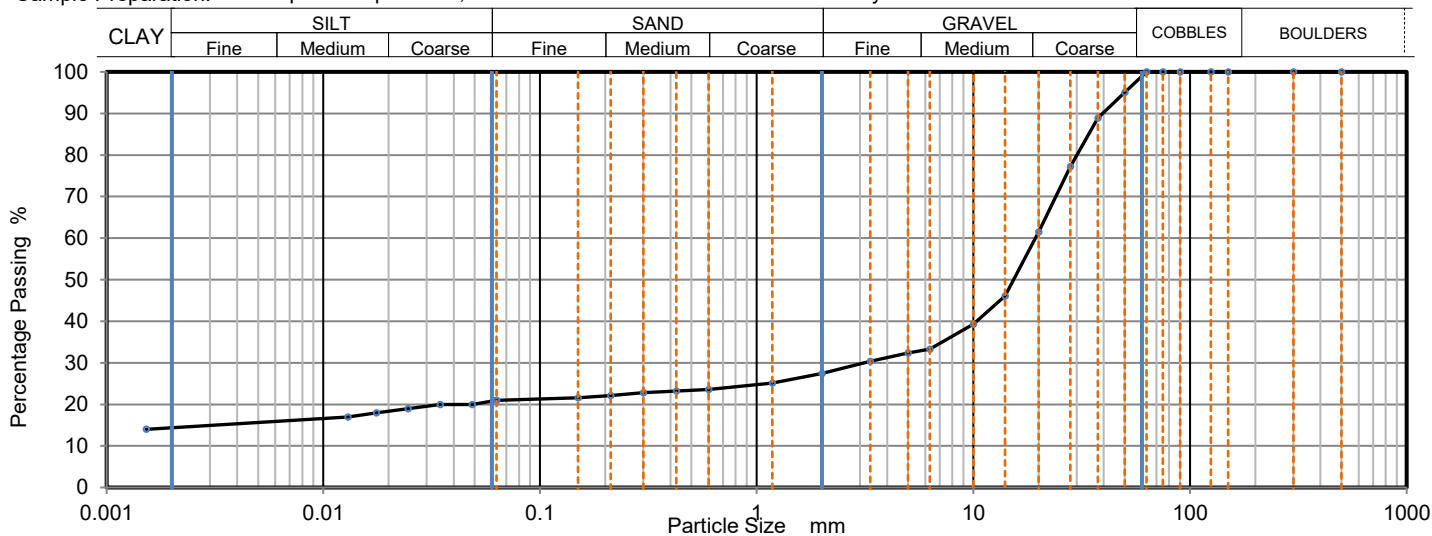
Client: Endeavour Drilling
Client Address: Unit 7 Mapledene Industrial Estate, Maldon Road,
Chelmsford, CM3 6LD
Contact: Matthew Rust
Site Address: STANTEC, Southleigh Road
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: J5443
Job Number: 23-51526-1
Date Sampled: 28/06/2023
Date Received: 15/08/2023
Date Tested: 22/08/2023
Sampled By: Client- MR

Test Results:

Laboratory Reference: 2784028
Hole No.: TP116
Sample Reference: Not Given
Sample Description: Brown clayey GRAVEL with fragments of flintstone
Sample Preparation: Sample was quartered, oven dried at 109.0 °C and broken down by hand.

Depth Top [m]: 0.90
Depth Base [m]: 1.20
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	21
300	100	0.0486	20
150	100	0.0346	20
125	100	0.0246	19
90	100	0.0175	18
75	100	0.0130	17
63	100	0.0015	14
50	95		
37.5	89		
28	77		
20	62		
14	46		
10	39		
6.3	33		
5	32		
3.35	30	Particle density (assumed) 2.65 Mg/m3	
2	27		
1.18	25		
0.6	24		
0.425	23		
0.3	23		
0.212	22		
0.15	22		
0.063	21		

Sample Proportions	% dry mass
Very coarse	0
Gravel	73
Sand	7
Silt	5
Clay	15

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 13000
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:

Signed:

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**TEST CERTIFICATE****DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

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Northampton NN4 7EB



Environmental Science

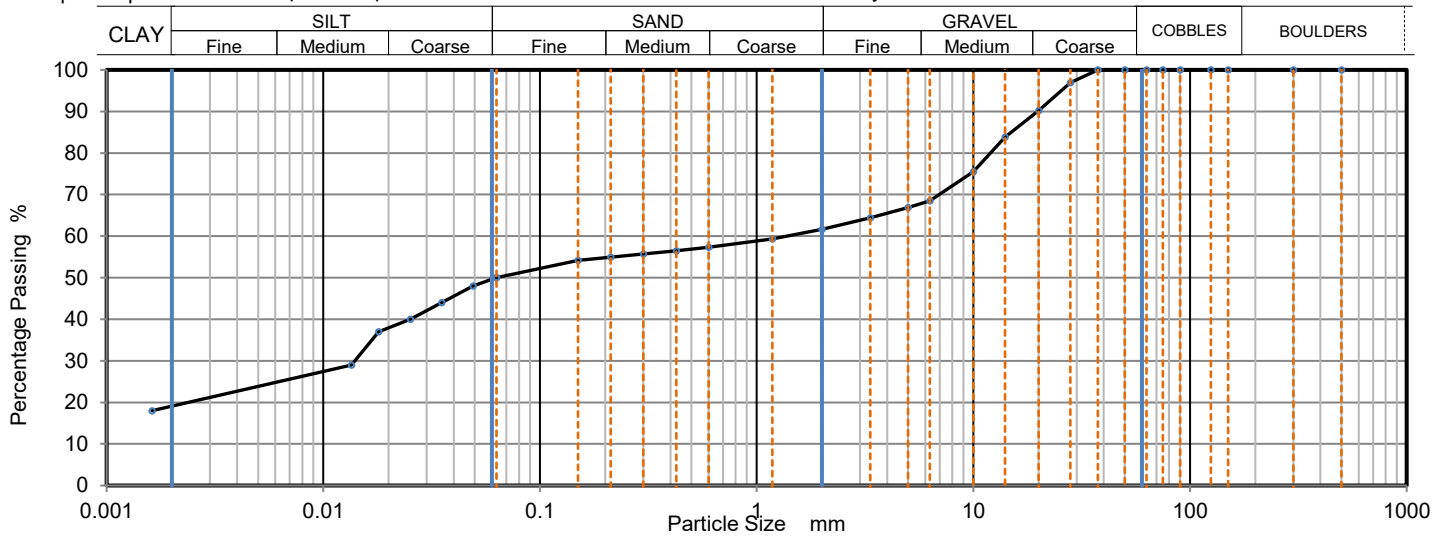
Client: Endeavour Drilling
Client Address: Unit 7 Mapledene Industrial Estate, Maldon Road,
Chelmsford, CM3 6LD
Contact: Matthew Rust
Site Address: STANTEC, Southleigh Road
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: J5443
Job Number: 23-51526-1
Date Sampled: 31/07/2023
Date Received: 15/08/2023
Date Tested: 22/08/2023
Sampled By: Client- MR

Test Results:

Laboratory Reference: 2784030
Hole No.: TP117
Sample Reference: Not Given
Sample Description: Yellowish brown gravelly CLAY with fragments of flintstone
Sample Preparation: Sample was quartered, oven dried at 109.0 °C and broken down by hand.

Depth Top [m]: 1.70
Depth Base [m]: 2.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	50
300	100	0.0490	48
150	100	0.0351	44
125	100	0.0252	40
90	100	0.0180	37
75	100	0.0135	29
63	100	0.0016	18
50	100		
37.5	100		
28	97		
20	90		
14	84		
10	76		
6.3	69		
5	67		
3.35	64	Particle density (assumed) 2.65 Mg/m3	
2	62		
1.18	59		
0.6	57		
0.425	57		
0.3	56		
0.212	55		
0.15	54		
0.063	50		

Sample Proportions	% dry mass
Very coarse	0
Gravel	38
Sand	12
Silt	31
Clay	19

Grading Analysis	
D100	mm 37.5
D60	mm 1.39
D30	mm 0.0138
D10	mm
Uniformity Coefficient	> 860
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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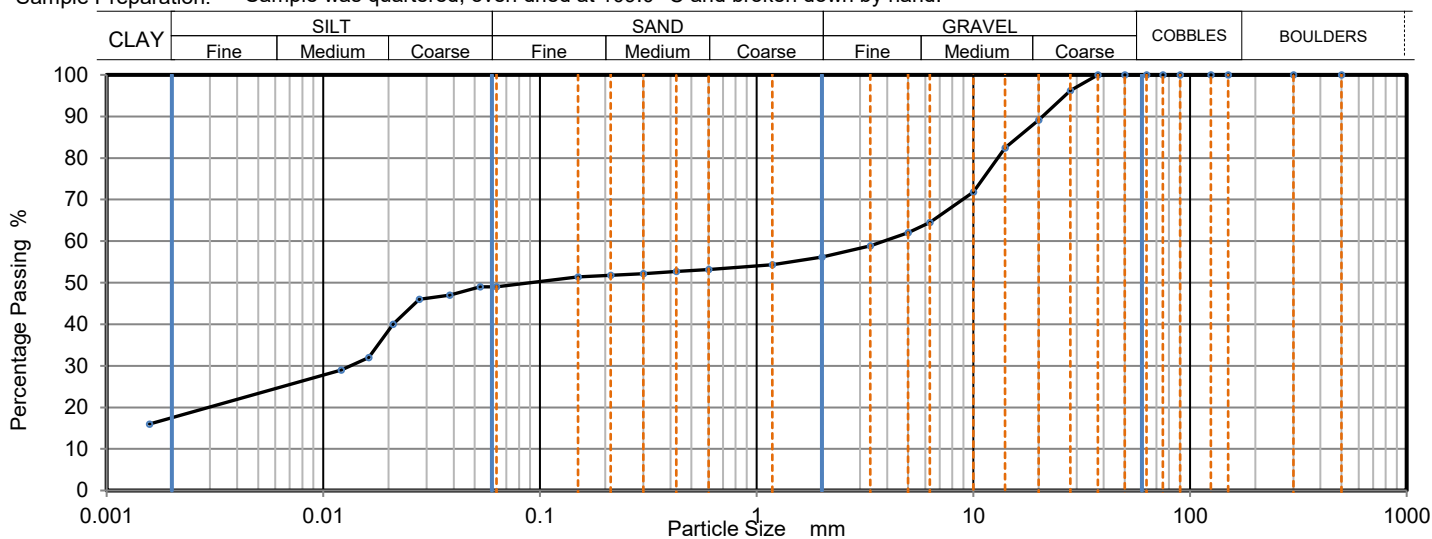
Client: Endeavour Drilling
Client Address: Unit 7 Mapledene Industrial Estate, Maldon Road,
Chelmsford, CM3 6LD
Contact: Matthew Rust
Site Address: STANTEC, Southleigh Road
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: J5443
Job Number: 23-51526-1
Date Sampled: 28/06/2023
Date Received: 15/08/2023
Date Tested: 22/08/2023
Sampled By: Client- MR

Test Results:

Laboratory Reference: 2784031
Hole No.: TP118
Sample Reference: Not Given
Sample Description: Yellowish brown gravelly CLAY with fragments of flintstone
Sample Preparation: Sample was quartered, oven dried at 109.0 °C and broken down by hand.

Depth Top [m]: 0.90
Depth Base [m]: 1.20
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0529	49
300	100	0.0383	47
150	100	0.0277	46
125	100	0.0210	40
90	100	0.0162	32
75	100	0.0121	29
63	100	0.0016	16
50	100		
37.5	100		
28	96		
20	89		
14	82		
10	72		
6.3	65		
5	62		
3.35	59	Particle density (assumed) 2.65 Mg/m ³	
2	56		
1.18	54		
0.6	53		
0.425	53		
0.3	52		
0.212	52		
0.15	51		
0.063	49		

Sample Proportions	% dry mass
Very coarse	0
Gravel	44
Sand	7
Silt	31
Clay	18

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 2500
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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Matthew Rust
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e: reception@i2analytical.com

Analytical Report Number : 23-51008

Project / Site name:	Stantec Southleigh Road	Samples received on:	15/08/2023
Your job number:	J5443	Samples instructed on / Analysis started on:	15/08/2023
Your order number:		Analysis completed by:	22/08/2023
Report Issue Number:	1	Report issued on:	22/08/2023
Samples Analysed:	7 soil samples		

Signed: _____

Dominika Liana
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: 23-51008
Project / Site name: Stantec Southleigh Road

Lab Sample Number				2781426	2781427	2781428	2781429	2781430
Sample Reference				WS101	WS102	WS104	WS105	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	2.00	1.90	2.40	1.40
Date Sampled				21/07/2023	28/06/2023	21/07/2023	20/08/2023	27/08/2023
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	7.3	6.1	12	15	9
Total mass of sample received	kg	0.001	NONE	0.6	0.7	0.4	0.8	0.9

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	5.6	7.7	7.9	8.2	8
Total Sulphate as SO ₄	mg/kg	50	MCERTS	190	170	180	160	160
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.06	0.0157	0.0645	0.011	0.0329
Total Sulphur	mg/kg	50	MCERTS	98	66	54	59	77

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

Analytical Report Number: 23-51008
Project / Site name: Stantec Southleigh Road

Lab Sample Number				2781431	2781432
Sample Reference				WS108	WS109
Sample Number				None Supplied	None Supplied
Depth (m)				1.30	1.20-1.65
Date Sampled				27/08/2023	28/06/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.8	7.3
Total mass of sample received	kg	0.001	NONE	1	0.4

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8	8
Total Sulphate as SO ₄	mg/kg	50	MCERTS	240	150
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0126	0.0399
Total Sulphur	mg/kg	50	MCERTS	97	99

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

Analytical Report Number : 23-51008

Project / Site name: Stantec Southleigh Road

* 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 *
2781426	WS101	None Supplied	1.7	Brown sand with gravel.
2781427	WS102	None Supplied	2	Brown clay with gravel.
2781428	WS104	None Supplied	1.9	Brown clay and sand with gravel.
2781429	WS105	None Supplied	2.4	Brown clay and sand with gravel.
2781430	WS106	None Supplied	1.4	Brown clay with gravel.
2781431	WS108	None Supplied	1.3	Brown clay with gravel.
2781432	WS109	None Supplied	1.20-1.65	Brown clay with gravel.

Analytical Report Number : 23-51008
Project / Site name: Stantec Southleigh Road

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
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
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-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 Sulphur in soil	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

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



Matthew Rust
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WD18 8YS

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e: Matthew@endeavourdrilling.co.uk

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 23-51020

Project / Site name:	STANTEC Southleigh Road	Samples received on:	15/08/2023
Your job number:	J5443	Samples instructed on / Analysis started on:	15/08/2023
Your order number:		Analysis completed by:	22/08/2023
Report Issue Number:	1	Report issued on:	22/08/2023
Samples Analysed:	5 soil samples		

Signed: _____

Dominika Liana
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: 23-51020
Project / Site name: STANTEC Southleigh Road

Lab Sample Number				2781471	2781472	2781473	2781474	2781475
Sample Reference				TP101	TP109	TP111	TP116	TP117
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	2.00	1.50	1.50	0.60
Date Sampled				29/06/2023	20/06/2023	29/06/2023	28/06/2023	30/06/2023
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	8.4	12	5	8.6	8.8
Total mass of sample received	kg	0.001	NONE	0.6	0.8	1	1.1	1

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.1	7.2	7.7	7.4	7.6
Total Sulphate as SO ₄	mg/kg	50	MCERTS	170	180	85	110	99
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0699	0.0343	0.0187	0.0194	0.0236
Total Sulphur	mg/kg	50	MCERTS	76	74	50	55	80

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

Analytical Report Number : 23-51020

Project / Site name: STANTEC Southleigh Road

* 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 *
2781471	TP101	None Supplied	1.4	Brown clay and sand with gravel.
2781472	TP109	None Supplied	2	Brown clay with gravel.
2781473	TP111	None Supplied	1.5	Brown clay and sand with gravel.
2781474	TP116	None Supplied	1.5	Brown clay and sand with gravel.
2781475	TP117	None Supplied	0.6	Brown clay and loam with gravel and vegetation.

Analytical Report Number : 23-51020
Project / Site name: STANTEC Southleigh Road

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
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
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-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 Sulphur in soil	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

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

APPENDIX H

Chemical Analysis Results



Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US

Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	30 June 2023
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	230622-44
Your Reference:	J5443
Location:	Southleigh Road, Havant
Report No:	694519
Order Number:	15538OW

We received 10 samples on Thursday June 22, 2023 and 3 of these samples were scheduled for analysis which was completed on Friday June 30, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28195079	TP 102	ES1	0.20	19/06/2023
28195071	TP 102	ES2	0.60	19/06/2023
28195069	TP 104	ES1	0.30	19/06/2023
28195070	TP 104	ES2	0.50	19/06/2023
28195072	TP 104	ES3	0.80	19/06/2023
28195075	TP 112	ES1	0.20	19/06/2023
28195076	TP 112	ES2	0.40	19/06/2023
28195078	TP 112	ES3	0.90	19/06/2023
28195073	TP 113	ES1	0.20	19/06/2023
28195074	TP 113	ES2	0.60	19/06/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Results Legend

- X** Test
- N** No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

Customer Sample Reference

AGS Reference

Depth (m)

Container

Sample Type

			28195079	28195070	28195076
			TP 102	TP 104	TP 112
			ES1	ES2	ES2
			0.20	0.50	0.40
			1 kg TUB with Handle (ALE260)	250g Amber jar (ALE210)	60g VOC (ALE215)
			S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3	X	X	X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3	X	X	X
EPH CWG GC (S)	All	NDPs: 0 Tests: 3	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 3	X	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 3	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 3	X	X	X
pH	All	NDPs: 0 Tests: 3	X	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3	X	X	X
Sample description	All	NDPs: 0 Tests: 2	X	X	
Total Organic Carbon	All	NDPs: 0 Tests: 3	X	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 3	X	X	X
VOC MS (S)	All	NDPs: 0 Tests: 3	X	X	X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28195079	TP 102	0.20	Light Brown	Sandy Clay Loam	Stones	Vegetation
28195070	TP 104	0.50	Light Brown	Silt Loam	Brick	Vegetation
28195076	TP 112	0.40	Cream	N/A	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

SDG: 230622-44

Report Number: 694519

Superseded Report:

Client Ref.: J5443

Location: Southleigh Road, Havant

VOC MS (S)

[illegible]



CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5$ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP 102ES1 0.20 SOLID 19/06/2023 00:00:00 22/06/2023 05:00:00 230622-44 28195079 TM048	29/06/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP 104ES2 0.50 SOLID 19/06/2023 00:00:00 22/06/2023 05:00:00 230622-44 28195070 TM048	29/06/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP 112ES2 0.40 SOLID 19/06/2023 00:00:00 22/06/2023 05:00:00 230622-44 28195076 TM048	29/06/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Table of Results - Appendix

Method No	Description
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230622-44
Client Ref.: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Test Completion Dates

Lab Sample No(s)	28195079	28195070	28195076
Customer Sample Ref.	TP 102	TP 104	TP 112
AGS Ref.	ES1	ES2	ES2
Depth	0.20	0.50	0.40
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)

Anions by Kone (soil)	28-Jun-2023	28-Jun-2023	28-Jun-2023
Asbestos ID in Solid Samples	29-Jun-2023	29-Jun-2023	29-Jun-2023
EPH CWG GC (S)	28-Jun-2023	29-Jun-2023	28-Jun-2023
GRO by GC-FID (S)	28-Jun-2023	28-Jun-2023	28-Jun-2023
Metals in solid samples by OES	28-Jun-2023	28-Jun-2023	29-Jun-2023
PAH by GCMS	30-Jun-2023	30-Jun-2023	29-Jun-2023
pH	27-Jun-2023	27-Jun-2023	27-Jun-2023
Phenols by HPLC (S)	29-Jun-2023	29-Jun-2023	29-Jun-2023
Sample description	24-Jun-2023	26-Jun-2023	26-Jun-2023
Total Organic Carbon	30-Jun-2023	30-Jun-2023	30-Jun-2023
TPH CWG GC (S)	28-Jun-2023	29-Jun-2023	28-Jun-2023
VOC MS (S)	29-Jun-2023	29-Jun-2023	29-Jun-2023



CERTIFICATE OF ANALYSIS

SDG: 230622-44
Client Ref: J5443

Report Number: 694519
Location: Southleigh Road, Havant

Superseded Report:

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



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Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation: 18 July 2023
Customer: Endeavour Drilling
Sample Delivery Group (SDG): 230624-60
Your Reference: J5443
Location: Southleigh Road, Havant
Report No: 696711
Order Number: 15538OW

This report has been revised and directly supersedes 696234 in its entirety.

We received 4 samples on Saturday June 24, 2023 and 1 of these samples were scheduled for analysis which was completed on Tuesday July 18, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60
Client Ref.: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28212359	WS101 ES1	ES	0.10	21/06/2023
28212360	WS101 ES2	ES	0.60	21/06/2023
28212356	WS104 ES1	ES	0.20	21/06/2023
28212358	WS104 ES2	ES	0.60	21/06/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60
Client Ref.: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Results Legend



Test



No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

28212358

Customer Sample Reference

WS104 ES2

AGS Reference

ES

Depth (m)

0.60

Container

60g VOC (ALE215)
250g Amber Jar (ALE210)
1kg TUB with Handle (ALE260)

Sample Type

S S S

Anions by Kone (soil)

All

NDPs: 0
Tests: 1

X

Asbestos ID in Solid Samples

All

NDPs: 0
Tests: 1

X

EPH CWG GC (S)

All

NDPs: 0
Tests: 1

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 1

X

Hexavalent Chromium (s)

All

NDPs: 0
Tests: 1

X

Metals in solid samples by OES

All

NDPs: 0
Tests: 1

X

PAH by GCMS

All

NDPs: 0
Tests: 1

X

pH

All

NDPs: 0
Tests: 1

X

Phenols by HPLC (S)

All

NDPs: 0
Tests: 1

X

Sample description

All

NDPs: 0
Tests: 1

X

Total Organic Carbon

All

NDPs: 0
Tests: 1

X

TPH CWG GC (S)

All

NDPs: 0
Tests: 1

X

VOC MS (S)

All

NDPs: 0
Tests: 1

X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60

Report Number: 696711

Superseded Report: 696234

Client Ref.: J5443

Location: Southleigh Road, Havant

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
-----------	----------	------	-----------------	--------	-------------	--------	------------	-------------	-------

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28212358	WS104 ES2	0.60	Light Brown	Sandy Clay Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60
Client Ref.: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5&+@@ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref.	WS104 ES2ES	13/07/2023	Renata Bozhkov	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.60										
Sample Type	SOLID										
Date Sampled	21/06/2023 00:00:00										
Date Received	24/06/2023 05:00:00										
SDG	230624-60										
Original Sample	28212358										
Method Number	TM048										



CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60
Client Ref.: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Table of Results - Appendix

Method No	Description
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230624-60
Client Ref.: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Test Completion Dates

Lab Sample No(s)	28212358
Customer Sample Ref.	WS104 ES2
AGS Ref.	ES
Depth	0.60
Type	Soil/Solid (S)

Anions by Kone (soil)	10-Jul-2023
Asbestos ID in Solid Samples	13-Jul-2023
EPH CWG GC (S)	18-Jul-2023
GRO by GC-FID (S)	07-Jul-2023
Hexavalent Chromium (s)	08-Jul-2023
Metals in solid samples by OES	07-Jul-2023
PAH by GCMS	14-Jul-2023
pH	06-Jul-2023
Phenols by HPLC (S)	07-Jul-2023
Sample description	05-Jul-2023
Total Organic Carbon	10-Jul-2023
TPH CWG GC (S)	18-Jul-2023
VOC MS (S)	06-Jul-2023



CERTIFICATE OF ANALYSIS

SDG: 230624-60
Client Ref: J5443

Report Number: 696711
Location: Southleigh Road, Havant

Superseded Report: 696234

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park
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Hawarden
Deeside
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Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation: 14 July 2023
Customer: Endeavour Drilling
Sample Delivery Group (SDG): 230629-53
Your Reference: J5443
Location: Southleigh Road, Havant
Report No: 696362
Order Number: 15538OW

This report has been revised and directly supersedes 696235 in its entirety.

We received 6 samples on Thursday June 29, 2023 and 2 of these samples were scheduled for analysis which was completed on Friday July 14, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28240616	TP105	ESES1	0.20	27/06/2023
28240617	TP105	ESES2	0.70	27/06/2023
28240618	TP105	ESES3	1.50	27/06/2023
28240620	TP106	ESES1	0.20	27/06/2023
28240621	TP106	ESES2	0.50	27/06/2023
28240622	TP106	ESES3	0.90	27/06/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Results Legend

- X** Test
- N** No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

Customer Sample Reference

AGS Reference

Depth (m)

Container

Sample Type

			28240617	28240621
			TP105	TP106
			ESES2	ESES2
			0.70	0.50
			60g VOC (ALE215)	250g Amber jar (ALE210)
			1kg TUB with Handle (ALE260)	60g VOC (ALE215)
			250g Amber jar (ALE210)	1kg TUB with Handle (ALE260)
			1kg TUB with Handle (ALE260)	250g Amber jar (ALE210)
			S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 2	X	X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 2	X	X
EPH CWG GC (S)	All	NDPs: 0 Tests: 2	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 2	X	X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 2	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 2	X	X
PAH by GCMS	All	NDPs: 0 Tests: 2	X	X
pH	All	NDPs: 0 Tests: 2	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 2	X	X
Sample description	All	NDPs: 0 Tests: 2	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 2	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 2	X	X
VOC MS (S)	All	NDPs: 0 Tests: 2	X	X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28240617	TP105	0.70	Dark Brown	Silty Clay Loam	Stones	None
28240621	TP106	0.50	Light Brown	Silty Clay Loam	Stones	Brick

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Results Legend			Customer Sample Ref.		TP105		TP106					
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.70 Soil/Solid (S) 27/06/2023		0.50 Soil/Solid (S) 27/06/2023					
					29/06/2023 230629-53 28240617 ESES2		29/06/2023 230629-53 28240621 ESES2					
Component	LOD/Units	Method										
Moisture Content Ratio (% of as received sample)	%	PM024	15		11							
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M		<0.01 M							
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M		<0.01 M							
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M		<0.015 M							
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M		<0.035 M							
Soil Organic Matter (SOM)	<0.35 %	TM132	0.733 #		0.36 #							
pH	1 pH Units	TM133	8.3 M		7.57 M							
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 M		<0.6 M							
Arsenic	<0.6 mg/kg	TM181	10.2 M		6.83 M							
Cadmium	<0.02 mg/kg	TM181	0.409 M		0.112 M							
Chromium	<0.9 mg/kg	TM181	17.2 M		21.7 M							
Copper	<1.4 mg/kg	TM181	10 M		9.51 M							
Lead	<0.7 mg/kg	TM181	18.7 M		14 M							
Mercury	<0.1 mg/kg	TM181	<0.1 M		<0.1 M							
Nickel	<0.2 mg/kg	TM181	24.7 M		20.4 M							
Selenium	<1 mg/kg	TM181	1.16 #		<1 #							
Vanadium	<0.2 mg/kg	TM181	39.4 #		37.5 #							
Zinc	<1.9 mg/kg	TM181	44 M		36.5 M							
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0955 M		0.0137 M							



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

PAH by GCMS

Results Legend			Customer Sample Ref.		TP105		TP106					
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.70 Soil/Solid (S) 27/06/2023 29/06/2023 230629-53 28240617 ESES2		0.50 Soil/Solid (S) 27/06/2023 29/06/2023 230629-53 28240621 ESES2					
Component	LOD/Units	Method										
Naphthalene-d8 % recovery**	%	TM218	94.9		96.2							
Acenaphthene-d10 % recovery**	%	TM218	92.9		92.5							
Phenanthrene-d10 % recovery**	%	TM218	90.9		88.8							
Chrysene-d12 % recovery**	%	TM218	94.1		94.1							
Perylene-d12 % recovery**	%	TM218	89.6		95.3							
Naphthalene	<9 µg/kg	TM218	<9		<9							
Acenaphthylene	<12 µg/kg	TM218	<12		<12							
Acenaphthene	<8 µg/kg	TM218	<8		<8							
Fluorene	<10 µg/kg	TM218	<10		<10							
Phenanthrene	<15 µg/kg	TM218	<15		<15							
Anthracene	<16 µg/kg	TM218	<16		<16							
Fluoranthene	<17 µg/kg	TM218	<17		<17							
Pyrene	<15 µg/kg	TM218	<15		<15							
Benz(a)anthracene	<14 µg/kg	TM218	<14		<14							
Chrysene	<10 µg/kg	TM218	<10		<10							
Benzo(b)fluoranthene	<15 µg/kg	TM218	<15		<15							
Benzo(k)fluoranthene	<14 µg/kg	TM218	<14		<14							
Benzo(a)pyrene	<15 µg/kg	TM218	<15		<15							
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	<18		<18							
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23		<23							
Benzo(g,h,i)perylene	<24 µg/kg	TM218	<24		<24							
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	<118		<118							



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

VOC MS (S)

Results Legend			Customer Sample Ref.		TP105		TP106													
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.70 Soil/Solid (S) 27/06/2023	0.50 Soil/Solid (S) 27/06/2023															
M	mCERTS accredited.																			
aq	Aqueous / settled sample.																			
diss.filt	Dissolved / filtered sample.																			
tot.unfilt	Total / unfiltered sample.																			
* Subcontracted - refer to subcontractor report for accreditation status.				29/06/2023 230629-53 28240617 ESES2	29/06/2023 230629-53 28240621 ESES2															
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery																				
(F) Trigger breach confirmed																				
1-4*§@ Sample deviation (see appendix)																				
Component	LOD/Units	Method																		
Dibromofluoromethane**	%	TM116	108		99.1															
Toluene-d8**	%	TM116	98.5		97.8															
4-Bromofluorobenzene**	%	TM116	98.2		98.2															
Methyl Tertiary Butyl Ether	<0.5 µg/kg	TM116	<0.5		<0.5															
Benzene	<1 µg/kg	TM116	<1		<1															
Toluene	<1 µg/kg	TM116	1.69		<1															
Ethylbenzene	<1 µg/kg	TM116	<1		<1															
p/m-Xylene	<2 µg/kg	TM116	<2		<2															
o-Xylene	<2 µg/kg	TM116	<2		<2															
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02		<0.02															
Sum of BTEX	<7 µg/kg	TM116	<7		<7															



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5$ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP106ESES2 0.70 SOLID 27/06/2023 00:00:00 29/06/2023 05:00:00 230629-53 28240617 TM048	12/07/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP106ESES2 0.50 SOLID 27/06/2023 00:00:00 29/06/2023 05:00:00 230629-53 28240621 TM048	13/07/2023	Renata Bozhkov	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Table of Results - Appendix

Method No	Description
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-53
Client Ref.: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Test Completion Dates

Lab Sample No(s)	28240617	28240621
Customer Sample Ref.	TP105	TP106
AGS Ref.	ESES2	ESES2
Depth	0.70	0.50
Type	Soil/Solid (S)	Soil/Solid (S)

Anions by Kone (soil)	11-Jul-2023	11-Jul-2023
Asbestos ID in Solid Samples	12-Jul-2023	13-Jul-2023
EPH CWG GC (S)	14-Jul-2023	14-Jul-2023
Hexavalent Chromium (s)	08-Jul-2023	08-Jul-2023
Metals in solid samples by OES	10-Jul-2023	10-Jul-2023
PAH by GCMS	14-Jul-2023	13-Jul-2023
pH	07-Jul-2023	06-Jul-2023
Phenols by HPLC (S)	07-Jul-2023	07-Jul-2023
Sample description	05-Jul-2023	05-Jul-2023
Total Organic Carbon	12-Jul-2023	12-Jul-2023
TPH CWG GC (S)	14-Jul-2023	14-Jul-2023
VOC MS (S)	10-Jul-2023	10-Jul-2023



CERTIFICATE OF ANALYSIS

SDG: 230629-53
Client Ref: J5443

Report Number: 696362
Location: Southleigh Road, Havant

Superseded Report: 696235

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

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General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



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Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation: 18 July 2023
Customer: Endeavour Drilling
Sample Delivery Group (SDG): 230629-55
Your Reference: J5443
Location: Southleigh Road, Havant
Report No: 696712
Order Number: 15538OW

This report has been revised and directly supersedes 696230 in its entirety.

We received 8 samples on Thursday June 29, 2023 and 2 of these samples were scheduled for analysis which was completed on Tuesday July 18, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28240957	WS103		0.10 - 0.30	26/06/2023
28240958	WS103		0.50 - 0.60	26/06/2023
28240959	WS103		1.10 - 1.20	26/06/2023
28240960	WS106		0.10 - 0.30	27/06/2023
28240961	WS106		0.40 - 0.50	27/06/2023
28240962	WS106		0.90 - 1.00	27/06/2023
28240964	WS108		0.10 - 0.20	27/06/2023
28240965	WS108		0.40 - 0.50	27/06/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Results Legend

- X** Test
- N** No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

Customer Sample Reference

AGS Reference

Depth (m)

Container

Sample Type

28240958

28240965

WS103

WS108

0.50 - 0.60

0.40 - 0.50

1kg Cardboard Container
250g Amber Jar (ALE210)
60g VOC (ALE215)
1kg TUB with Handle (ALE260)
250g Amber Jar (ALE210)
60g VOC (ALE215)

S S S S S S

Anions by Kone (soil)

All

NDPs: 0
Tests: 2

X

X

Asbestos ID in Solid Samples

All

NDPs: 0
Tests: 2

X

X

EPH CWG GC (S)

All

NDPs: 0
Tests: 2

X

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 2

X

X

Hexavalent Chromium (s)

All

NDPs: 0
Tests: 2

X

X

Metals in solid samples by OES

All

NDPs: 0
Tests: 2

X

X

PAH by GCMS

All

NDPs: 0
Tests: 2

X

X

pH

All

NDPs: 0
Tests: 2

X

X

Phenols by HPLC (S)

All

NDPs: 0
Tests: 2

X

X

Sample description

All

NDPs: 0
Tests: 2

X

X

Total Organic Carbon

All

NDPs: 0
Tests: 2

X

X

TPH CWG GC (S)

All

NDPs: 0
Tests: 2

X

X

VOC MS (S)

All

NDPs: 0
Tests: 2

X

X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28240958	WS103	0.50 - 0.60	Light Brown	Silty Sand	Stones	Vegetation
28240965	WS108	0.40 - 0.50	Light Brown	Clay Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Results Legend			Customer Sample Ref.		WS103		WS108					
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.50 - 0.60 Soil/Solid (S) 26/06/2023 29/06/2023 230629-55 28240958	0.40 - 0.50 Soil/Solid (S) 27/06/2023 29/06/2023 230629-55 28240965							
M	mCERTS accredited.											
aq	Aqueous / settled sample.											
diss.filt	Dissolved / filtered sample.											
tot.unfilt	Total / unfiltered sample.											
*	Subcontracted - refer to subcontractor report for accreditation status.											
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery											
(F)	Trigger breach confirmed											
1-4**@	Sample deviation (see appendix)											
Component	LOD/Units	Method										
Moisture Content Ratio (% of as received sample)	%	PM024	5	11								
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M	<0.01 M								
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M	<0.01 M								
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M	<0.015 M								
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M	<0.035 M								
Soil Organic Matter (SOM)	<0.35 %	TM132	0.595 #	0.681 #								
pH	1 pH Units	TM133	6.48 M	8.08 M								
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 M	<0.6 M								
Arsenic	<0.6 mg/kg	TM181	12.1 M	11.6 M								
Cadmium	<0.02 mg/kg	TM181	<0.02 M	0.261 M								
Chromium	<0.9 mg/kg	TM181	10.7 M	25.5 M								
Copper	<1.4 mg/kg	TM181	2.68 M	10.4 M								
Lead	<0.7 mg/kg	TM181	11.1 M	12.6 M								
Mercury	<0.1 mg/kg	TM181	<0.1 M	<0.1 M								
Nickel	<0.2 mg/kg	TM181	6.92 M	29.4 M								
Selenium	<1 mg/kg	TM181	<1 #	<1 #								
Vanadium	<0.2 mg/kg	TM181	35.1 #	46.1 #								
Zinc	<1.9 mg/kg	TM181	15.9 M	36.1 M								
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.257 M	0.0104 M								
								</				



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

PAH by GCMS

Results Legend			Customer Sample Ref.		WS103		WS108						
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.50 - 0.60 Soil/Solid (S) 26/06/2023		0.40 - 0.50 Soil/Solid (S) 27/06/2023						
M	mCERTS accredited.												
aq	Aqueous / settled sample.												
diss.filt	Dissolved / filtered sample.												
tot.unfilt	Total / unfiltered sample.												
* Subcontracted - refer to subcontractor report for accreditation status.													
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery													
(F) Trigger breach confirmed													
1-4* Sample deviation (see appendix)													
Component	LOD/Units	Method											
Naphthalene-d8 % recovery**	%	TM218	97.7		97.1								
Acenaphthene-d10 % recovery**	%	TM218	95.9		92.5								
Phenanthrene-d10 % recovery**	%	TM218	94.5		88.6								
Chrysene-d12 % recovery**	%	TM218	98.8		93								
Perylene-d12 % recovery**	%	TM218	96.1		92.5								
Naphthalene	<9 µg/kg	TM218	<9 M		<9 M								
Acenaphthylene	<12 µg/kg	TM218	<12 M		<12 M								
Acenaphthene	<8 µg/kg	TM218	<8 M		<8 M								
Fluorene	<10 µg/kg	TM218	<10 M		<10 M								
Phenanthrene	<15 µg/kg	TM218	<15 M		<15 M								
Anthracene	<16 µg/kg	TM218	<16 M		<16 M								
Fluoranthene	<17 µg/kg	TM218	<17 M		<17 M								
Pyrene	<15 µg/kg	TM218	<15 M		<15 M								
Benz(a)anthracene	<14 µg/kg	TM218	<14 M		<14 M								
Chrysene	<10 µg/kg	TM218	<10 M		<10 M								
Benzo(b)fluoranthene	<15 µg/kg	TM218	<15 M		<15 M								
Benzo(k)fluoranthene	<14 µg/kg	TM218	<14 M		<14 M								
Benzo(a)pyrene	<15 µg/kg	TM218	<15 M		<15 M								
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	<18 M		<18 M								
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23 M		<23 M								
Benzo(g,h,i)perylene	<24 µg/kg	TM218	<24 M		<24 M								
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	<118		<118								
			</										



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

VOC MS (S)

Results Legend			Customer Sample Ref.		WS103		WS108														
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.50 - 0.60 Soil/Solid (S) 26/06/2023	0.40 - 0.50 Soil/Solid (S) 27/06/2023																
M	mCERTS accredited.																				
aq	Aqueous / settled sample.																				
diss.filt	Dissolved / filtered sample.																				
tot.unfilt	Total / unfiltered sample.																				
* Subcontracted - refer to subcontractor report for accreditation status.																					
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery																					
(F) Trigger breach confirmed																					
1-4*§@ Sample deviation (see appendix)																					
Component	LOD/Units	Method																			
Dibromofluoromethane**	%	TM116	98.3		97.4																
Toluene-d8**	%	TM116	98.1		97.9																
4-Bromofluorobenzene**	%	TM116	98.1		100																
Methyl Tertiary Butyl Ether	<0.5 µg/kg	TM116	<0.5		<0.5																
			M		M																
Benzene	<1 µg/kg	TM116	<1		<1																
			M		M																
Toluene	<1 µg/kg	TM116	<1		<1																
			M		M																
Ethylbenzene	<1 µg/kg	TM116	<1		<1																
			M		M																
p/m-Xylene	<2 µg/kg	TM116	<2		<2																
			#		#																
o-Xylene	<2 µg/kg	TM116	<2		<2																
			M		M																
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02		<0.02																
Sum of BTEX	<7 µg/kg	TM116	<7		<7																



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5$ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS103 0.50 - 0.60 SOLID 26/06/2023 00:00:00 29/06/2023 05:00:00 230629-55 28240958 TM048	13/07/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS108 0.40 - 0.50 SOLID 27/06/2023 00:00:00 29/06/2023 05:00:00 230629-55 28240965 TM048	13/07/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55
Client Ref.: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Table of Results - Appendix

Method No	Description
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230629-55

Report Number: 696712

Superseded Report: 696230

Client Ref.: J5443

Location: Southleigh Road, Havant

Test Completion Dates

Lab Sample No(s)	28240958	28240965
Customer Sample Ref.	WS103	WS108
AGS Ref.		
Depth	0.50 - 0.60	0.40 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	11-Jul-2023	11-Jul-2023
Asbestos ID in Solid Samples	13-Jul-2023	13-Jul-2023
EPH CWG GC (S)	18-Jul-2023	13-Jul-2023
Hexavalent Chromium (s)	08-Jul-2023	08-Jul-2023
Metals in solid samples by OES	10-Jul-2023	10-Jul-2023
PAH by GCMS	14-Jul-2023	13-Jul-2023
pH	06-Jul-2023	06-Jul-2023
Phenols by HPLC (S)	07-Jul-2023	07-Jul-2023
Sample description	05-Jul-2023	05-Jul-2023
Total Organic Carbon	10-Jul-2023	11-Jul-2023
TPH CWG GC (S)	18-Jul-2023	13-Jul-2023
VOC MS (S)	10-Jul-2023	10-Jul-2023



CERTIFICATE OF ANALYSIS

SDG: 230629-55
Client Ref: J5443

Report Number: 696712
Location: Southleigh Road, Havant

Superseded Report: 696230

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation: 18 July 2023
Customer: Endeavour Drilling
Sample Delivery Group (SDG): 230701-49
Your Reference: J5443
Location: Southleigh Road, Havant
Report No: 696714
Order Number: 15538OW

This report has been revised and directly supersedes 696231 in its entirety.

We received 20 samples on Saturday July 01, 2023 and 4 of these samples were scheduled for analysis which was completed on Tuesday July 18, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28255715	TP101 ES1	ES	0.10	29/06/2023
28255717	TP101 ES2	ES	0.50	29/06/2023
28255705	TP103 ES1	ES	0.20	29/06/2023
28255707	TP103 ES2	ES	0.80	29/06/2023
28255711	TP110 ES1	ES	0.10	29/06/2023
28255713	TP110 ES2	ES	0.60	29/06/2023
28255718	TP111 ES1	ES	0.20	29/06/2023
28255720	TP111 ES2	ES	1.00	29/06/2023
28255449	TP114 ES1	ES	0.20	28/06/2023
28255450	TP114 ES2	ES	0.80	28/06/2023
28255451	TP116 ES1	ES	0.10	28/06/2023
28255452	TP116 ES2	ES	0.70	28/06/2023
28255453	TP118 ES1	ES	0.10	28/06/2023
28255454	TP118 ES2	ES	0.60	28/06/2023
28255442	WS102 ES1	ES	0.10 - 0.20	28/06/2023
28255444	WS102 ES2	ES	0.30 - 0.40	28/06/2023
28255445	WS107 ES1	ES	0.10 - 0.20	28/06/2023
28255446	WS107 ES2	ES	0.30 - 0.40	28/06/2023
28255447	WS109 ES1	ES	0.10 - 0.20	28/06/2023
28255448	WS109 ES2	ES	0.40 - 0.50	28/06/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

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SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Results Legend

- X** Test
- N** No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend	Lab Sample No(s)		28255717	28255713	28255444	28255447
	Customer Sample Reference		TP101 ES2	TP110 ES2	WS102 ES2	WS109 ES1
Sample Types -	AGS Reference		ES	ES	ES	ES
	Depth (m)		0.50	0.60	0.30 - 0.40	0.10 - 0.20
Sample Types -	Container		250g Amber jar (ALE210) 1kg TUB with Handle (ALE260)	250g Amber jar (ALE210) 1kg TUB with Handle (ALE260)	250g Amber jar (ALE210) 1kg TUB with Handle (ALE260)	250g Amber jar (ALE210) 1kg TUB with Handle (ALE260)
	Sample Type		S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 4	X	X	X	X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X	X	X	X
EPH CWG GC (S)	All	NDPs: 0 Tests: 4	X	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4	X	X	X	X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4	X	X	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 4	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 4	X	X	X	X
pH	All	NDPs: 0 Tests: 4	X	X	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4	X	X	X	X
Sample description	All	NDPs: 0 Tests: 4	X	X	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 4	X	X	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 4	X	X	X	X
VOC MS (S)	All	NDPs: 0 Tests: 4	X	X	X	X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28255717	TP101 ES2	0.50	Light Brown	Clay	Stones	Vegetation
28255713	TP110 ES2	0.60	Light Brown	Clay	Stones	None
28255444	WS102 ES2	0.30 - 0.40	Light Brown	Silty Clay Loam	Stones	None
28255447	WS109 ES1	0.10 - 0.20	Light Brown	Clay Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

SDG: 230701-49

Report Number: 696714

Superseded Report: 696231

Client Ref.: J5443

Location: Southleigh Road, Havant

PAH by GCMS

[illegible]



CERTIFICATE OF ANALYSIS

Validated

SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5$ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP101 ES2ES 0.50 SOLID 29/06/2023 00:00:00 01/07/2023 05:00:00 230701-49 28255717 TM048	13/07/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP110 ES2ES 0.60 SOLID 29/06/2023 00:00:00 01/07/2023 05:00:00 230701-49 28255713 TM048	12/07/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS102 ES2ES 0.30 - 0.40 SOLID 28/06/2023 00:00:00 01/07/2023 05:00:00 230701-49 28255444 TM048	12/07/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS109 ES1ES 0.10 - 0.20 SOLID 28/06/2023 00:00:00 01/07/2023 05:00:00 230701-49 28255447 TM048	13/07/2023	Odhran McLernon	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Table of Results - Appendix

Method No	Description
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230701-49
Client Ref.: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Test Completion Dates

Lab Sample No(s)	28255717	28255713	28255444	28255447
Customer Sample Ref.	TP101 ES2	TP110 ES2	WS102 ES2	WS109 ES1
AGS Ref.	ES	ES	ES	ES
Depth	0.50	0.60	0.30 - 0.40	0.10 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)

Anions by Kone (soil)	10-Jul-2023	11-Jul-2023	11-Jul-2023	11-Jul-2023
Asbestos ID in Solid Samples	13-Jul-2023	12-Jul-2023	12-Jul-2023	13-Jul-2023
EPH CWG GC (S)	18-Jul-2023	13-Jul-2023	14-Jul-2023	18-Jul-2023
GRO by GC-FID (S)	07-Jul-2023		07-Jul-2023	07-Jul-2023
Hexavalent Chromium (s)	08-Jul-2023	08-Jul-2023	08-Jul-2023	08-Jul-2023
Metals in solid samples by OES	10-Jul-2023	10-Jul-2023	10-Jul-2023	10-Jul-2023
PAH by GCMS	14-Jul-2023	13-Jul-2023	13-Jul-2023	13-Jul-2023
pH	06-Jul-2023	06-Jul-2023	06-Jul-2023	06-Jul-2023
Phenols by HPLC (S)	07-Jul-2023	07-Jul-2023	12-Jul-2023	12-Jul-2023
Sample description	05-Jul-2023	05-Jul-2023	05-Jul-2023	05-Jul-2023
Total Organic Carbon	11-Jul-2023	11-Jul-2023	12-Jul-2023	10-Jul-2023
TPH CWG GC (S)	18-Jul-2023	13-Jul-2023	14-Jul-2023	18-Jul-2023
VOC MS (S)	10-Jul-2023	07-Jul-2023	07-Jul-2023	07-Jul-2023



CERTIFICATE OF ANALYSIS

SDG: 230701-49
Client Ref: J5443

Report Number: 696714
Location: Southleigh Road, Havant

Superseded Report: 696231

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park
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Hawarden
Deeside
CH5 3US

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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	15 August 2023
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	230803-84
Your Reference:	J5443
Location:	Southleigh Road, Havant
Report No:	700189
Order Number:	15538OW

We received 10 samples on Thursday August 03, 2023 and 2 of these samples were scheduled for analysis which was completed on Tuesday August 15, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28428476	TP107	ESES1	0.10 - 0.30	31/07/2023
28428477	TP107	ESES2	0.40 - 0.60	31/07/2023
28428478	TP107	ESES3	0.70 - 1.00	31/07/2023
28428479	TP108	ESES1	0.10 - 2.00	31/07/2023
28428480	TP108	ESES2	0.20 - 0.40	31/07/2023
28428484	TP115	ESES1	0.10 - 0.20	31/07/2023
28428485	TP115	ESES2	0.30 - 0.50	31/07/2023
28428481	TP117	ESES1	0.10 - 0.20	31/07/2023
28428482	TP117	ESES2	0.20 - 0.40	31/07/2023
28428483	TP117	ESES3	0.50 - 0.70	31/07/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Results Legend



Test



No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

Customer Sample Reference

AGS Reference

Depth (m)

Container

Sample Type

28428476

28428482

TP107

TP117

ESES1

ESES2

0.10 - 0.30

0.20 - 0.40

1kg Cardboard Container

250g Amber Jar (ALE210)

60g VOC (ALE215)

1kg Cardboard Container

250g Amber Jar (ALE210)

60g VOC (ALE215)

60g VOC (ALE215)

S

S

S

S

S

S

Anions by Kone (soil)

All

NDPs: 0
Tests: 2

X

X

Asbestos ID in Solid Samples

All

NDPs: 0
Tests: 2

X

X

EPH CWG GC (S)

All

NDPs: 0
Tests: 2

X

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 2

X

X

Metals in solid samples by OES

All

NDPs: 0
Tests: 2

X

X

PAH by GCMS

All

NDPs: 0
Tests: 2

X

X

pH

All

NDPs: 0
Tests: 2

X

X

Phenols by HPLC (S)

All

NDPs: 0
Tests: 2

X

X

Sample description

All

NDPs: 0
Tests: 2

X

X

Total Organic Carbon

All

NDPs: 0
Tests: 2

X

X

TPH CWG GC (S)

All

NDPs: 0
Tests: 2

X

X

VOC MS (S)

All

NDPs: 0
Tests: 2

X

X



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
-----------	----------	------	-----------------	--------	-------------	--------	------------	-------------	-------

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28428476	TP107	0.10 - 0.30	Dark Brown	Sandy Loam	Stones	Vegetation
28428482	TP117	0.20 - 0.40	Light Brown	Silt Loam	Vegetation	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

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SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Results Legend			Customer Sample Ref.		TP107		TP117					
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4**@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.10 - 0.30 Soil/Solid (S) 31/07/2023 03/08/2023 230803-84 28428476 ESES1		0.20 - 0.40 Soil/Solid (S) 31/07/2023 03/08/2023 230803-84 28428482 ESES2					
Component	LOD/Units	Method										
Moisture Content Ratio (% of as received sample)	%	PM024		10		13						
Phenol	<0.01 mg/kg	TM062 (S)		<0.01		<0.01						
				M		M						
Cresols	<0.01 mg/kg	TM062 (S)		<0.01		<0.01						
				M		M						
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015		<0.015						
				M		M						
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035		<0.035						
				M		M						
Soil Organic Matter (SOM)	<0.35 %	TM132		3.47		2.1						
				#		#						
pH	1 pH Units	TM133		7.96		7.77						
				M		M						
Arsenic	<0.6 mg/kg	TM181		9.54		8.81						
				M		M						
Cadmium	<0.02 mg/kg	TM181		0.0409		0.0275						
				M		M						
Chromium	<0.9 mg/kg	TM181		11.8		15.4						
				M		M						
Copper	<1.4 mg/kg	TM181		11.1		24.7						
				M		M						
Lead	<0.7 mg/kg	TM181		23.2		27.1						
				M		M						
Mercury	<0.1 mg/kg	TM181		<0.1		<0.1						
				M		M						
Nickel	<0.2 mg/kg	TM181		10.4		11.5						
				M		M						
Selenium	<1 mg/kg	TM181		<1		<1						
				#		#						
Vanadium	<0.2 mg/kg	TM181		21.6		30.3						
				#		#						
Zinc	<1.9 mg/kg	TM181		47.6		51.8						
				M		M						
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		<0.004		0.0218						
				M		M						



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

PAH by GCMS

Results Legend			Customer Sample Ref.		TP107		TP117						
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.10 - 0.30 Soil/Solid (S) 31/07/2023		0.20 - 0.40 Soil/Solid (S) 31/07/2023						
M	mCERTS accredited.												
aq	Aqueous / settled sample.												
diss.filt	Dissolved / filtered sample.												
tot.unfilt	Total / unfiltered sample.												
* Subcontracted - refer to subcontractor report for accreditation status.					03/08/2023 230803-84 28428476 ESES1		03/08/2023 230803-84 28428482 ESES2						
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery													
(F) Trigger breach confirmed													
1-4*§@ Sample deviation (see appendix)													
Component	LOD/Units	Method											
Naphthalene-d8 % recovery**	%	TM218	91.9		97.6								
Acenaphthene-d10 % recovery**	%	TM218	97.4		97.2								
Phenanthrene-d10 % recovery**	%	TM218	108		102								
Chrysene-d12 % recovery**	%	TM218	109		105								
Perylene-d12 % recovery**	%	TM218	109		104								
Naphthalene	<9 µg/kg	TM218	527		<9								
			M		M								
Acenaphthylene	<12 µg/kg	TM218	938		<12								
			M		M								
Acenaphthene	<8 µg/kg	TM218	95.5		<8								
			M		M								
Fluorene	<10 µg/kg	TM218	613		<10								
			M		M								
Phenanthrene	<15 µg/kg	TM218	6900		24.4								
			M		M								
Anthracene	<16 µg/kg	TM218	2830		<16								
			M		M								
Fluoranthene	<17 µg/kg	TM218	9700		71.3								
			M		M								
Pyrene	<15 µg/kg	TM218	7550		60.6								
			M		M								
Benz(a)anthracene	<14 µg/kg	TM218	4290		36.3								
			M		M								
Chrysene	<10 µg/kg	TM218	3890		43.7								
			M		M								
Benzo(b)fluoranthene	<15 µg/kg	TM218	4390		52.8								
			M		M								
Benzo(k)fluoranthene	<14 µg/kg	TM218	1680		24.1								
			M		M								
Benzo(a)pyrene	<15 µg/kg	TM218	3780		40.9								
			M		M								
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	1800		29.8								
			M		M								
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	419		<23								
			M		M								
Benzo(g,h,i)perylene	<24 µg/kg	TM218	2030		28.6								
			M		M								
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	51400		412								
		</											



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample Ref.		TP107		TP117															
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.10 - 0.30 Soil/Solid (S) 31/07/2023		0.20 - 0.40 Soil/Solid (S) 31/07/2023															
M	mCERTS accredited.																					
aq	Aqueous / settled sample.																					
diss.filt	Dissolved / filtered sample.																					
tot.unfilt	Total / unfiltered sample.																					
* Subcontracted - refer to subcontractor report for accreditation status.																						
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery																						
(F) Trigger breach confirmed																						
1-4*§@Sample deviation (see appendix)																						
Component	LOD/Units	Method																				
GRO Surrogate % recovery**	%	TM089	100		103																	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	<10		<10																	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	<10		<10																	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	<10		<10																	
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000		<1000		#		#													
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000		<1000		#		#													
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000		<1000		#		#													
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	26100		1610		#		#													
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	3110		<1000																	
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	29400		<5000																	
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	149000		<10000																	
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10		<10																	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10		<10																	
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	<10		<10																	
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000		<1000		#		#													
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1570		<1000		#		#													
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	25700		<1000		#		#													
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	79200		2070		#		#													
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	12700		<1000																	
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1910		<1000																	
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	119000		<5000																	
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	149000		<10000																	
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	<50		<50																	
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50		<50																	
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	<20		<20																	



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

VOC MS (S)

Results Legend			Customer Sample Ref.		TP107		TP117															
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.10 - 0.30 Soil/Solid (S) 31/07/2023	0.20 - 0.40 Soil/Solid (S) 31/07/2023																	
M	mCERTS accredited.																					
aq	Aqueous / settled sample.																					
diss.filt	Dissolved / filtered sample.																					
tot.unfilt	Total / unfiltered sample.																					
* Subcontracted - refer to subcontractor report for accreditation status.																						
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery																						
(F) Trigger breach confirmed																						
1-4*§@ Sample deviation (see appendix)																						
Component	LOD/Units	Method																				
Dibromofluoromethane**	%	TM116	110		111																	
Toluene-d8**	%	TM116	98.4		98.9																	
4-Bromofluorobenzene**	%	TM116	87.6		91.3																	
Methyl Tertiary Butyl Ether	<0.5 µg/kg	TM116	<5		<5																	
			M		M																	
Benzene	<1 µg/kg	TM116	<10		<10																	
			M		M																	
Toluene	<1 µg/kg	TM116	<10		<10																	
			M		M																	
Ethylbenzene	<1 µg/kg	TM116	<10		<10																	
			M		M																	
p/m-Xylene	<2 µg/kg	TM116	<20		<20																	
			#		#																	
o-Xylene	<2 µg/kg	TM116	<20		<20																	
			M		M																	
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.2		<0.2																	
Sum of BTEX	<7 µg/kg	TM116	<70		<70																	



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5$ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP107ESES1 0.10 - 0.30 SOLID 31/07/2023 00:00:00 03/08/2023 05:00:00 230803-84 28428476 TM048	14/08/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP117ESES2 0.20 - 0.40 SOLID 31/07/2023 00:00:00 03/08/2023 05:00:00 230803-84 28428482 TM048	15/08/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Table of Results - Appendix

Method No	Description
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM218	The determination of PAH in soil samples by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 230803-84
Client Ref.: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Test Completion Dates

Lab Sample No(s)	28428476	28428482
Customer Sample Ref.	TP107	TP117
AGS Ref.	ESES1	ESES2
Depth	0.10 - 0.30	0.20 - 0.40
Type	Soil/Solid (S)	Soil/Solid (S)

Anions by Kone (soil)	10-Aug-2023	10-Aug-2023
Asbestos ID in Solid Samples	14-Aug-2023	15-Aug-2023
EPH CWG GC (S)	08-Aug-2023	08-Aug-2023
GRO by GC-FID (S)	09-Aug-2023	09-Aug-2023
Metals in solid samples by OES	10-Aug-2023	10-Aug-2023
PAH by GCMS	08-Aug-2023	09-Aug-2023
pH	08-Aug-2023	08-Aug-2023
Phenols by HPLC (S)	08-Aug-2023	08-Aug-2023
Sample description	04-Aug-2023	04-Aug-2023
Total Organic Carbon	10-Aug-2023	10-Aug-2023
TPH CWG GC (S)	09-Aug-2023	09-Aug-2023
VOC MS (S)	07-Aug-2023	07-Aug-2023



CERTIFICATE OF ANALYSIS

SDG: 230803-84
Client Ref: J5443

Report Number: 700189
Location: Southleigh Road, Havant

Superseded Report:

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

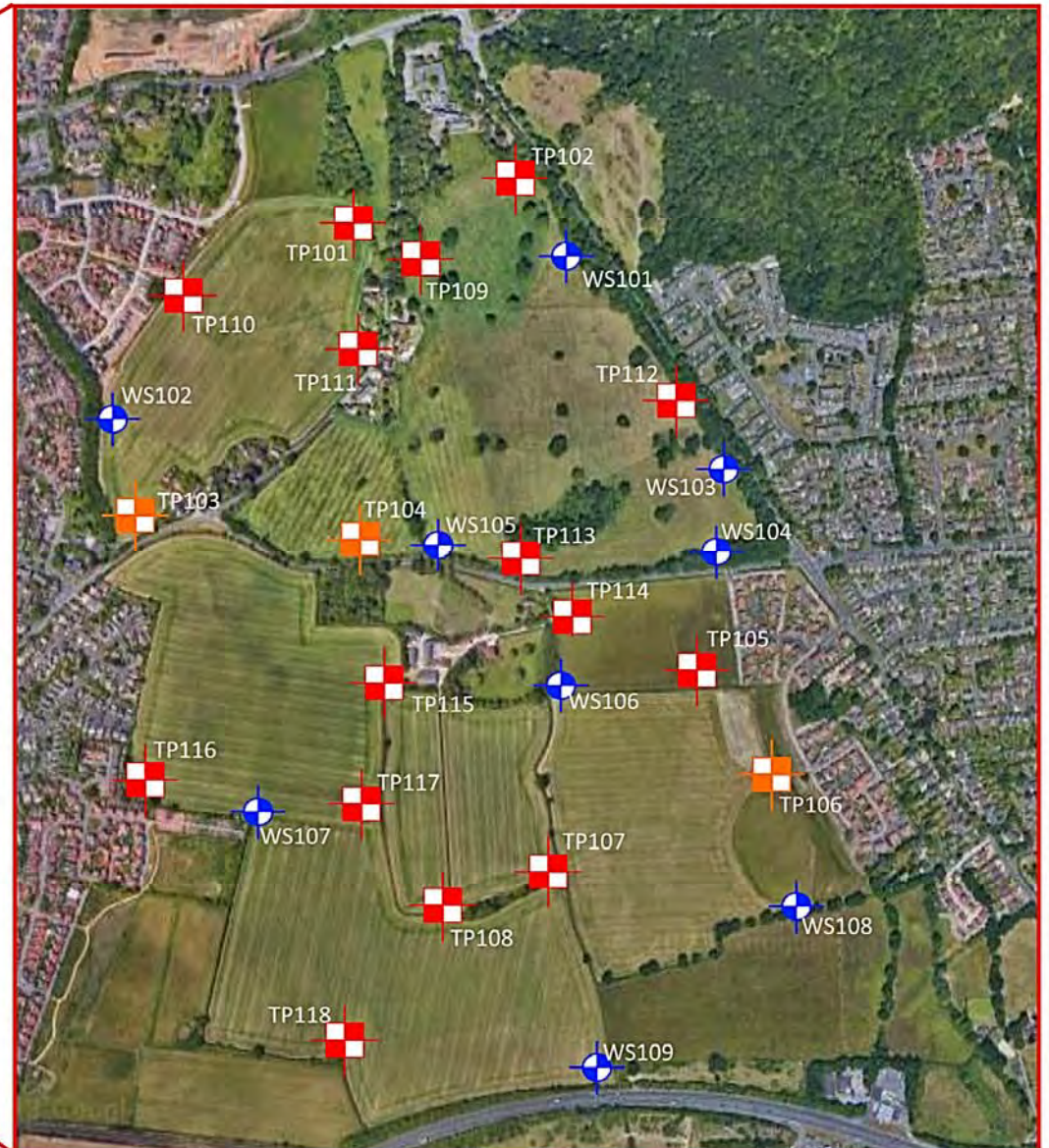
Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



PROJECT:
SOUTHLEIGH ROAD, HAVANT

CLIENT:
STANTEC UK LTD

SCALE:
NTS

JOB NO:
J5443

DRAWN: MG
CHECKED: OW

DATE:
20/09/23

TITLE:
EXPLORATORY WINDOW SAMPLE AND TRIAL PIT LOCATION PLAN

DWG NO:

KEY:
[Red and white checkered square] TRIAL PIT LOCATION

[Blue circle] WINDOW SAMPLE LOCATION

[Orange and white checkered square] TRIAL PIT WITH SOAKAWAY

 **endeavour drilling**

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

Date: 11th August 2023

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.95	11.08.23	4.00	21.92
WS103	4.00	4.00	11.08.23	2.30	12.26
WS104	3.00	2.91	11.08.23	2.91	9.29
WS105	1.80	1.80	11.08.23	1.05	11.86
WS106	4.00	3.36	11.08.23	2.50	9.78
WS107	3.50	3.23	11.08.23	1.97	11.39
WS108	3.30	Unable to Access	11.08.23	Unable to Access	-
WS109	2.50	Unable to Access	11.08.23	Unable to Access	-

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

Date: 15th September 2023

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.83	15.09.23	2.00	23.92
WS103	4.00	4.00	15.09.23	1.58	12.98
WS104	3.00	2.85	15.09.23	DRY	-
WS105	1.80	2.00	15.09.23	0.94	11.97
WS106	4.00	3.55	15.09.23	2.70	9.58
WS107	3.50	3.30	15.09.23	2.00	11.36
WS108	3.30	3.20	15.09.23	2.61	7.55
WS109	2.50	2.50	15.09.23	2.18	8.65

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

Date: 16th October 2023

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.83	16.10.23	2.21	23.71
WS103	4.00	4.00	16.10.23	1.82	12.74
WS104	3.00	2.85	16.10.23	Dry	-
WS105	1.80	2.00	16.10.23	0.77	12.14
WS106	4.00	3.55	16.10.23	2.44	9.84
WS107	3.50	3.30	16.10.23	2.00	11.36
WS108	3.30	3.20	16.10.23	2.48	7.68
WS109	2.50	2.50	16.10.23	2.14	8.69

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

Date: 15th November 2023

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.90	15.11.23	0.72	25.20
WS103	4.00	3.92	15.11.23	0.43	14.13
WS104	3.00	2.87	15.11.23	0.16	12.04
WS105	1.80	1.80	15.11.23	0.35	12.56
WS106	4.00	3.60	15.11.23	1.33	10.95
WS107	3.50	3.50	15.11.23	0.86	12.50
WS108	3.30	3.20	15.11.23	0.94	9.22
WS109	2.50	2.50	15.11.23	0.51	10.32

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

Date: 14th December 2023

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.97	14.12.23	0.82	25.10
WS103	4.00	4.07	14.12.23	0.38	14.18
WS104	3.00	2.86	14.12.23	0.02	12.18
WS105	1.80	1.67	14.12.23	0.16	12.75
WS106	4.00	3.70	14.12.23	1.36	10.92
WS107	3.50	3.14	14.12.23	0.30	13.06
WS108	3.30	3.20	14.12.23	0.70	9.46
WS109	2.50	2.67	14.12.23	0.41	10.42

Water Level Readings

Client: Stantec (UK) Ltd

Site: J5443 Southleigh Road, Havant

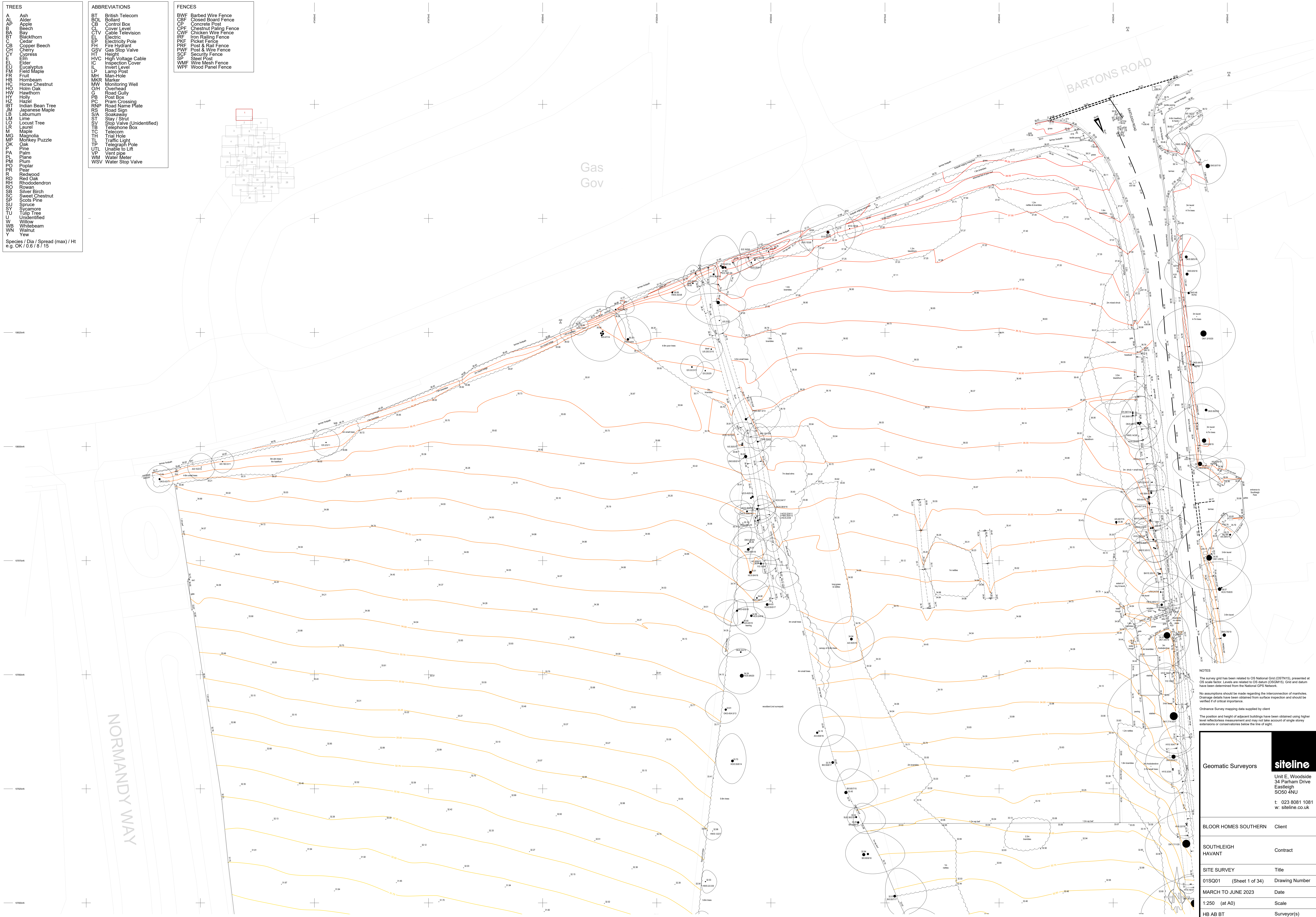
Date: 16th January 2024

Borehole No.	Install Depth (mbgl)	Dipped Depth (mbgl)	DATE	Water Level (mbgl)	Water Level (mAOD)
WS101	6.00	5.92	16.01.24	0.84	25.08
WS103	4.00	4.02	16.01.24	0.39	14.17
WS104	3.00	2.81	16.01.24	0.02	12.18
WS105	1.80	1.67	16.01.24	0.26	12.65
WS106	4.00	3.64	16.01.24	1.59	10.69
WS107	3.50	3.25	16.01.24	0.38	12.98
WS108	3.30	3.23	16.01.24	0.94	9.22
WS109	2.50	2.65	16.01.24	0.43	10.40

Trees		ABBREVIATIONS
A Ash	BT Bolt	British Telecom
AL Alar	BO Bollard	
AP Apple	CB Control Box	
B Beech	CO Control	
BA Birch	CTV Cable Television	
BB Blackberry	EL Electric	
BP Blackthorn	EP Electricity Pole	
CB Copper Beech	FH Fire Hydrant	
CC Cherry	GSV Gas Stop Valve	
CC Cypress	HT Height	
E Elm	HVC High Voltage Cable	
EL Elm	IC Inlet	
EU Eucalyptus	IL Invert Level	
FM Field Maple	LP Lamp Post	
FM Hornbeam	MH Man-Hole	
HC Horse Chestnut	MKR Marker	
HO Horn Oak	MW Monitoring Well	
HO Hawthorn	O/H Overhead	
HY Holly	Road Gully	
HZ Hazel	PB Post Box	
IBT Indian Bean Tree	PC Pann Crossing	
J Japanese Maple	RNP Road Name Plate	
LB Laburnum	R/S Road Sign	
LM Lime	S/A Soakaway	
LO Locust Tree	SV Split / Strut	
LR Laurel	SV Stop Valve (Unidentified)	
M Magnolia	TB Telephone Box	
MC Maple	TC Telecom	
MP Monkey Puzzle	TH Trial Hole	
PK Pine	TL Traffic Light	
PA Palm	TP Telegraph Pole	
PL Plane	UTL Unable to Lift	
PM Plum	VP Vent pipe	
PO Poplar	WM Water Meter	
PR Pear	WSV Water Stop Valve	
R Redwood		
RD Red Oak		
RD Rhododendron		
R Rowan		
SB Silver Birch		
S Sweet Chestnut		
SC Scots Pine		
S Spruce		
SY Sycamore		
T Tulip Tree		
U Unidentified		
W Willow		
WB Whitebeam		
WN Walnut		
Y Yew		

FENCES

BWF	Barbed Wire Fence
CBF	Closed Board Fence
CP	Concrete Post
CPF	Chestnut Paling Fence
CWF	Chicken Wire Fence
IRF	Iron Railing Fence
PKF	Picket Fence
PRF	Post & Rail Fence
PWF	Post & Wire Fence
SCF	Security Fence
SP	Steel Post
WMF	Wire Mesh Fence
WPF	Wood Panel Fence



NOTES

The survey grid has been related to OS National Grid (OSTN15), presented at OS scale factor. Levels are related to OS datum (OSGM15). Grid and datum have been determined from the National GPS Network.

No assumptions should be made regarding the interconnection of manholes. Image details have been obtained from surface inspection and should be verified if of critical importance.

Ordnance Survey mapping data supplied by client

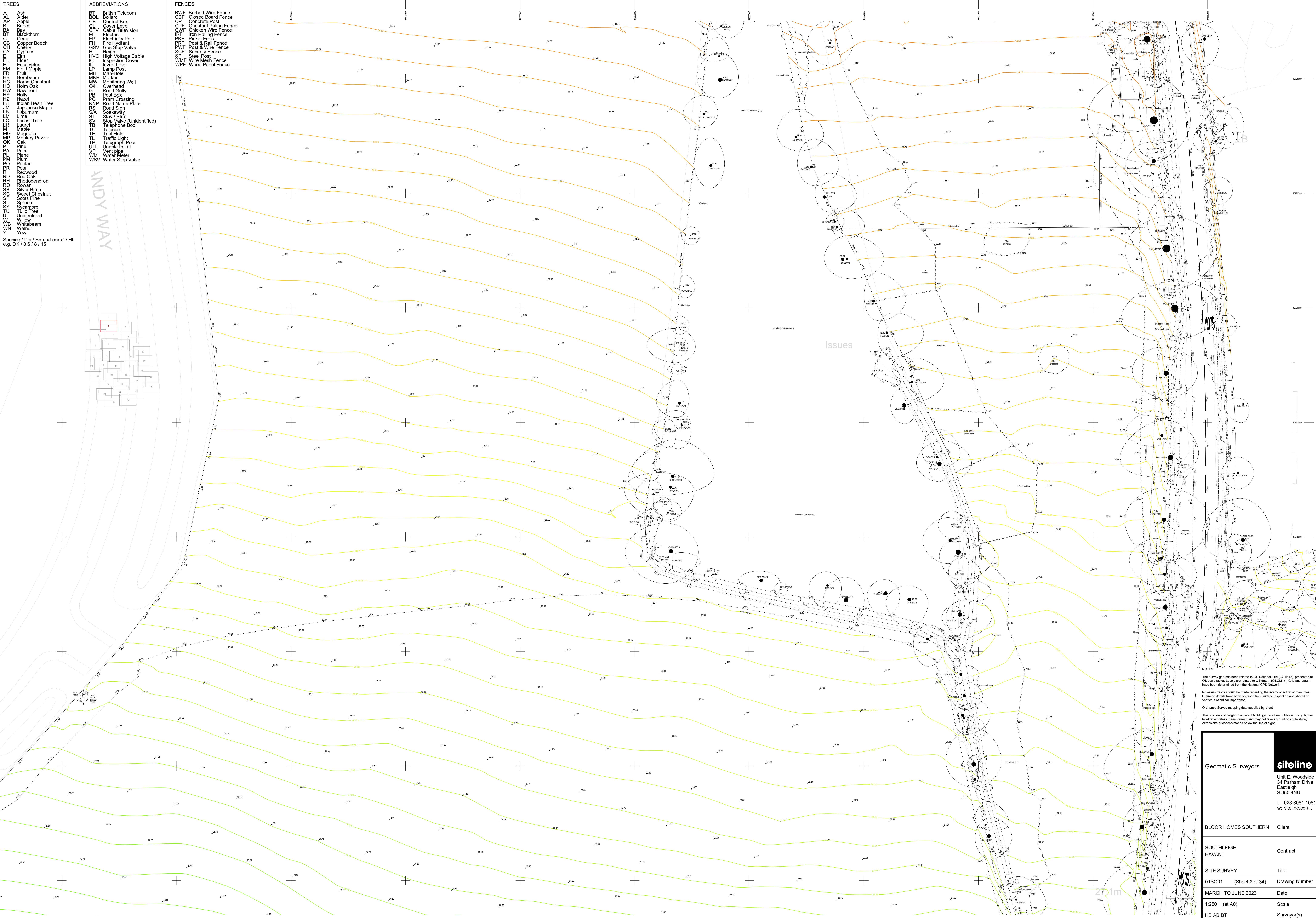
The position and height of adjacent buildings have been obtained using higher level reflectors/measurement and may not take account of single storey extensions or conservatories below the line of sight.

BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 1 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

- TREES
- AL Ash
AP Alder
BA Apple
BB Beech
CB Cedar
CBH Blackthorn
CH Cherry
CO Copper Beech
CY Cypress
EL Elm
EU Eucalyptus
FI Field Maple
FR Fruit
HB Hornbeam
HC Horse Chestnut
HO Holm Oak
HW Hawthorn
HY Holly
HZ Hazel
IBT Indian Bean Tree
JM Japanese Maple
LS Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
OK Oak
PA Pine
PL Plane
PO Poplar
PP Pear
RW Redwood
RO Red Oak
RH Rhododendron
RWN Rowan
SB Silver Birch
SC Sweet Chestnut
SP Scots Pine
SU Spruce
TUL Tulip Tree
U Underside
W Willow
WB Whitebeam
WN Walnut
Y Yew
- Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15

- ABBREVIATIONS
- BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric Pole
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
IL Invert Level
L Lamp Post
MH Man-Hole
MKR Marker
MW Monitoring Well
O/H Overhead
G Road Gully
PB Post Box
PC Pram Crossing
RNP Road Name Plate
RS Road Sign
S/A Sootaway
SV Stop Valve (Unidentified)
TB Telephone Box
TC Telecom
TH Trial Hole
TL Traffic Light
TP Telegraph Pole
UTL Unable to Lift
VP Vent pipe
WM Water Meter
WSV Water Stop Valve

- FENCES
- BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
IRF Iron Railing Fence
PKF Picket Fence
PRF Post & Rail Fence
PVF Post & Wire Fence
SCF Security Fence
SP Steel Post
WMF Wire Mesh Fence
WPF Wood Panel Fence



NOTES

The survey grid has been related to OS National Grid (OSTN15), presented at OS Scale factor. Levels are related to OS datum (OSGM15). Grid and datum have been determined from the National GPS Network.

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Ordnance Survey mapping data supplied by client

The position and height of adjacent buildings have been obtained using higher level reflectance measurement and may not take account of single storey extensions or conservatories below the line of sight.

Geomatic Surveyors

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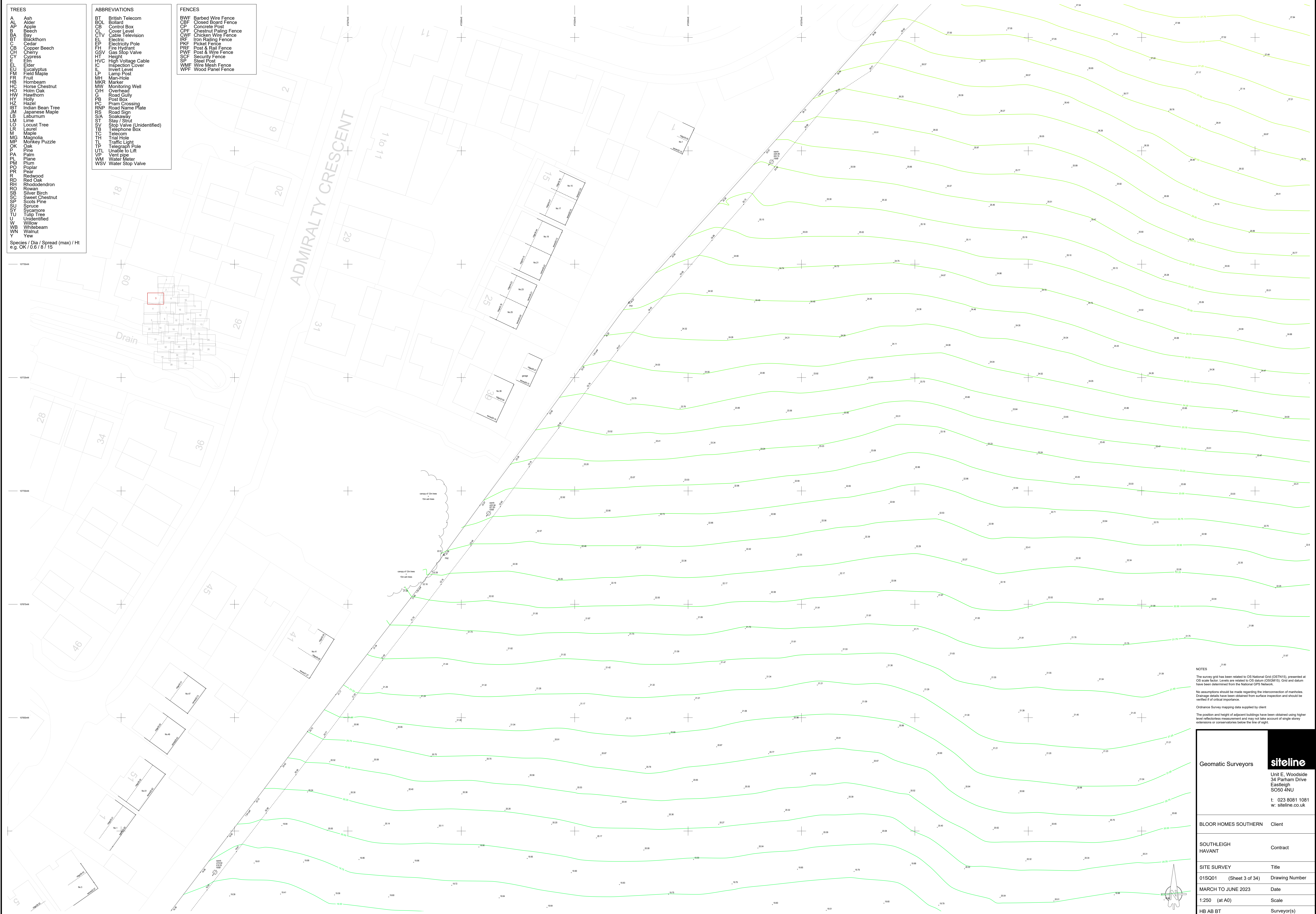
BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 2 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

ABBREVIATIONS	
BT	British Telecom
CB	Cable
CB	Control Box
CL	Cover Level
CCTV	Cable Television
EL	Electric
FE	Electricity Pole
FI	Fire Hydrant
GSSV	Gas Stop Valve
H	Height
HVC	High Voltage Cable
I	Inspection Cover
IL	Invert Level
L	Lamp Post
MP	Man-Hole
MKR	Marker
GW	Monitoring Well
M	Overhead
GO	Goal Gully
PO	Post Box
PC	Pram Crossing
RNP	Road Name Plate
R	Road Sign
S/A	Soakaway
S	Strut
TS	Stop Valve (Unidentified)
TB	Telephone Box
TE	Telephone
TH	Trail Hole
TL	Traffic Light
TP	Telegraph Pole
UTL	Unable to Lift
V	Vent pipe
WM	Water Meter
WV	Water Stop Valve

FENCES

BWF	Barbed Wire Fence
CBF	Closed Board Fence
CP	Concrete Post
CPF	Chestnut Paling Fence
CWF	Chicken Wire Fence
IRF	Iron Railing Fence
PKF	Picket Fence
PRF	Post & Rail Fence
PWF	Post & Wire Fence
SCF	Security Fence
SP	Steel Post
WMF	Wire Mesh Fence
WPF	Wood Panel Fence



NOTES

The survey grid has been related to OS National Grid (OSTN15), presented at OS scale factor. Levels are related to OS datum (OSGM15). Grid and datum have been determined from the National GPS Network.

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Ordnance Survey mapping data supplied by client

The position and height of adjacent buildings have been obtained using higher level reflectorless measurement and may not take account of single storey extensions or conservatories below the line of sight.

Geomatic Surveyors

siteline

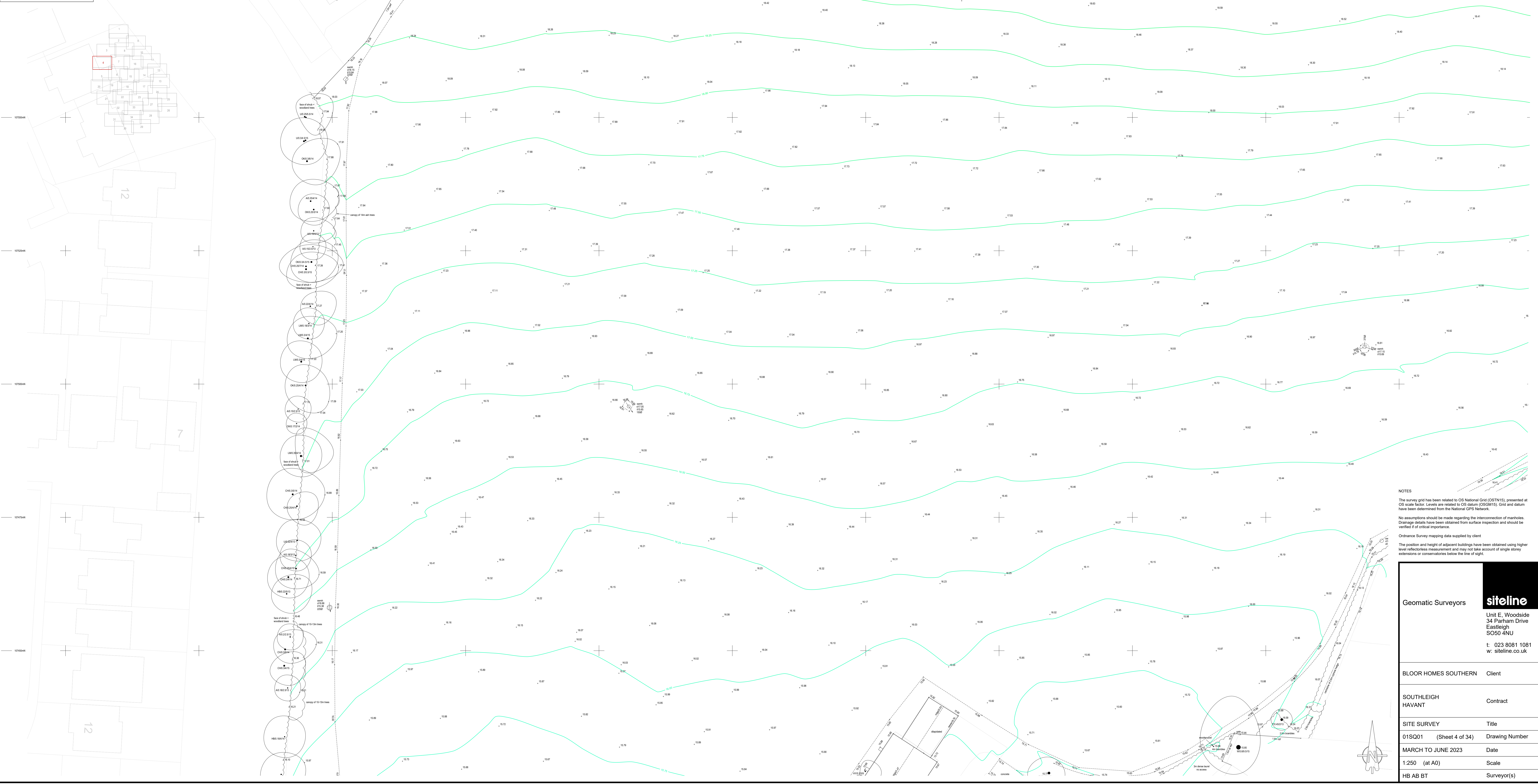
Unit E, Woodside
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w: siteline.co.uk

BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 3 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES		ABBREVIATIONS		FENCES	
AL	Ash	BT	British Telecom	BWF	Barbed Wire Fence
AP	Apple	BOL	Bollard	CBF	Closed Board Fence
BA	Beech	CB	Control Box	CP	Concrete Post
BB	Blackthorn	CL	Cover Level	CPF	Chestnut Paling Fence
BC	Cedar	CTV	Cable Television	CWF	Chicken Wire Fence
CBH	Copper Beech	EL	Electric	IRF	Iron Railing Fence
CH	Cherry	EP	Electricity Pole	PKF	Picket Fence
CY	Cypress	EH	Fire Hydrant	PRF	Post & Rail Fence
DE	Elm	GSV	Gas Stop Valve	PWF	Post & Wire Fence
EU	Eucalyptus	HT	Height	SCF	Security Fence
FE	Field Maple	HVC	High Voltage Cable	SP	Steel Post
FR	Fruit	IC	Inspection Cover	WMF	Wire Mesh Fence
HB	Hornbeam	L	Invert Level	WPF	Wood Panel Fence
HC	Horse Chestnut	LD	Lamp Post		
HO	Hornbeam	MH	Man-Hole		
HW	Hawthorn	MKR	Marker		
HZ	Holly	MW	Monitoring Well		
IBT	Indian Bean Tree	O/H	Overhead		
JM	Japanese Maple	R	Road Gully		
LS	Laburnum	PB	Post Box		
LO	Lime	PC	Pram Crossing		
LM	Lime	RNP	Road Name Plate		
LR	Laurel	RS	Road Sign		
M	Maple	S/A	Soakaway		
MG	Magnolia	SV	Stop Valve (Unidentified)		
MP	Monkey Puzzle	TB	Telephone Box		
OK	Oak	TC	Telephone		
P	Pine	TH	Trail Hole		
PL	Plane	TL	Traffic Light		
PM	Plum	TP	Telegraph Pole		
PO	Poplar	UTL	Unable to Lift		
PR	Pear	VP	Vent pipe		
RD	Redwood	WM	Water Meter		
RO	Red Oak	WSV	Water Stop Valve		
RH	Rhododendron				
SB	Silver Birch				
SC	Sweet Chestnut				
SP	Scots Pine				
SW	Sycamore				
TU	Tulip Tree				
U	Unidentified				
W	Willow				
WB	Whitebeam				
WN	Walnut				
Y	Yew				

Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15



NOTES
The survey grid has been related to OS National Grid (OSTN15), presented at OS scale factor. Levels are related to OS datum (OSGM15). Grids and datum have been determined from the National GPS Network.

No assumptions should be made regarding the interconnection of manholes. Drainage details have been obtained from surface inspection and should be verified if of critical importance.

Ordnance Survey mapping data supplied by client

The position and height of adjacent buildings have been obtained using higher level reflectorless measurement and may not take account of single storey extensions or conservatories below the line of sight.

Geomatic Surveyors		Unit E, Woodside 34 Parham Drive Eastleigh SO50 4NU t: 023 8081 1081 w: siteline.co.uk	
BLOOR HOMES SOUTHERN		Client	
SOUTHLEIGH HAVANT		Contract	
SITE SURVEY		Title	
01SQ01 (Sheet 4 of 34)		Drawing Number	
MARCH TO JUNE 2023		Date	
1:250 (at A0)		Scale	
HB AB BT		Surveyor(s)	

- TREES
- AL Ash
AP Alder
B BT
BA Apple
CB Beech
BA Bay
CB Blackthorn
CH Cedar
CB Copper Beech
CH Cherry
CY Cypress
EL Elm
E Elder
EU Eucalyptus
FM Field Maple
FR Fruit
HB Hornbeam
HC Horse Chestnut
HO Horn Oak
HW Hawthorn
HY Holly
HZ Hazel
IBT Indian Bean Tree
JM Japanese Maple
LB Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
OK Oak
P Pine
PL Plane
PM Plum
PO Poplar
PR Pear
R Redwood
RO Red Oak
RH Rhododendron
SB Silver Birch
SC Sweet Chestnut
SP Scots Pine
SU Sycamore
TU Tulip Tree
U Unidentified
W Willow
WB Whitebeam
Y Walnut
Y Yew
- Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

- ABBREVIATIONS
- BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
L Lamp Post
MH Man-Hole
MKR Marker
MW Monitoring Well
O/H Overhead
G Road Gully
PB Post Box
PC Pram Crossing
RNP Road Name Plate
RS Road Sign
S/A Sootaway
SV Stop Valve (Unidentified)
TB Telephone Box
TC Telecom
TH Trial Hole
TL Traffic Light
TP Telegraph Pole
UTL Unable to Lift
VP Vent pipe
WM Water Meter
WSV Water Stop Valve

- FENCES
- BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
CWF Chicken Wire Fence
IRF Iron Railing Fence
PF Picket Fence
PRF Post & Rail Fence
PWF Post & Wire Fence
SCF Security Fence
SP Steel Post
WMF Wire Mesh Fence
WPF Wood Panel Fence



NOTES

The survey grid has been related to OS National Grid (OSN15), presented at OS scale factor. Levels are related to OS datum (OSGD15). Grids and datum have been determined from the National GPS Network.

No assumptions should be made regarding the intersection of manholes. Drainage details have been obtained from surface inspection and should be verified if of critical importance.

Ordnance Survey mapping data supplied by client.

The position and height of adjacent buildings have been obtained using higher level reflectorless measurement and may not take account of single storey extensions or conservatories below the line of sight.

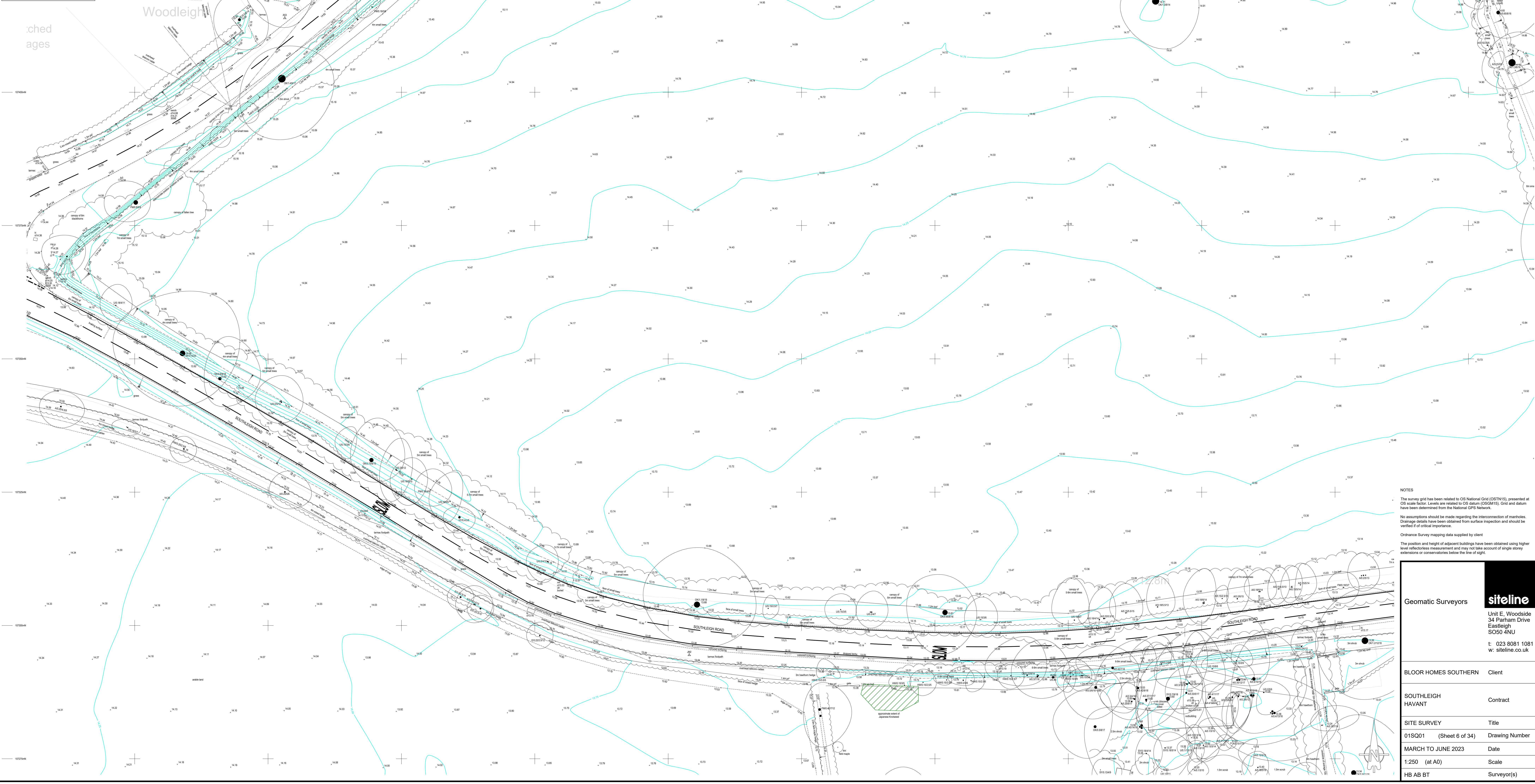
Geomatic Surveyors **siteline**

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Eastleigh
SO50 4NU

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w: siteline.co.uk

BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 5 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES	ABBREVIATIONS	FENCES
A Ash	BT British Telecom	BWF Barbed Wire Fence
AL Alder	BOL Bollard	CBF Closed Board Fence
AP Apple	CB Control Box	CF Concrete Post
BS Beech	CL Cover Level	CPF Concrete Post Fence
BBA Bay	CTV Cable Television	CWF Chicken Wire Fence
BT Birch	EL Electric	IRF Iron Railing Fence
CB Cedar	EH Electricity Pole	PKF Picket Fence
CC Copper Beech	FI Fire Hydrant	PRF Post & Rail Fence
CH Cherry	GSV Gas Stop Valve	PWF Post & Wire Fence
CH Cypress	HT Height	SCF Security Fence
EL Elder	HVC High Voltage Cable	SP Steel Post
EM Eucalyptus	IC Inspection Cover	WMF Wire Mesh Fence
FM Field Maple	IL Invert Level	WPF Wood Panel Fence
FR Fruit	LP Lamp Post	
HB Hornbeam	MH Man-Hole	
HC Horse Chestnut	MW Monitoring Well	
HO Holly Oak	OW Overhead	
HW Hawthorn	G Road Gully	
HY Holly	PB Post Box	
HZ Hazel	PC Pram Crossing	
IBT Indian Broom Tree	RNP Road Name Plate	
JM Japanese Maple	RSD Road Sign	
LB Laburnum	S/A Soakaway	
L Lime	ST Stay / Strut	
LO Locust Tree	SV Stop Valve (Unidentified)	
LR Laurel	TC Telephone Box	
MA Maple	TC Telephone	
MG Magnolia	TH Trail Hole	
MP Monkey Puzzle	TL Traffic Light	
O Oak	TP Telegraph Pole	
P Pine	UN Unable to Lift	
PA Palm	VP Vent pipe	
PL Plane	WM Water Meter	
PM Plum	WSV Water Stop Valve	
PO Poplar		
PR Pear		
RD Redwood		
RO Red Oak		
RH Rhododendron		
ROW Rowan		
SB Silver Birch		
SC Sweet Chestnut		
SP Scots Pine		
S Spruce		
SU Sycamore		
T Tulip Tree		
U Willow		
W Whitebeam		
WB Walnut		
Y Yew		



<p>THE survey grid has been related to OS National Grid (OSTN10), presented at OS scale factor. Levels are related to OS datum (OSD1985). Grid and datum have been determined from the National GPS Network.</p> <p>No assumptions should be made regarding the interpretation of manholes. Drawn details have been obtained from surface inspection and should be verified if of critical importance.</p> <p>Ordinance Survey mapping data supplied by client</p> <p>The position and height of adjacent buildings have been obtained using high-level reflectorless measurement and may not take account of single storey extensions or conservatories below the line of sight.</p>	
Geomatic Surveyors	<p>siteline</p> <p>Unit E, Woodside 34 Parham Drive Eastleigh SO50 4NU</p> <p>t: 023 8081 1081 w: siteline.co.uk</p>
BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01S0Q1 (Sheet 6 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES
A Ash
AL Alder
AP Apple
B Beech
BA Bay
BT Blackthorn
CB Cedar
CH Copper Beech
CO Cherry
CY Cypress
E Elder
EU Eucalyptus
F Field Maple
FR Fruit
HB Hornbeam
HC Horse Chestnut
HO Horn Oak
HW Hawthorn
HY Holly
H Hazel
IBT Indian Bean Tree
JM Japanese Maple
L Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
O Oak
P Pine
PL Plane
PM Plum
PO Poplar
PR Pear
R Redwood
RO Red Oak
RH Rhododendron
RW Rowan
SB Silver Birch
SC Sweet Chestnut
SP Scots Pine
S Spruce
T Tulip Tree
U Unidentified
W Willow
WB Whitebeam
WN Walnut
Y Yew
Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

ABBREVIATIONS
BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric Pole
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
IL Lamp Post
MH Man-Hole
MKR Marker
MW Monitoring Well
O/H Overhead
G Road Gully
PB Post Box
PC Pram Crossing
RNP Road Name Plate
RS Road Sign
S/A Sootaway
SV Stop Valve (Unidentified)
TB Telephone Box
TLC Telecom
TH Trial Hole
TL Traffic Light
TP Telegraph Pole
UTL Unable to Lift
VP Vent pipe
WM Water Meter
WSV Water Stop Valve

FENCES
BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
CWF Chicken Wire Fence
IRF Iron Railing Fence
PKF Picket Fence
PRF Post & Rail Fence
PWF Post & Wire Fence
SCF Security Fence
SP Steel Post
WMF Wire Mesh Fence
WPF Wood Panel Fence



NOTES

The survey grid has been related to OS National Grid (OSTN15), presented at OS scale factor. Levels are related to OS datum (OSGM15). Grids and datum have been determined from the National GPS Network.

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Ordnance Survey mapping data supplied by client.

The position and height of adjacent buildings have been obtained using higher level reflectorless measurement and may not take account of single storey extensions or conservatories below the line of sight.

Geomatic Surveyors

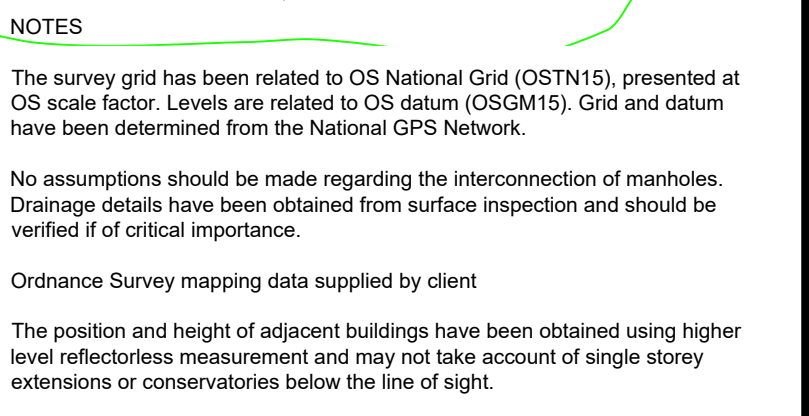
siteline

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BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 7 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

27.48



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w: siteline.co.uk

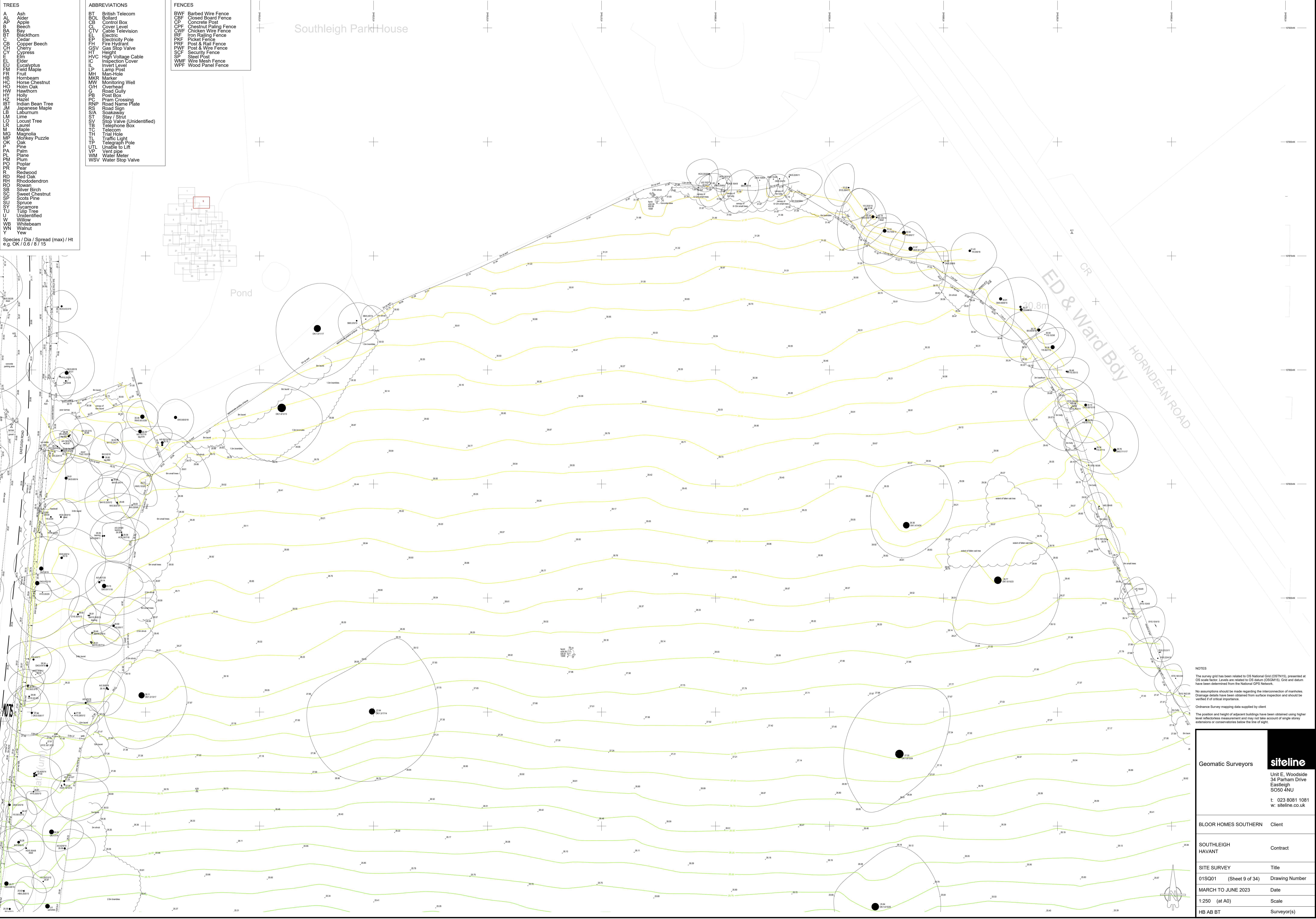
BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 8 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

- TREES
- AL Ash
 - AP Apple
 - B Beech
 - BBA Bay
 - BT Blackthorn
 - CB Cedar
 - CBP Copper Beech
 - CH Cherry
 - CY Cypress
 - EL Elder
 - ELU Eucalyptus
 - FR Field Maple
 - FRB Hornbeam
 - HC Horse Chestnut
 - HO Holm Oak
 - HW Hawthorn
 - HY Holly
 - HZ Hazel
 - IBT Indian Bean Tree
 - JM Japanese Maple
 - LB Laburnum
 - LM Lime
 - LO Locust Tree
 - LR Laurel
 - M Maple
 - MG Magnolia
 - MP Monkey Puzzle
 - OK Oak
 - P Pine
 - PL Plane
 - PM Plum
 - PO Poplar
 - PR Pear
 - PRR Redwood
 - RO Rhododendron
 - ROB Rowan
 - SCS Scots Pine
 - SP Spruce
 - SU Sycamore
 - TU Tulip Tree
 - U Unidentified
 - W Willow
 - WB Whitebeam
 - WN Walnut
 - Y Yew

Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15

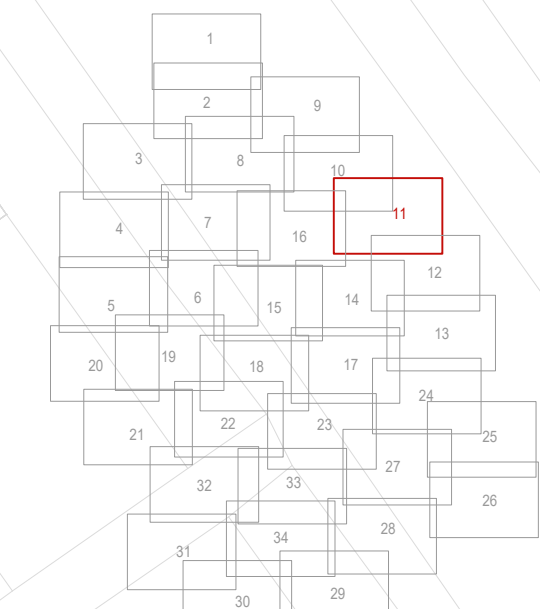
- ABBREVIATIONS
- BT British Telecom
 - BOL Bollard
 - CB Control Box
 - CL Cover Level
 - CTV Cable Television
 - EL Electric
 - EP Electricity Pole
 - FH Fire Hydrant
 - GSV Gas Stop Valve
 - HT Height
 - HVC High Voltage Cable
 - IC Inspection Cover
 - IL Invert Level
 - LP Lamp Post
 - MH Man-Hole
 - MKR Marker
 - MW Monitoring Well
 - O/H Overhead
 - R/G Road Gully
 - PB Post Box
 - PC Pram Crossing
 - RNP Road Name Plate
 - RS Road Sign
 - S/A Soakaway
 - ST Stay / Strut
 - SV Stop Valve (Unidentified)
 - TB Telephone Box
 - TC Telecom
 - TH Trial Hole
 - TL Traffic Light
 - TP Telegraph Pole
 - UTL Unable to Lift
 - VP Vent pipe
 - WM Water Meter
 - WSV Water Stop Valve

- FENCES
- BWF Barbed Wire Fence
 - CBF Closed Board Fence
 - CP Concrete Post
 - CPF Chestnut Paling Fence
 - CWF Chicken Wire Fence
 - IRF Iron Railing Fence
 - PKF Picket Fence
 - PRF Post & Rail Fence
 - PWF Post & Wire Fence
 - SCF Security Fence
 - SP Steel Post
 - WMF Wire Mesh Fence
 - WPF Wood Panel Fence



BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 10 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15



<p>Geomatic Surveyors</p>	 <p>Unit E, Woodside 34 Parham Drive Eastleigh SO50 4NU</p> <p>t: 023 8081 1081 w: siteline.co.uk</p>
<p>BLOOR HOMES SOUTHERN</p>	<p>Client</p>
<p>SOUTHLEIGH HAVANT</p>	<p>Contract</p>
<p>SITE SURVEY</p>	<p>Title</p>
<p>01SQ01 (Sheet 11 of 34)</p>	<p>Drawing Number</p>
<p>MARCH TO JUNE 2023</p>	<p>Date</p>
<p>1:250 (at A0)</p>	<p>Scale</p>
<p>HB AB BT</p>	<p>Surveyor(s)</p>

TREES

A

AL

AP

AS

BA

BB

CB

CH

CO

CU

EU

FR

HB

HC

HO

HW

HY

HZ

IBT

JM

LA

LM

LO

LR

MA

MG

MP

OK

PA

PL

PM

PO

PR

RD

RO

SC

SO

SP

SY

UT

U

W

WB

WN

Y

Ash

Alder

Apple

Beech

Blackthorn

Cedar

Copper Beech

Cherry

Cypress

Elm

Elder

Eucalyptus

Field Maple

Fruit

Hornbeam

Horse Chestnut

Horn Oak

Hawthorn

Holly

Hazel

Indian Bean Tree

Japanese Maple

Laburnum

Lime

Locust Tree

Laurel

Maple

Magnolia

Monkey Puzzle

Oak

Palm

Pine

Plane

Plum

Poplar

Pear

Redwood

Red Oak

Rhododendron

Rowan

Silver Birch

Sweet Chestnut

Scots Pine

Sycamore

Tulip Tree

Unidentified

Willow

Whitebeam

Walnut

Yew

ABBREVIATIONS

BT

BOL

CB

CL

CTV

EP

EH

GSV

HT

HVC

IC

IL

LMH

MKR

MW

O/H

G

PB

PC

RNP

RS

S/A

SV

TB

TC

TH

TL

TP

UTL

WM

WSV

British Telecom

Bollard

Control Box

Cover Level

Cable Television

Electric Pole

Electric

Fire Hydrant

Gas Stop Valve

Height

High Voltage Cable

Inspection Cover

Invert Level

Lamp Post

Man-Hole

Marker

Monitoring Well

Overhead

Road Gully

Post Box

Pram Crossing

Road Name Plate

Road Sign

Soakaway

Stay / Strut

Stop Valve (Unidentified)

Telephone Box

Telecom

Trial Hole

Traffic Light

Telegraph Pole

Unable to Lift

Vent pipe

Water Meter

Water Stop Valve

FENCES

BWF

CBF

CP

CPF

CWF

IRF

PKF

PRF

PWF

SCF

SP

WMF

WPF

Barbed Wire Fence

Closed Board Fence

Concrete Post

Chestnut Paling Fence

Chicken Wire Fence

Picket Fence

Iron Railing Fence

Post & Rail Fence

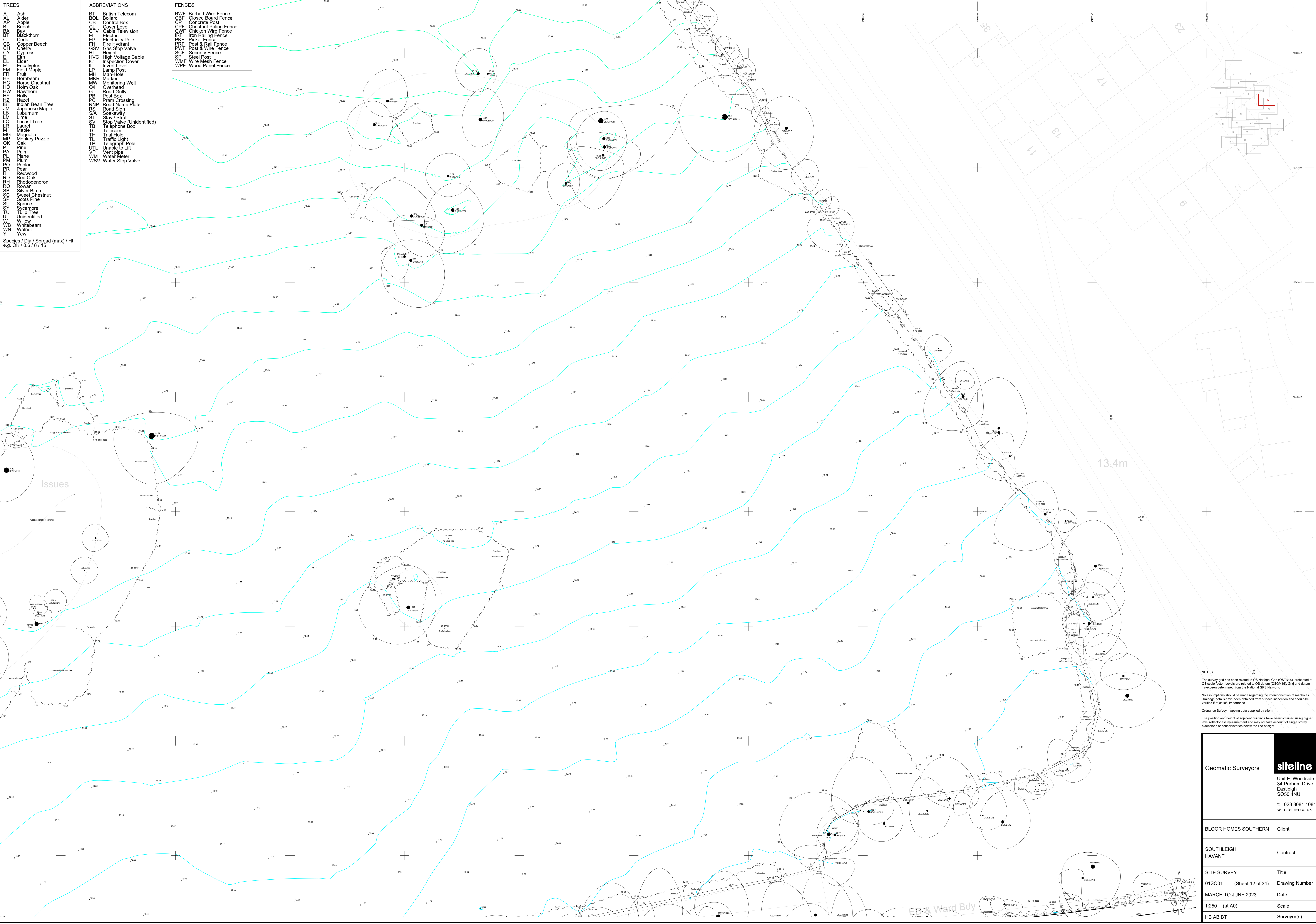
Post & Wire Fence

Security Fence

Steel Post

Wire Mesh Fence

Wood Panel Fence



NOTES

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BLOOR HOMES SOUTHERN	Client
SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 12 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

- TREES

A

AL

AP

B

BA

BB

CB

CH

CO

CU

EU

FR

HB

HC

HO

HW

HY

HZ

IBT

JM

LS

LM

LU

LR

M

MG

MP

OK

PA

PL

PM

PO

PR

R

R2D

R3D

R4D

R5D

R6D

R7D

R8D

R9D

S

SCU

T

U

W

WB

WN

Y

Ash

Alder

Apple

Beech

Bay

Blackthorn

Cedar

Copper Beech

Cherry

Cypress

Elder

Eucalyptus

Field Maple

Fruit

Hambeam

Horse Chestnut

Horn Oak

Hawthorn

Holly

Hazel

Indian Bean Tree

Japanese Maple

Laburnum

Lime

Locust Tree

Laurel

Maple

Magnolia

Monkey Puzzle

Oak

Pine

Plane

Plum

Podar

Pear

Redwood

Red Oak

Rhododendron

Rowan

Silver Birch

Sweet Chestnut

Scots Pine

Spruce

Sycamore

Tulip Tree

Unidentified

Willow

Whitebeam

Walnut

Yew
- ABBREVIATIONS

BT

BOL

CB

CL

CTV

EP

EH

GSV

HT

HVC

IC

IL

LP

MH

MR

MW

O/H

G

PB

PC

RNP

RS

S/S

SV

TB

TC

TH

TL

TP

UTL

WM

WSV

British Telecom

Bollard

Control Box

Cover Level

Cable Television

Electric Pole

Fire Hydrant

Gas Stop Valve

Height

High Voltage Cable

Inspection Cover

Invert Level

Lamp Post

Man-Hole

Marker

Monitoring Well

Overhead

Road Gully

Post Box

Pram Crossing

Road Name Plate

Road Sign

Soakaway

Stay / Strut

Stop Valve (Unidentified)

Telephone Box

Telecom

Trial Hole

Traffic Light

Telegraph Pole

Unable to Lift

Vent pipe

Water Meter

Water Stop Valve
- FENCES

BWF

CBF

CP

CPF

CWF

IRF

PKF

PRF

PWF

SCF

SP

WMF

WPF

Barbed Wire Fence

Closed Board Fence

Concrete Post

Chestnut Paling Fence

Chicken Wire Fence

Iron Railing Fence

Picket Fence

Post & Rail Fence

Post & Wire Fence

Security Fence

Steel Post

Wire Mesh Fence

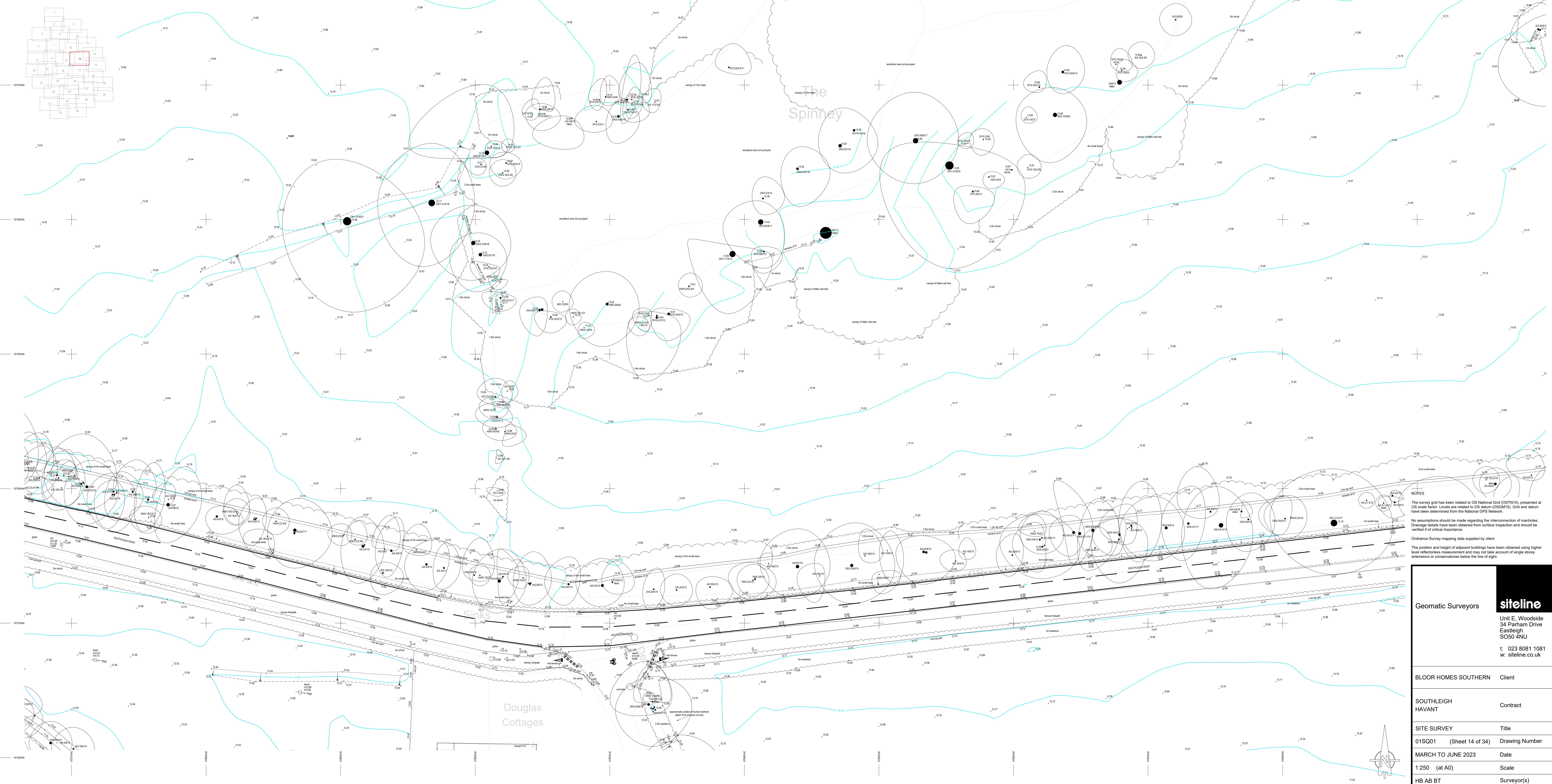
Wood Panel Fence

Species / Dia / Spread (max) / Ht
e.g. OK 10.5 / 8 / 15



TREES		ABBREVIATIONS		FENCES	
AL	Ash	BT	British Telecom	BWF	Barbed Wire Fence
AP	Apple	BOL	Bollard	CBF	Closed Board Fence
BA	Beech	CB	Control Box	CP	Concrete Post
BB	Blackthorn	CL	Cover Level	CPF	Chestnut Paling Fence
BC	Bay	CTV	Cable Television	CWF	Chicken Wire Fence
CB	Cedar	EL	Electric	IRF	Iron Railing Fence
CH	Copper Beech	EP	Electric Pole	PKF	Picket Fence
CO	Cherry	EH	Fire Hydrant	PRF	Post & Rail Fence
CY	Cypress	GSV	Gas Stop Valve	PWF	Post & Wire Fence
EL	Elder	HT	Height	SCF	Security Fence
EU	Eucalyptus	HVC	High Voltage Cable	SP	Steel Post
FI	Field Maple	IC	Inspection Cover	WMF	Wire Mesh Fence
FR	Fruit	L	Invert Level	WPF	Wood Panel Fence
HB	Hornbeam	LP	Lamp Post		
HC	Horse Chestnut	MH	Man-Hole		
HO	Horn Oak	MKR	Marker		
HW	Hawthorn	MW	Monitoring Well		
HZ	Holly	O/H	Overhead		
IB	Ilex	G	Road Gully		
IBT	Indian Bean Tree	PB	Post Box		
JM	Japanese Maple	PC	Pram Crossing		
LB	Laburnum	RNP	Road Name Plate		
LO	Lime	RS	Road Sign		
LR	Larch	S/A	Soakaway		
LS	Locust Tree	ST	Stop Valve (Unidentified)		
LR	Laurel	SV	Stop Valve		
M	Maple	TB	Telephone Box		
MG	Magnolia	TC	Telecom		
MP	Monkey Puzzle	TH	Trail Hole		
OK	Oak	TL	Traffic Light		
PA	Palm	TP	Telegraph Pole		
PL	Plane	UTL	Unable to Lift		
PM	Plum	VP	Vent pipe		
PO	Poplar	WM	Water Meter		
PR	Pear	WSV	Water Stop Valve		
RD	Redwood				
RO	Red Oak				
RH	Rhododendron				
SB	Silver Birch				
SC	Scots Pine				
SO	Sycamore				
SV	Swamp				
TU	Tulip Tree				
U	Unidentified				
WB	Whitebeam				
WN	Walnut				
Y	Yew				

Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15



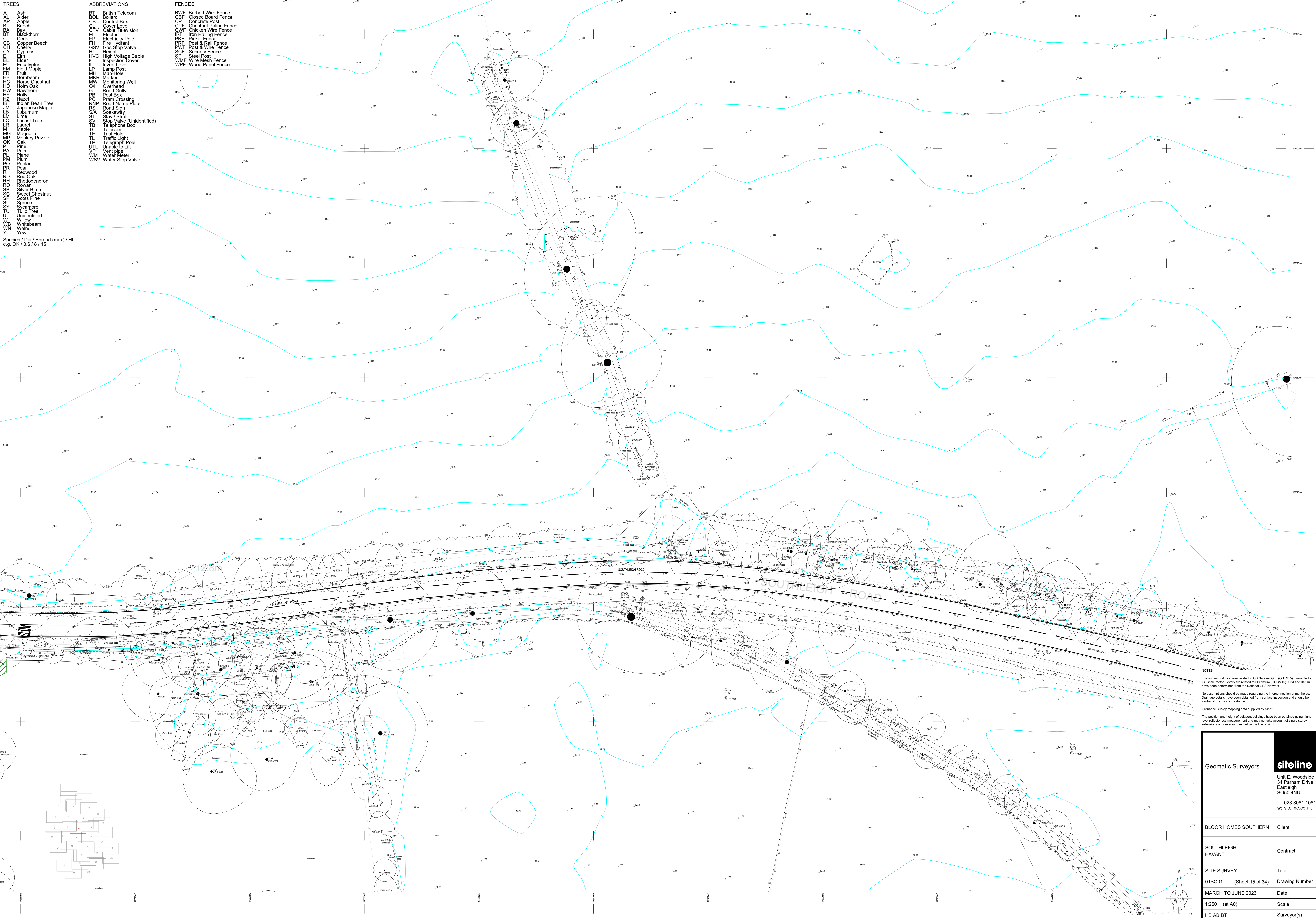
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SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 14 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1/250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES		ABBREVIATIONS		FENCES	
AL	Ash	BT	British Telecom	BWF	Barbed Wire Fence
AP	Apple	BOL	Bollard	CBF	Closed Board Fence
B	Beech	CB	Control Box	CP	Concrete Post
BA	Bay	CL	Cover Level	CPF	Chestnut Paling Fence
BT	Blackthorn	CTV	Cable Television	CWF	Chicken Wire Fence
CB	Cedar	EP	Electric Pole	IRF	Iron Railing Fence
CBH	Copper Beech	EH	Electric Hydrant	PKF	Picket Fence
CH	Cherry	FSV	Fire Stop Valve	PRF	Post & Rail Fence
CY	Cypress	HT	Height	PWF	Post & Wire Fence
EL	Elder	HVC	High Voltage Cable	SCF	Security Fence
EU	Eucalyptus	IC	Inspection Cover	SP	Steel Post
FM	Field Maple	L	Invert Level	WVF	Wire Mesh Fence
FR	Fruit	LP	Lamp Post	WPF	Wood Panel Fence
HB	Hornbeam	MH	Man-Hole		
HC	Horse Chestnut	MKR	Marker		
HO	Horn Oak	MW	Monitoring Well		
HW	Hawthorn	O/H	Overhead		
HY	Holly	G	Road Gully		
HZ	Hazel	PB	Post Box		
IBT	Indian Bean Tree	PC	Pram Crossing		
JM	Japanese Maple	RNP	Road Name Plate		
LM	Lime	RS	Road Sign		
LO	Locust Tree	S/A	Soakaway		
LR	Laurel	SV	Stop Valve (Unidentified)		
M	Maple	TB	Telephone Box		
MG	Magnolia	TC	Telecom		
MP	Monkey Puzzle	TH	Trial Hole		
OK	Oak	TL	Traffic Light		
P	Pine	TP	Telegraph Pole		
PA	Palm	UTL	Unable to Lift		
PL	Plane	VP	Vent pipe		
PM	Plum	WM	Water Meter		
PO	Poplar	WSV	Water Stop Valve		
PR	Pear				
RD	Redwood				
RO	Red Oak				
RS	Rhododendron				
SB	Silver Birch				
SC	Sweet Chestnut				
SP	Scots Pine				
SU	Spruce				
TU	Tulip Tree				
U	Unidentified				
W	Willow				
WB	Whitebeam				
WN	Walnut				
Y	Yew				

Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15



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SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 15 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES
AL Ash
LB Alder
AP Apple
BA Beech
BB Blackthorn
CB Cedar
CBH Copper Beech
CO Cherry
CY Cypress
E Elm
EL Eucalyptus
EM Field Maple
FR Fruit
HB Hornbeam
HC Horse Chestnut
HO Holm Oak
HW Hawthorn
HY Holly
HZ Hazel
IBT Indian Bean Tree
JM Japanese Maple
LS Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
OK Oak
P Pine
PL Plane
PM Plum
PO Poplar
PR Pear
R Redwood
RO Rhododendron
S Silver Birch
SC Sweet Chestnut
SP Scots Pine
SU Sycamore
T Tulip Tree
U Unidentified
W Willow
WB Whitebeam
WN Walnut
Y Yew

Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

ABBREVIATIONS
BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric Pole
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
IL Lamp Post
LP Lamp Post
MH Man-Hole
MKR Marker
MW Monitoring Well
O/H Overhead
G Road Gully
PB Post Box
PC Pram Crossing
RNP Road Name Plate
RS Road Sign
S/A Sotakaway
ST Stay / Strut
SV Stop Valve (Unidentified)
TB Telephone Box
TC Telecom
TH Trial Hole
TL Traffic Light
TP Telegraph Pole
UTL Unable to Lift
VP Vent pipe
WM Water Meter
WSV Water Stop Valve

FENCES
BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
CWF Chicken Wire Fence
IRF Iron Railing Fence
PKF Picket Fence
PRF Post & Rail Fence
PVF Post & Wire Fence
SCF Security Fence
SF Steel Post
WMF Wire Mesh Fence
WPF Wood Panel Fence

Home Farm
Barn

Woodlands
Cottage

NOTES

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BLOOR HOMES SOUTHERN

Client

SOUTHLEIGH
HAVANT

Contract

SITE SURVEY

Title

01SQ01

(Sheet 16 of 34) Drawing Number

MARCH TO JUNE 2023

Date

1:250

(at A0) Scale

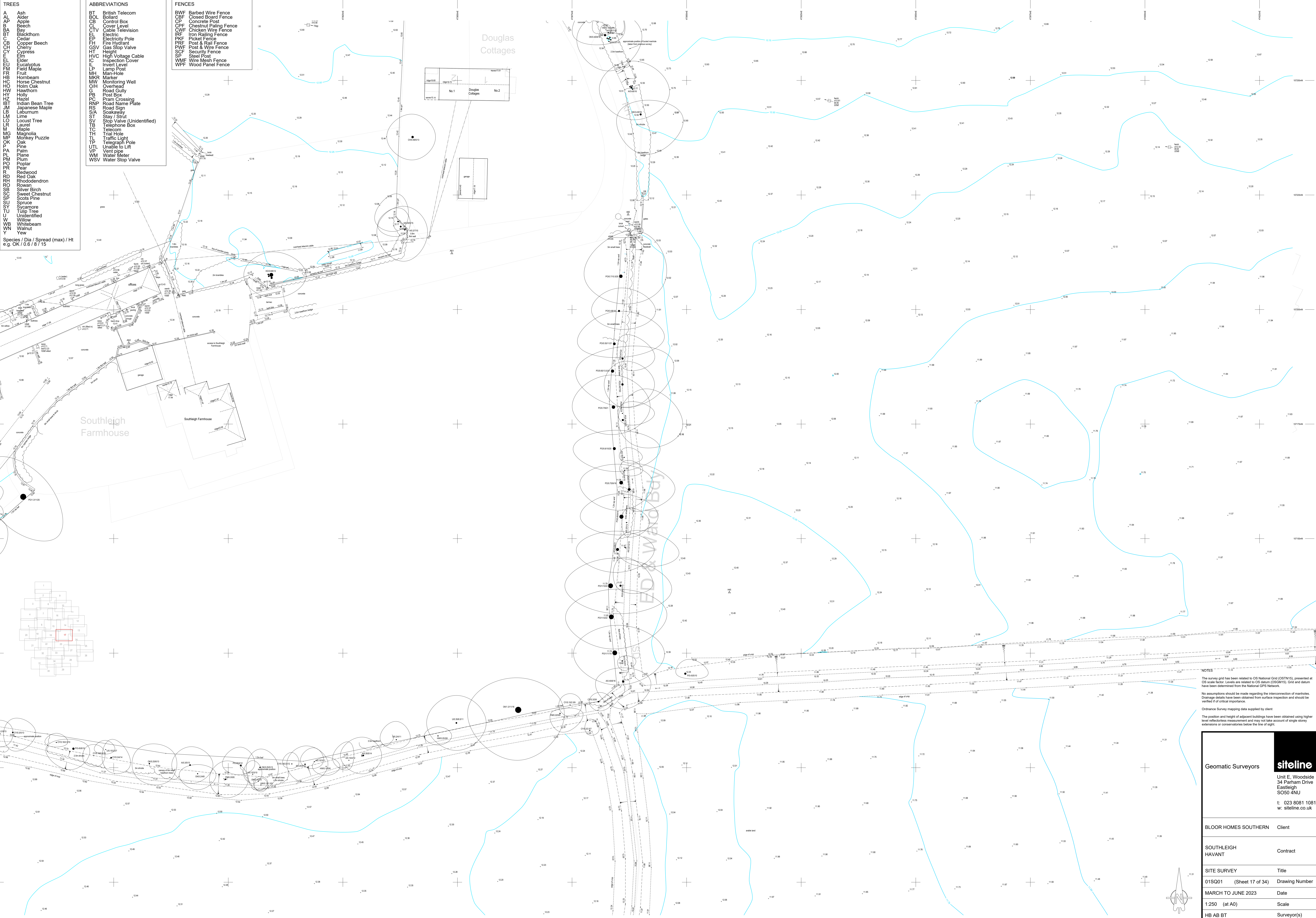
HB AB BT

Surveyor(s)

- TREES
- AL Ash
 - LS Alder
 - AP Apple
 - BA Beech
 - BT Blackthorn
 - CB Cedar
 - CH Cherry
 - CO Cypress
 - CU Elm
 - EU Eucalyptus
 - FR Field Maple
 - FR Hornbeam
 - HC Horse Chestnut
 - HO Horn Oak
 - HW Hawthorn
 - HY Holly
 - HZ Hazel
 - IBT Indian Bean Tree
 - JM Japanese Maple
 - LA Laburnum
 - LM Lime
 - LO Locust Tree
 - LR Laurel
 - M Maple
 - MG Magnolia
 - MP Monkey Puzzle
 - OK Oak
 - P Pine
 - PL Plane
 - PM Plum
 - PO Poplar
 - PR Pear
 - RD Redwood
 - RO Red Oak
 - RH Rhododendron
 - RS Rowan
 - SB Silver Birch
 - SC Sweet Chestnut
 - SP Scots Pine
 - SR Spruce
 - ST Sycamore
 - TU Tulip Tree
 - U Unidentified
 - W Willow
 - WB Whitebeam
 - WN Walnut
 - Y Yew
- Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

- ABBREVIATIONS
- BT British Telecom
 - BOL Bollard
 - CB Control Box
 - CL Cover Level
 - CTV Cable Television
 - EP Electric Pole
 - EH Electricity Pole
 - FH Fire Hydrant
 - GSV Gas Stop Valve
 - HT Height
 - HVC High Voltage Cable
 - IC Inspection Cover
 - IL Invert Level
 - LP Lamp Post
 - MH Man-Hole
 - MKR Marker
 - MW Monitoring Well
 - O/H Overhead
 - G Road Gully
 - PB Post Box
 - PC Pram Crossing
 - RNP Road Name Plate
 - RS Road Sign
 - S/A Sootaway
 - SV Stop Valve (Unidentified)
 - ST Stay / Strut
 - TB Telephone Box
 - TC Telecom
 - TH Trial Hole
 - TL Traffic Light
 - TP Telegraph Pole
 - UTL Unable to Lift
 - VP Vent pipe
 - WM Water Meter
 - WSV Water Stop Valve

- FENCES
- BWF Barbed Wire Fence
 - CBF Closed Board Fence
 - CP Concrete Post
 - CPF Chestnut Paling Fence
 - CWF Chicken Wire Fence
 - IRF Iron Railing Fence
 - PKF Picket Fence
 - PRF Post & Rail Fence
 - PWF Post & Wire Fence
 - SCF Security Fence
 - SP Steel Post
 - WMF Wire Mesh Fence
 - WPF Wood Panel Fence



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SOUTHLEIGH HAVANT	Contract
SITE SURVEY	Title
01SQ01 (Sheet 17 of 34)	Drawing Number
MARCH TO JUNE 2023	Date
1:250 (at A0)	Scale
HB AB BT	Surveyor(s)

TREES
A Ash
AL Alder
AP Apple
B Beech
BA Bay
BT Blackthorn
CB Cedar
CBH Copper Beech
CH Cherry
CY Cypress
E Elm
EL Electric Pole
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
L Lamp Post
LP
MH Man-Hole
MR Marker
HC Horse Chestnut
HO Holm Oak
HW Hawthorn
H Holly
HZ Hazel
IBT Indian Bean Tree
JM Japanese Maple
LS Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
OK Oak
P Pine
PL Plane
PM Plum
PO Poplar
PR Pear
R Redwood
RD Rhododendron
S Silver Birch
SC Sweet Chestnut
SP Scots Pine
SU Sycamore
T Tulip Tree
U Unidentified
W Willow
WB Whitebeam
WN Walnut
Y Yew

Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15

ABBREVIATIONS
BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric Pole
FH Fire Hydrant
GSV Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
L Lamp Post
LP
MH Man-Hole
MR Marker
MW Monitoring Well
O/H Overhead
G Road Gully
PB Post Box
PC Pram Crossing
RNP Road Name Plate
RS Road Sign
S/A Soakaway
ST Stay / Strut
SV Stop Valve (Unidentified)
TB Telephone Box
TC Telecom
TH Trial Hole
TL Traffic Light
TP Telegraph Pole
UTL Unable to Lift
V Vent pipe
WM Water Meter
WSV Water Stop Valve

FENCES
BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
IRF Iron Railing Fence
PKF Picket Fence
PRF Post & Rail Fence
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WMF Wire Mesh Fence
WPF Wood Panel Fence



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SOUTHLEIGH HAVANT Contract

SITE SURVEY Title

01SQ01 (Sheet 18 of 34) Drawing Number

MARCH TO JUNE 2023 Date

1:250 (at A0) Scale

HB AB BT Surveyor(s)

TREES

A Ash
AL Alder
AP Apple
B Beech
BA Blackthorn
BT British Telecom
CB Control Box
CTV Cable Television
EP Electric
G Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
L Lamp Post
LP Lamp Post
FR Fruit
HB Hornbeam
HC Horse Chestnut
HO Horn Oak
HW Hawthorn
HY Holly
HZ Hazel
IBT Indian Bean Tree
JM Japanese Maple
LS Laburnum
LM Lime
LO Locust Tree
LR Laurel
M Maple
MG Magnolia
MP Monkey Puzzle
OK Oak
P Pine
PL Plane
PM Plum
PO Poplar
PR Pear
RD Redwood
RH Rhododendron
R Rowan
SB Silver Birch
SC Scots Pine
SU Sycamore
T Tulip Tree
U Underside
W Willow
WB Whitebeam
WN Walnut
Y Yew

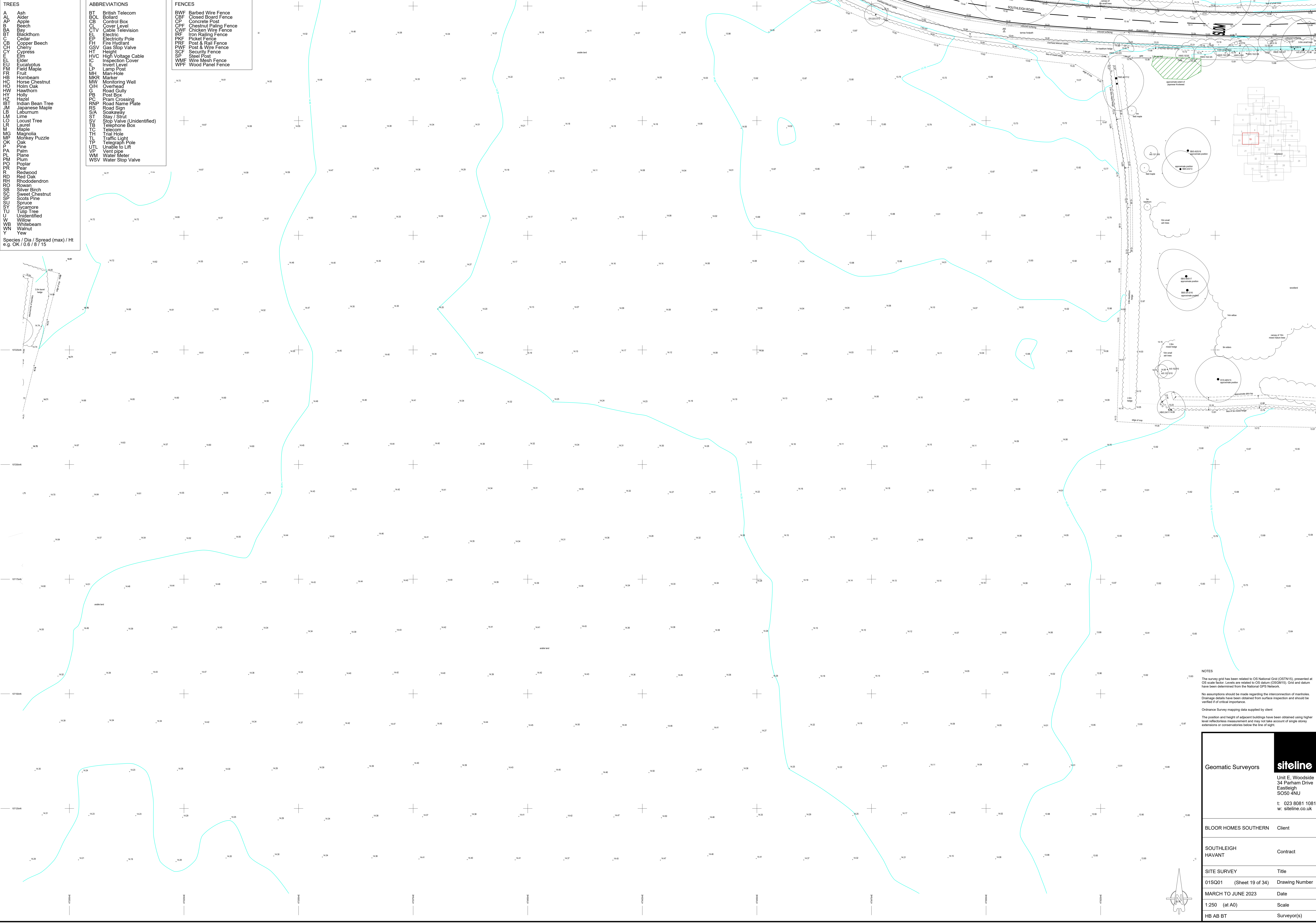
Species / Dia / Spread (max) / Ht
e.g. OK 10.6 / 8 / 15

ABBREVIATIONS

BT British Telecom
BOL Bollard
CB Control Box
CL Cover Level
CTV Cable Television
EP Electric
G Gas Stop Valve
HT Height
HVC High Voltage Cable
IC Inspection Cover
L Lamp Post
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PL Plane
PM Plum
PO Poplar
PR Pear
RD Redwood
RH Rhododendron
R Rowan
SB Silver Birch
SC Scots Pine
SU Sycamore
T Tulip Tree
U Underside
W Willow
WB Whitebeam
WN Walnut
Y Yew

FENCES

BWF Barbed Wire Fence
CBF Closed Board Fence
CP Concrete Post
CPF Chestnut Paling Fence
CWF Chicken Wire Fence
IRF Iron Railing Fence
PF Post & Rail Fence
PWF Post & Wire Fence
SCF Security Fence
SP Steel Post
WVF Wire Mesh Fence
WPF Wood Panel Fence



Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15

BT	British Telecom
CBOL	Bollard
CB	Control Box
CL	Cover Level
CCTV	Cable Television
EL	Electric
ES	Electricity Pole
FI	Fire Hydrant
GSV	Gas Stop Valve
H	Height
HVC	High Voltage Cable
IPC	Inspection Cover
I	Invert Level
LP	Lamp Post
ML	Man-hole
MP	Marker
WW	Monitoring Well
OH	Overhead
GR	Gravel
GO	Goal Rully
RS	Road Box
PC	Pram Crossing
RNP	Road Name Plate
R	Road Sign
S/S	Soakaway
S	Strut
STV	Stop Valve (Unidentified)
TB	Telephone Box
TC	Trial Hole
TL	Traffic Light
TE	Telegraph Pole
UT	Unable to Lift
VP	Vent pipe
WM	Water Meter
WSV	Water Stop Valve

FENCES

BWF	Barbed Wire Fence
CBF	Closed Board Fence
CP	Concrete Post
CPF	Chestnut Paling Fence
CWF	Chicken Wire Fence
IRF	Iron Railing Fence
PKF	Picket Fence
PRF	Post & Rail Fence
PWF	Post & Wire Fence
SCF	Security Fence
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<p>Geomatic Surveyors</p>	
	<p>Unit E, Woodside 34 Parkham Drive Eastleigh SO50 4NU</p> <p>t: 023 8081 1081 w: siteline.co.uk</p>
<p>BLOOR HOMES SOUTHERN</p>	<p>Client</p>
<p>SOUTHLEIGH HAVANT</p>	<p>Contract</p>
<p>SITE SURVEY</p>	<p>Title</p>
<p>01SQ01 (Sheet 20 of 34)</p>	<p>Drawing Number</p>
<p>MARCH TO JUNE 2023</p>	<p>Date</p>
<p>1:250 (at A0)</p>	<p>Scale</p>
<p>HB AB BT</p>	<p>Surveyor(s)</p>

- TREES**
- A Ash
 - AL Alder
 - AP Apple
 - B Beech
 - BA Bay
 - BT Blackthorn
 - CB Cedar
 - CH Copper Beech
 - CO Cherry
 - CP Cypress
 - EF Elm
 - EL Elder
 - EU Eucalyptus
 - FM Field Maple
 - FR Fruit
 - HB Hornbeam
 - HC Horse Chestnut
 - HO Horn Oak
 - HW Hawthorn
 - HY Holly
 - HZ Hazel
 - IBT Indian Bean Tree
 - JM Japanese Maple
 - LS Laburnum
 - LM Lime
 - LO Locust Tree
 - LR Laurel
 - M Maple
 - MG Magnolia
 - MP Monkey Puzzle
 - OK Oak
 - PA Palm
 - PL Plane
 - PM Plum
 - PO Poplar
 - PR Pear
 - RD Redwood
 - RO Red Oak
 - RH Rhododendron
 - RS Rowan
 - SB Silver Birch
 - SC Sweet Chestnut
 - SP Scots Pine
 - SR Spruce
 - SY Sycamore
 - TU Tulip Tree
 - U Unidentified
 - W Willow
 - WB Whitebeam
 - WN Walnut
 - Y Yew
- ABBREVIATIONS**
- BT British Telecom
 - BOL Bollard
 - CB Control Box
 - CL Cover Level
 - CTV Cable Television
 - EP Electric Pole
 - EH Fire Hydrant
 - GSV Gas Stop Valve
 - HT Height
 - HVC High Voltage Cable
 - IC Inspection Cover
 - L Lamp Post
 - MH Man-Hole
 - MKR Marker
 - MW Monitoring Well
 - O/H Overhead
 - G Road Gully
 - PB Post Box
 - PC Pram Crossing
 - RNP Road Name Plate
 - RS Road Sign
 - S/A Soakaway
 - SV Stop Valve (Unidentified)
 - TB Telephone Box
 - TC Telecom
 - TH Trial Hole
 - TL Traffic Light
 - TP Telegraph Pole
 - UTL Unable to Lift
 - VP Vent pipe
 - WM Water Meter
 - WSV Water Stop Valve
- FENCES**
- BWF Barbed Wire Fence
 - CBF Closed Board Fence
 - CP Concrete Post
 - CPF Chestnut Paling Fence
 - CWF Chicken Wire Fence
 - IRF Iron Railing Fence
 - PKF Picket Fence
 - PRF Post & Rail Fence
 - PWF Post & Wire Fence
 - SCF Security Fence
 - SP Steel Post
 - WMF Wire Mesh Fence
 - WPF Wood Panel Fence
- Species / Dia / Spread (max) / Ht
e.g. OK / 0.6 / 8 / 15



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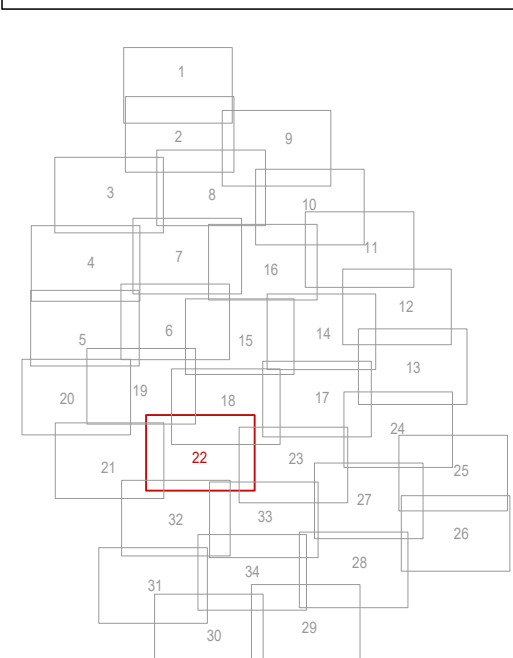
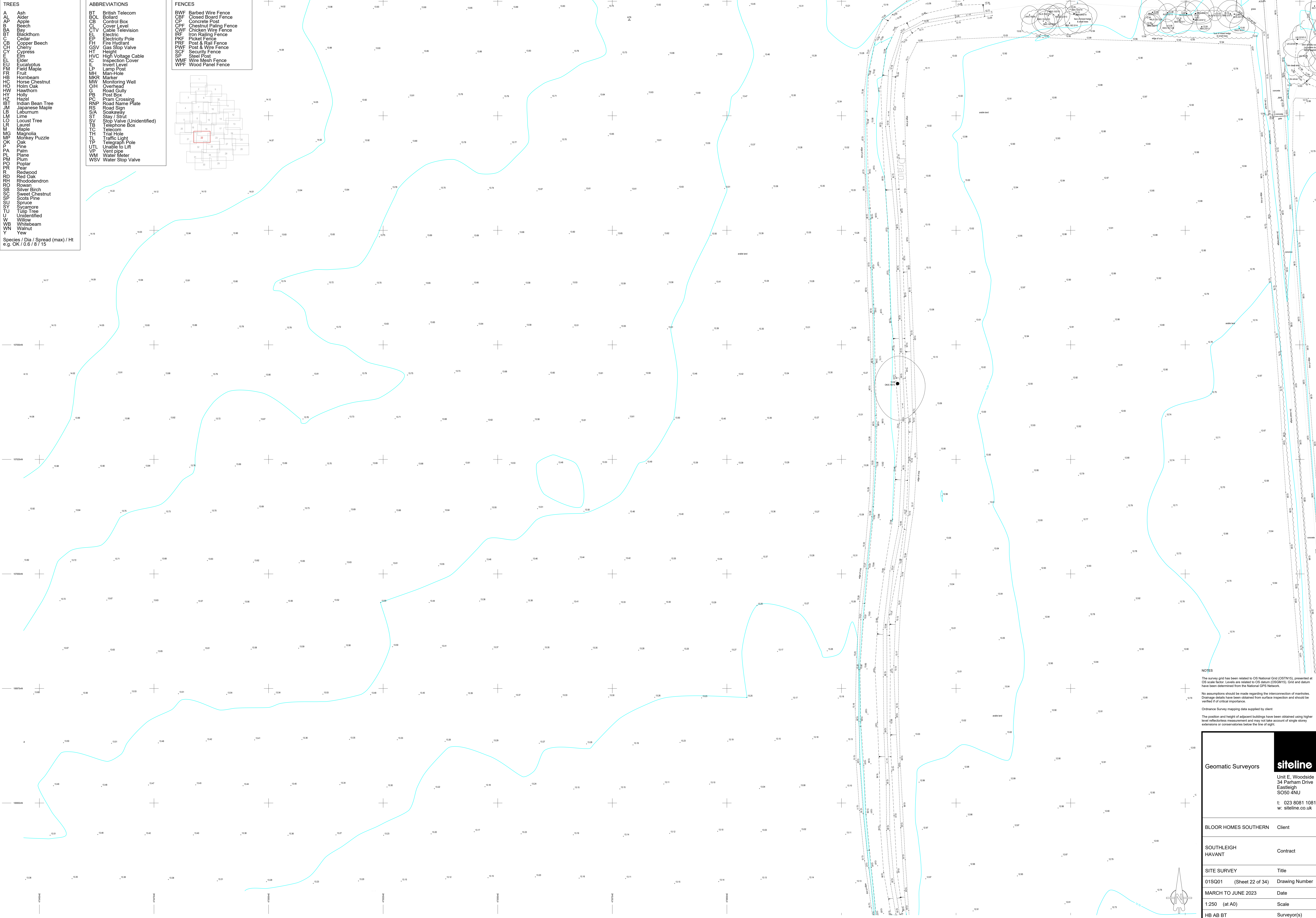
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01SQ01 (Sheet 21 of 34)		Drawing Number	
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Species / Dia / Spread (max) / Ht
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BLOOR HOMES SOUTHERN Client

SOUTHLEIGH HAVANT Contract

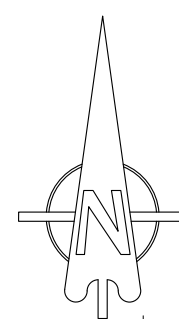
SITE SURVEY Title

01SQ01 (Sheet 22 of 34) Drawing Number

MARCH TO JUNE 2023 Date

1:250 (at A0) Scale

HB AB BT Surveyor(s)

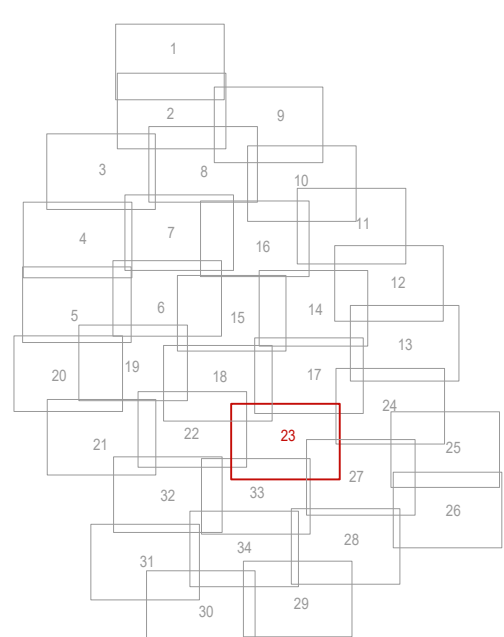
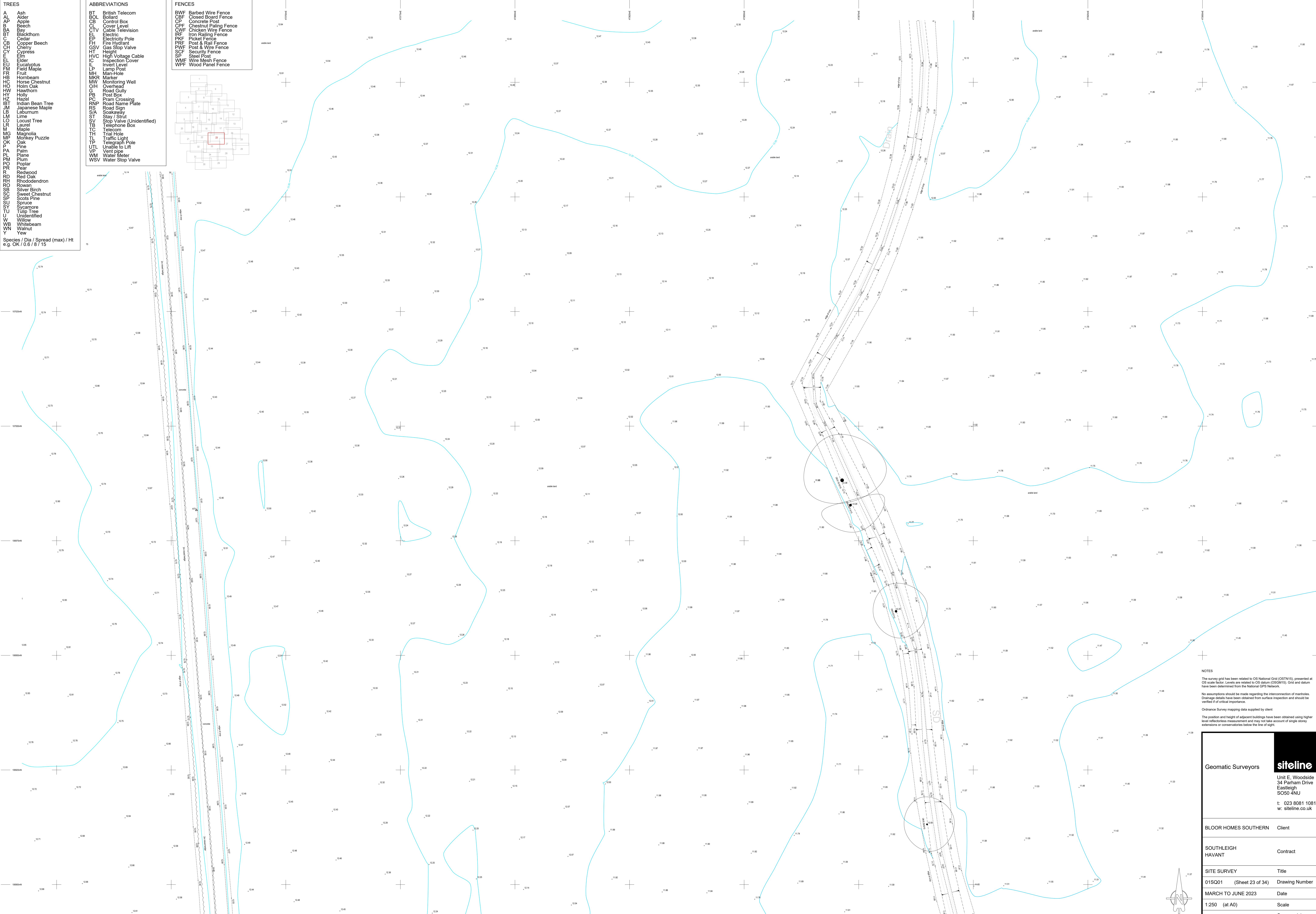


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O/H Overhead
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SV Stop Valve (Unidentified)
TB Telephone Box
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HAVANT

Contract

SITE SURVEY

Title

01S001

(Sheet 23 of 34) Drawing Number

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Surveyor(s)

