

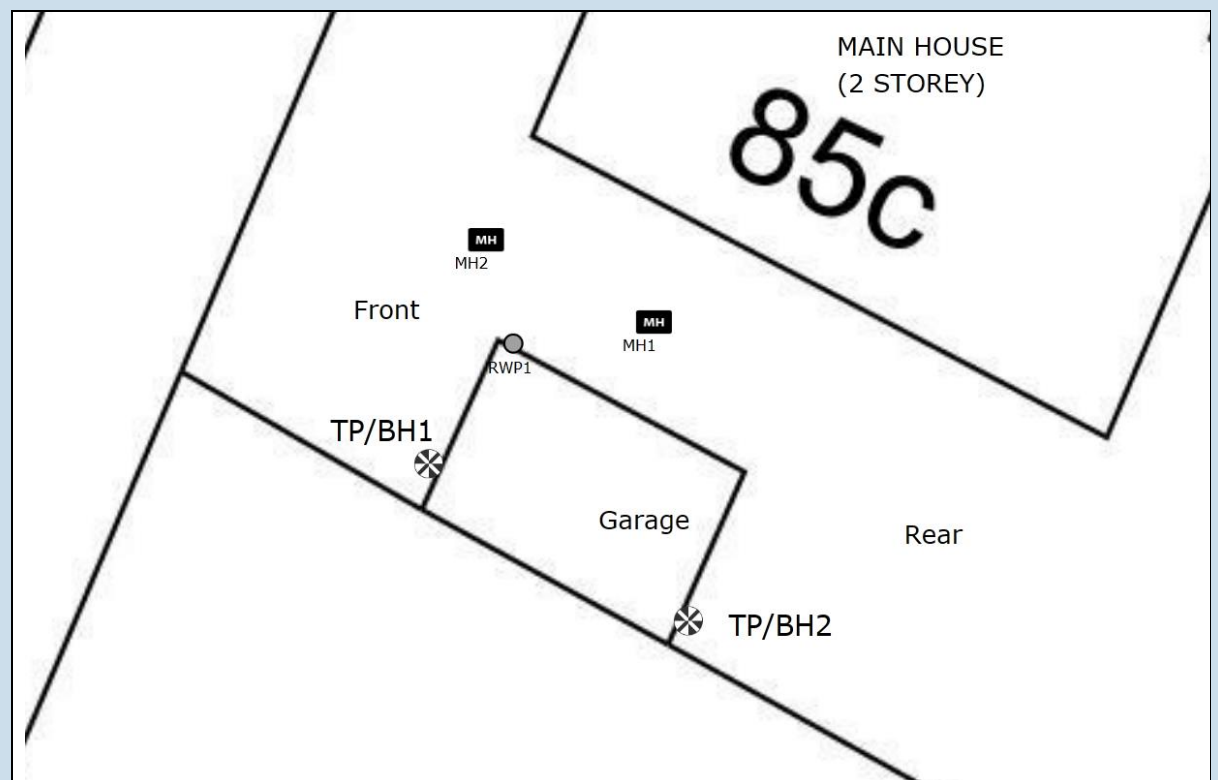
GEOTECHNICAL

for SMS (LBG)

85C Green Lane, Northwood, HA6 1AH

Client: SMS (LBG)
Client Contact: Refer to iSubs
Client Ref: IFS-LBG-SUB-25-0115754
Policy Holder: Mr and Mrs David and Julie Payne
Report Date: 24 February 2025
Our Ref: C80588G35263

Site Plan

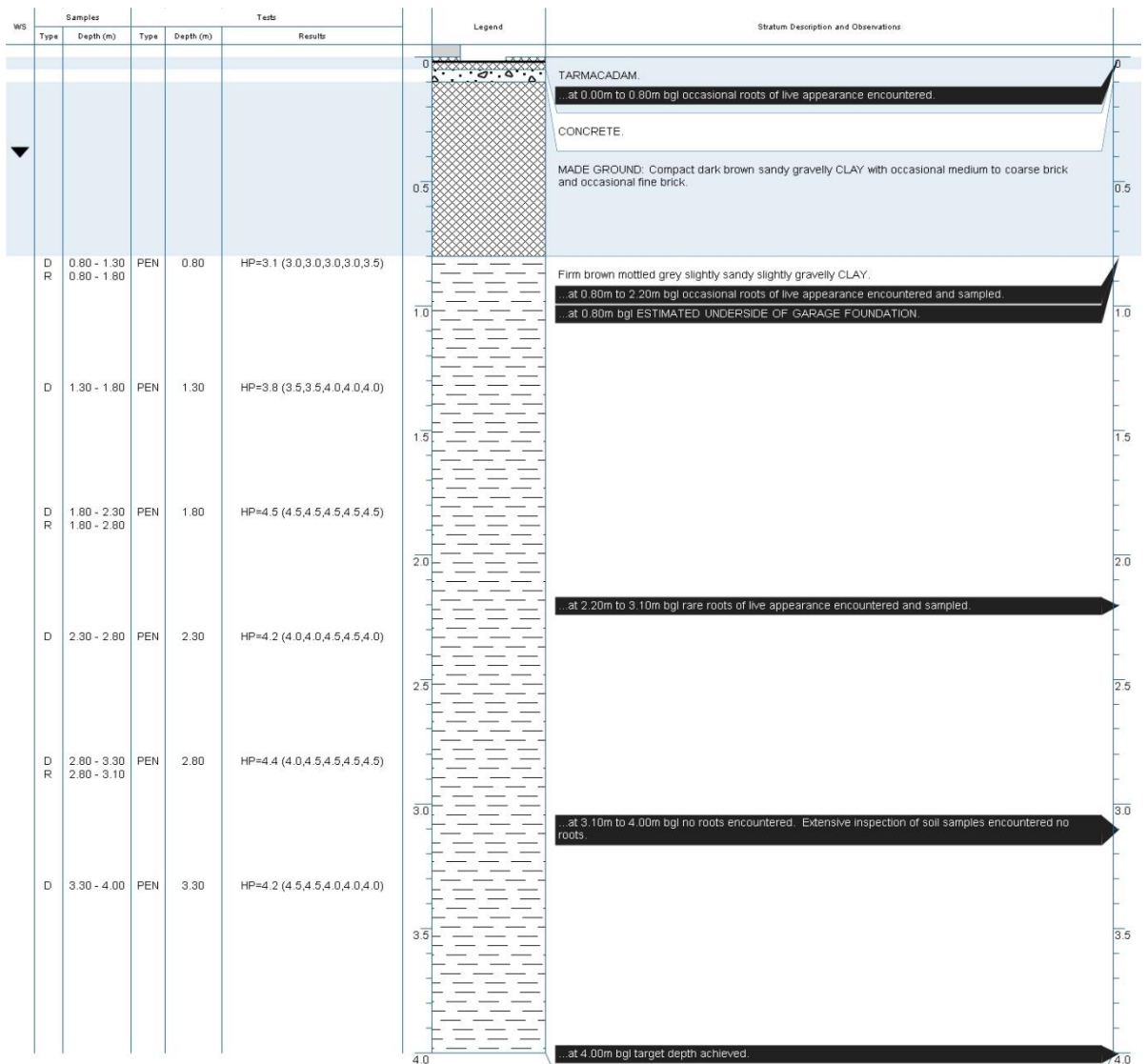
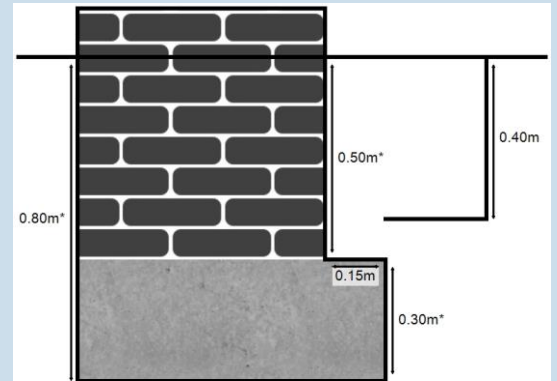


	Borehole		Foul Water Drain		Foul Manhole		Foul Rodding Point		Foul Vent Pipe
	Trial Pit / Borehole		Surface Water Drain		Rain Water Manhole		Surface Rodding Point		Rain Water Gully
	Trial Pit		Combined Drain		Combined Manhole				

TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

Garage foundation was partially exposed and comprised of brick wall to 500mm bgl, bearing on concrete to a depth of at least 800mm bgl, with a total projection of 150mm from the elevation.

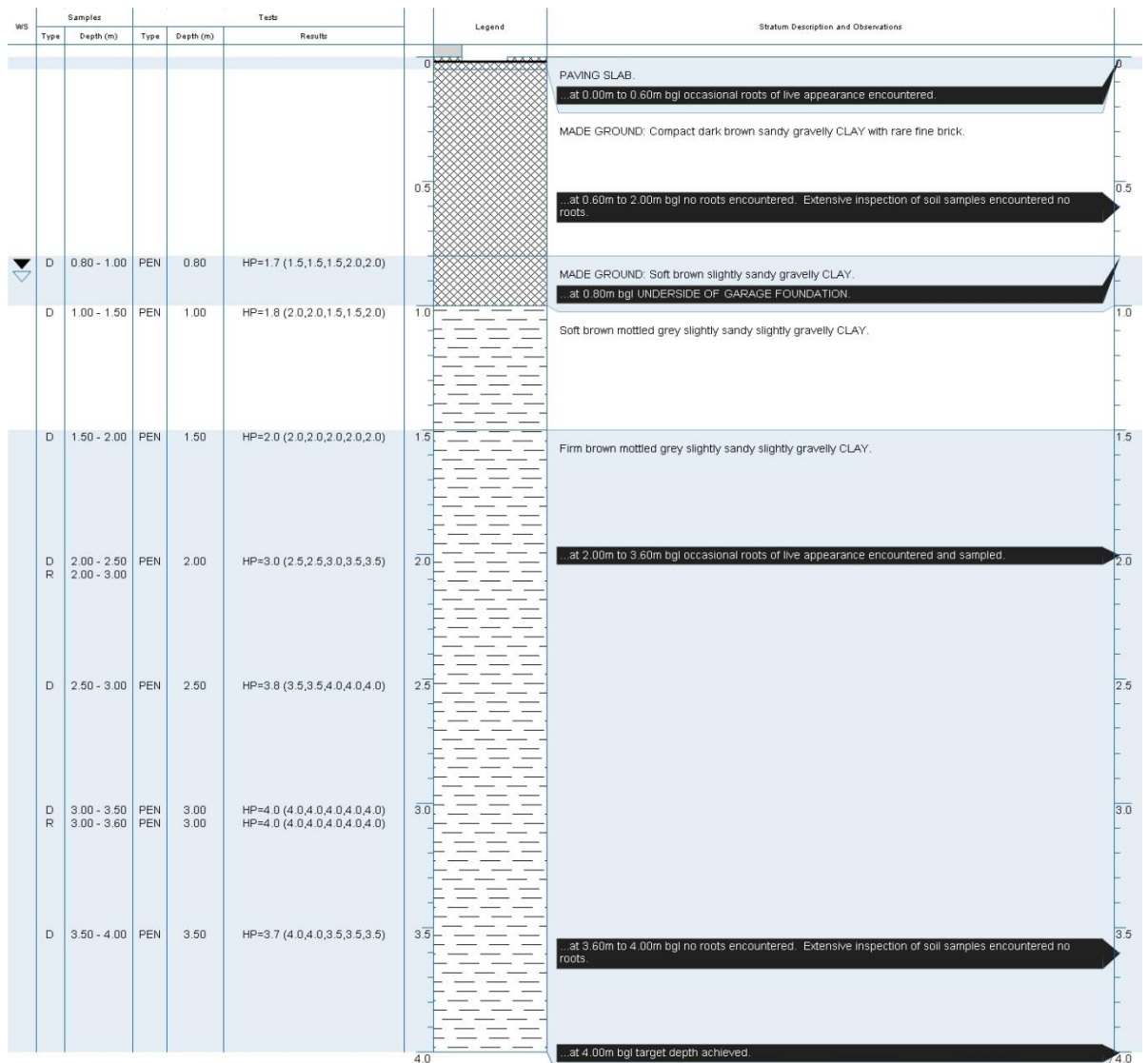
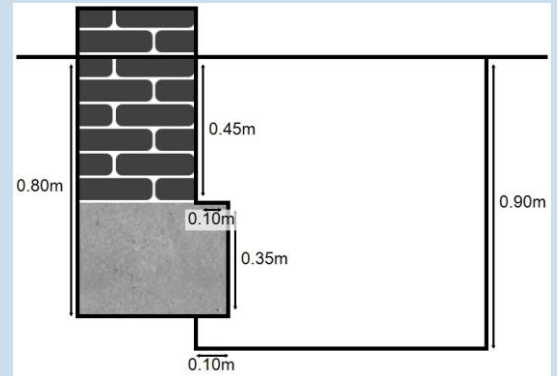


-- End of borehole at 4.00m --
Borehole completed by mech window sampler. Roots encountered to 3.10m bgl. Groundwater encountered at 0.40m bgl. Standing water level within the exploratory hole at 0.40m bgl on completion. PEN = Hand Penetrometer (kg/sq cm). Trial pit excavated to 0.40m bgl. Borehole completed by mech window sampler.

TP/BH2 Foundation Detail and Borehole Log

Foundation Detail

Garage foundation comprised of brick wall to 450mm bgl, bearing on concrete to 800mm bgl with a total projection of 100mm from the elevation. Underside of foundation (USF) was exposed to 100mm back from the face of the foundation and probed 350mm back from the face of the foundation.



-- End of borehole at 4.00m --
Borehole completed by hand auger. Roots encountered to 3.60m bgl. PEN = Hand Penetrometer (kg/sq cm). Trial pit excavated to 0.90m bgl. Groundwater encountered at 0.90m bgl. Standing water level within the exploratory note at 3.90m bgl on completion.

Site Observations

GENERAL:

Site Investigation works (TP/BH 1) undertaken on 24 February 2025 during light rain.

Site Investigation works (TP/BH 2) undertaken on 24 February 2025 during light rain.

HEALTH AND SAFETY:

Negative signal obtained in Power, Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH1).

Negative signal obtained in Power, Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH2).

FOUNDATIONS:

At 0.80m bgl ESTIMATED UNDERSIDE OF GARAGE FOUNDATION in TP/BH1.

At 0.80m bgl UNDERSIDE OF GARAGE FOUNDATION in TP/BH2.

BOREHOLE:

At 4.00m bgl target depth achieved in TP/BH1.

At 4.00m bgl target depth achieved in TP/BH2.

ROOTS:

At 0.00m to 0.80m bgl occasional roots of live appearance encountered in TP/BH1.

At 0.80m to 2.20m bgl occasional roots of live appearance encountered and sampled in TP/BH1.

At 2.20m to 3.10m bgl rare roots of live appearance encountered and sampled in TP/BH1.

At 3.10m to 4.00m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH1.

At 0.00m to 0.60m bgl occasional roots of live appearance encountered in TP/BH2.

At 0.60m to 2.00m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH2.

At 2.00m to 3.60m bgl occasional roots of live appearance encountered and sampled in TP/BH2.

At 3.60m to 4.00m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH2.

IN SITU TESTING:

Hand Penetrometer (PEN) undertaken at 0.80m bgl (TP/BH 1) within the hand excavated trial pit and thereafter in the window sample borehole at maximum 0.50m intervals.

Hand Penetrometer (PEN) undertaken at 0.80m bgl (TP/BH 2) within the hand excavated trial pit and thereafter in the hand auger borehole at maximum 0.50m intervals.

WATER STRIKES:

A water strike (WS) was encountered in the made ground at 0.40m bgl (TP/BH 1), with a standing water level (SWL) recorded at 0.40m bgl after 10 minutes (TP/BH 1). Standing water level within the exploratory hole at 0.40m bgl (TP/BH 1) on completion.

A water strike (WS) was encountered in the clay at 0.90m bgl (TP/BH 2), with a standing water level (SWL) recorded at 0.85m bgl after 10 minutes (TP/BH 2). Standing water level within the exploratory hole at 3.90m bgl (TP/BH 2) on completion.


SOIL ANALYSIS

for Subsidence Management Services


85C Green Lane, Northwood, HA6 1AH

Client: Subsidence Management Services
Claim Number: 102463424
Policy Holder: Mr and Mrs David and Julie Payne
Report Date: 18/03/2025
Our Ref: L28731

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Supervisor	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received: 06-Mar-25
Water Content Test Date: 07-Mar-25
Atterberg Limits Test Date: 13-Mar-25

Oedometer Test Date: 16-Mar-25



9265

Notes relating to soils testing

Unless otherwise stated, all soil testing was undertaken by Environmental Services at 21 Coventry Road, Coleshill, B46 3BB for Subsidence Management Services, Bembridge House, 1300 Parkway, Solent Business Park, Whiteley, Fareham, Hampshire, England, PO15 7AE and all testing at these premises currently falls outside of UKAS accreditation.

Soil samples have been prepared in accordance with BS1377:Part 1: 2016 Section 7

Descriptions of soil samples within the laboratory have been undertaken generally in accordance with BS5930:2015. Descriptions of soil samples fall outside of the scope of UKAS accreditation and may have been shortened to remove tertiary components for ease of reference.

The graphical representation of 40% of the LL and the numerical representation of the modified plasticity index (mod. PI) fall outside of the scope of UKAS accreditation.

Following the issue of this soil analysis report, samples will be retained for at least 28 days should additional testing, or referencing, be required. It should be noted that any tests undertaken on soils retained subsequent to the issue of this report may not give an accurate indication of the in-situ conditions of the sample.

This Soil Analysis Report may not be reproduced, in part or in full, without written approval of the laboratory.

The results contained herein relate only to items tested and no others. Additionally as the laboratory is not responsible for the sampling process it takes no responsibility for the condition of the samples and all samples are tested "as received".

Where samples of the same test type are not tested on the same day, or the testing spans multiple days, the test date states the day of the final test or the test date of the final sample.

All information above the laboratory reference on the cover page of this report are as provided by the customer and the laboratory is not responsible for any errors or omissions therein.

Water Content Tests are undertaken in accordance with ISO 17892:Part 1:2014

The Liquid Limit test is undertaken in accordance with BS1377:Part 2:2022 using an 80g cone with a 30° tip. Sieve percentages reported in blue denote that the sample has been sieved otherwise it has been prepared from its natural state. Sieve percentage reported in BOLD denote that the sample has been oven-dried prior to testing.

Unless otherwise specified herein, the one-point cone penetrometer method has been used.

The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:2022. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

The Oedometer swell/strain test method is based upon BS1377:Part 5:1990 Section 4.4 'Determination of swelling and collapse characteristics' and unless otherwise stated is undertaken on a remoulded, disturbed, sample.

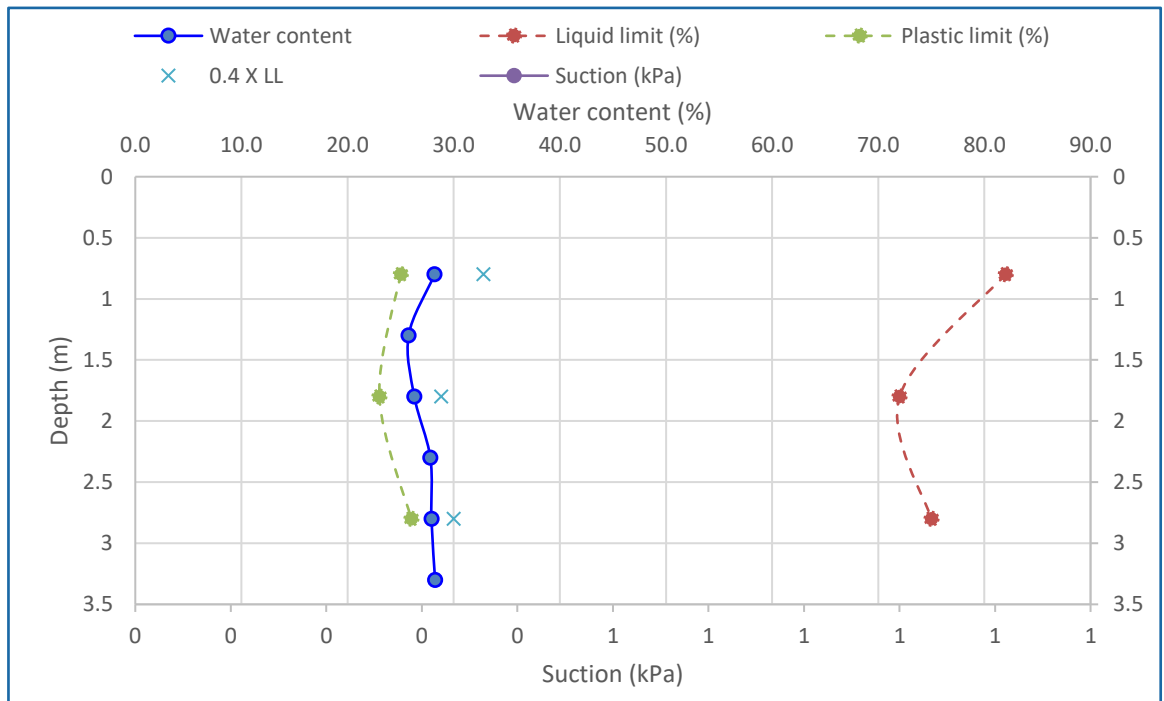
The Oedometer Swell/Strain Test is undertaken in a controlled environment within a temperature range of 16°C and 24°C

If you would like to provide feedback on this report or any laboratory services or performance, please complete the form below. All appropriate feedback will be used in the continual improvement of laboratory services.

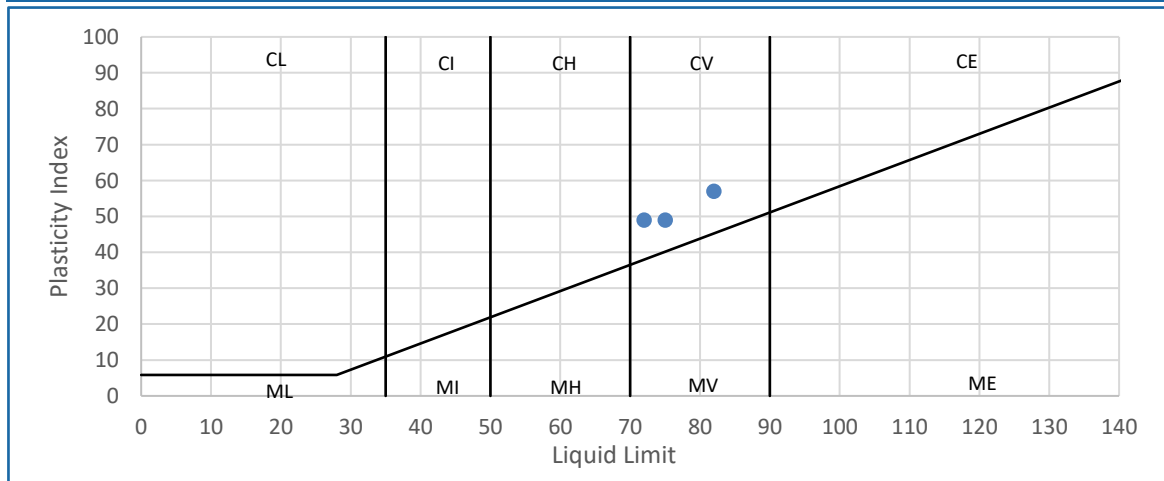
[Laboratory feedback form](#)

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.8	28.2	82	25	57	95	54		Firm brown slightly gravelly CLAY . Gravel is fine and medium.
2	1.3	25.8							Firm brown slightly gravelly CLAY . Gravel is fine and medium.
3	1.8	26.3	72	23	49	95	47		Firm to stiff brown slightly gravelly CLAY . Gravel is fine and medium.
4	2.3	27.8							Firm to stiff brown slightly gravelly CLAY . Gravel is fine and medium.
5	2.8	27.9	75	26	49	93	46		Firm to stiff brown slightly gravelly CLAY . Gravel is fine and medium.
6	3.3	28.2							Firm to stiff brown slightly gravelly CLAY . Gravel is fine and medium.

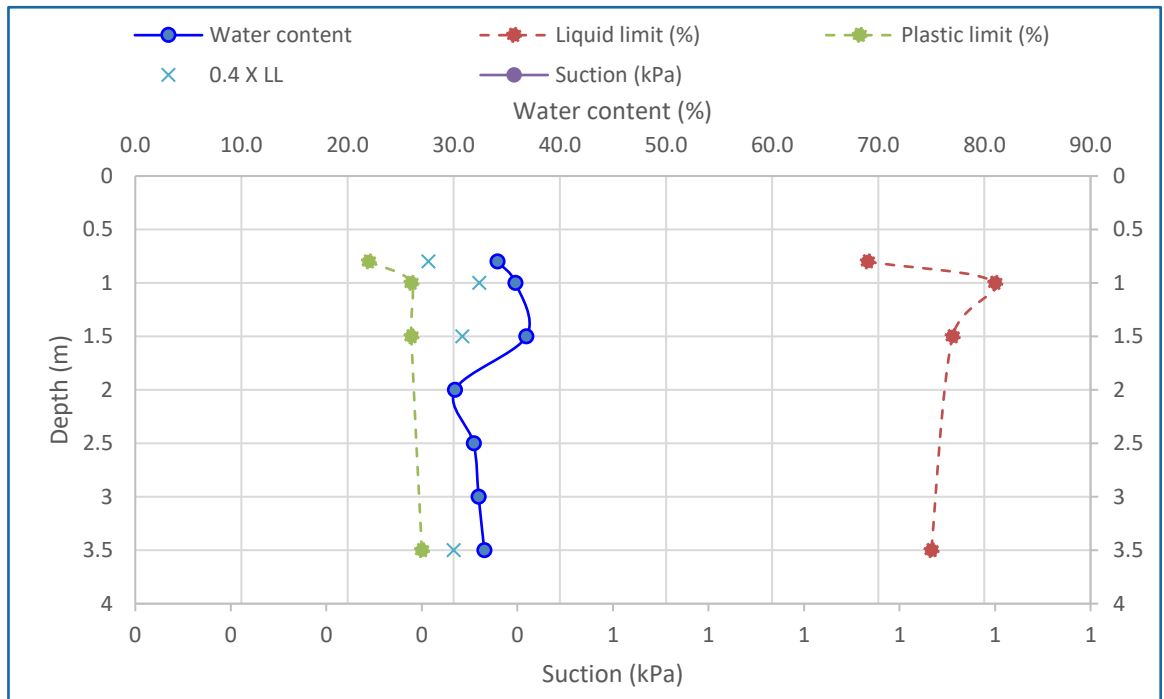


Plasticity Chart for Casagrande Classification

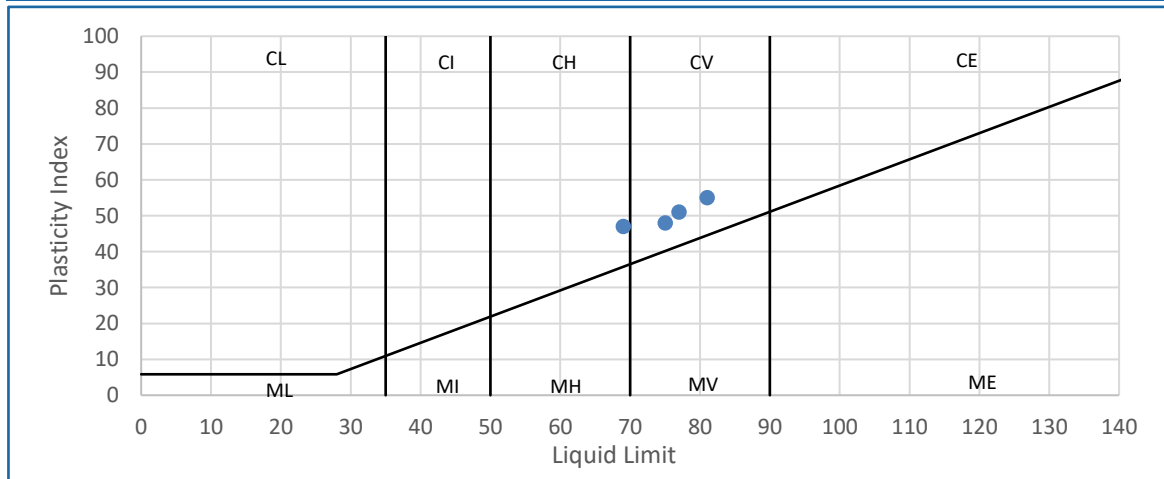


Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
7	0.8	34.1	69	22	47	59	28		Firm brown/orange-brown gravelly CLAY . Gravel is fine and medium.
8	1	35.8	81	26	55	95	52		Firm brown/orange-brown slightly gravelly CLAY . Gravel is fine and medium.
9	1.5	36.8	77	26	51	99	50		Firm brown CLAY with rare gravel. Gravel is fine and medium.
10	2	30.1							Firm brown CLAY
11	2.5	31.9							Firm brown CLAY
12	3	32.3							Firm to stiff brown CLAY
13	3.5	32.9	75	27	48	100	48		Firm to stiff brown CLAY



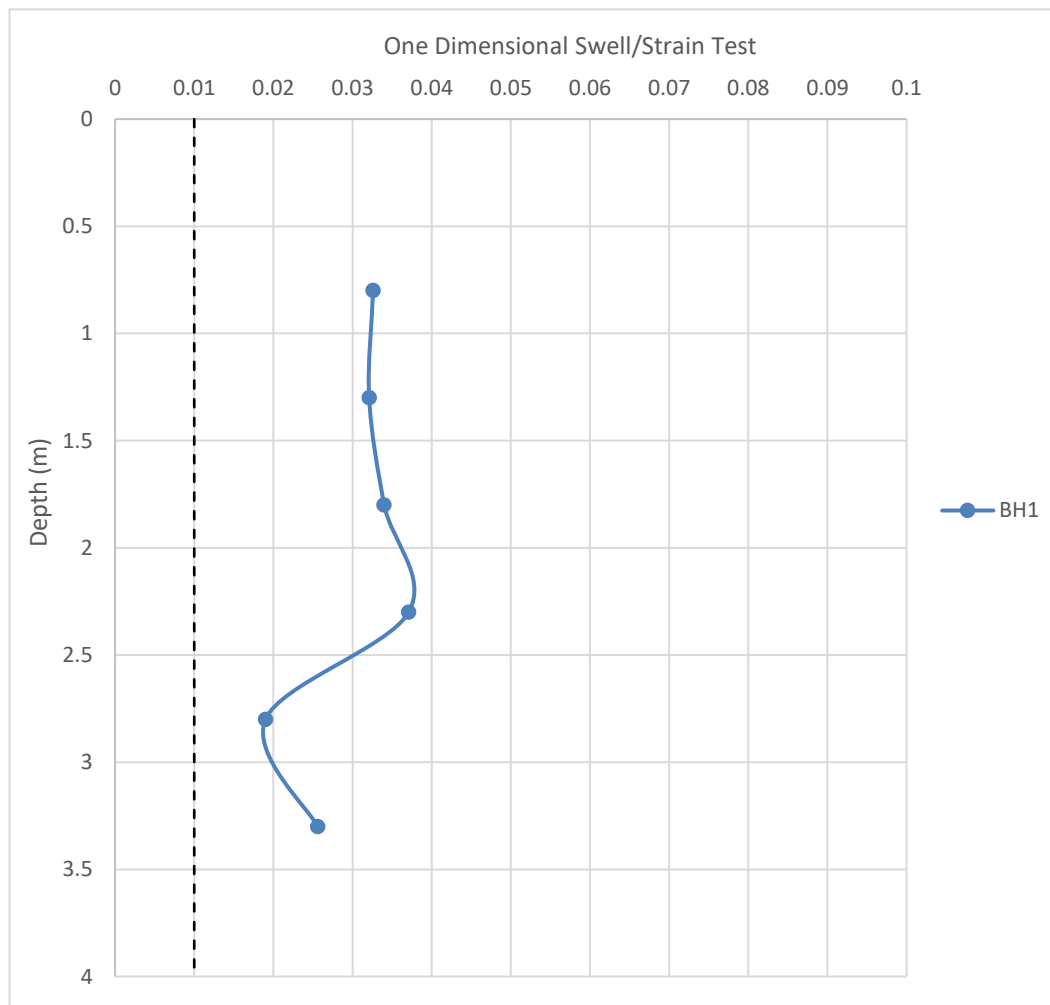
Plasticity Chart for Casagrande Classification



Summary of Oedometer Testing for BH1

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
1	0.8	0.0326	13	
2	1.3	0.0321	8	
3	1.8	0.034	8.5	
4	2.3	0.0371	9.3	
5	2.8	0.019	4.8	
6	3.3	0.0256	6.4	

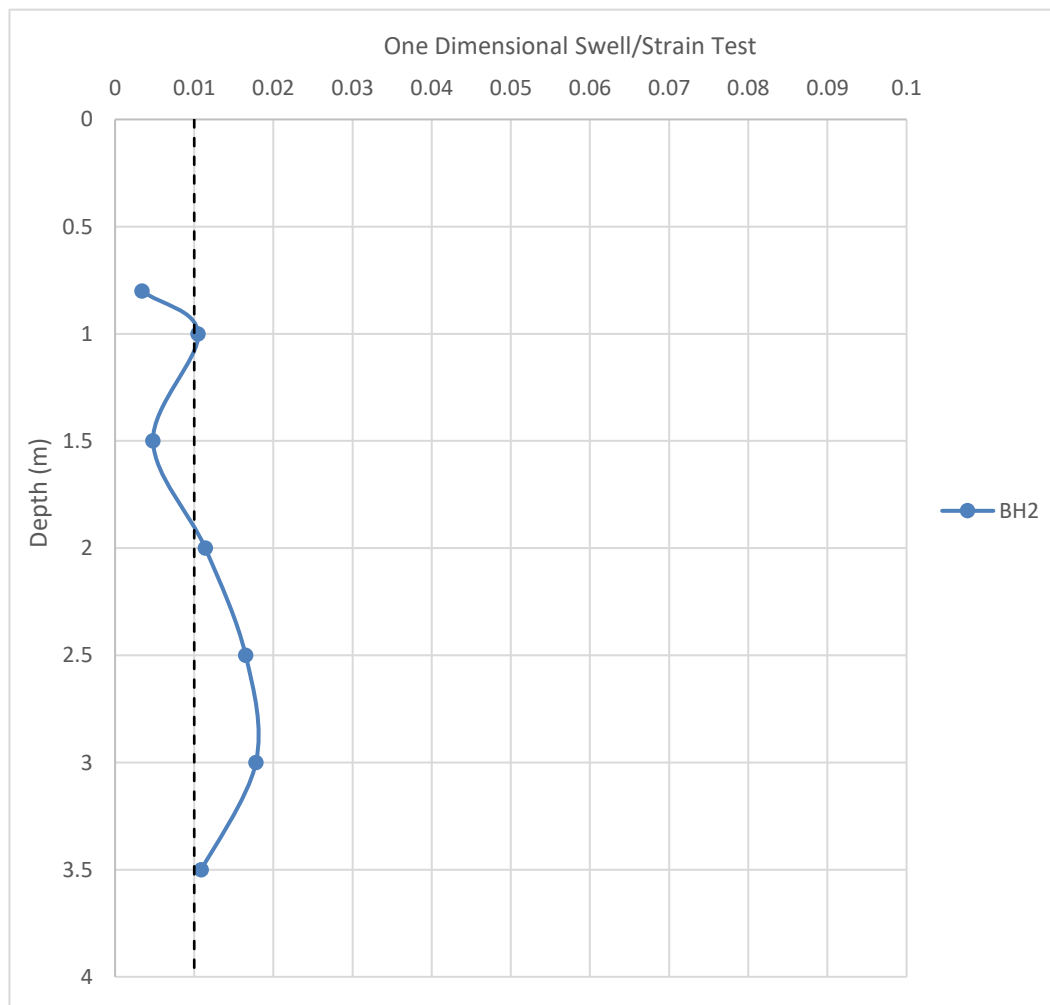
BH 1 estimate of heave	50mm
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Summary of Oedometer Testing for BH2

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
7	0.8	0.0034	0	
8	1	0.0105	1.1	
9	1.5	0.0048	0	
10	2	0.0114	2.9	
11	2.5	0.0165	4.1	
12	3	0.0178	4.4	
13	3.5	0.0109	2.7	

BH 2 estimate of heave	15mm
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Deviating Samples

The table below details any samples deviating from laboratory procedure or deviating in condition to an extent whereby the validity of results may be affected. A test denoted "I" is likely to have had testing abandoned but where a test result has been provided a non-standard procedure may have been used, details of which will be provided upon request.

LAB REF	CONDITION	WC	ATT	SUC	OED
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Key

- D Delay in sample receipt
- C Contaminated sample
- B Sample not bagged correctly
- S Sample too sandy (unsuitable for testing)
- G Sample too gravelly (unsuitable for testing)
- V Sample too soft (unsuitable for preparation)
- L Sample too silty
- I Insufficient sample
- O Too much organic content (unsuitable for testing)
- N Non-standard procedure used
- H Sample depth too shallow
- X Testing result too similar to above sample

References

The following provides a brief interpretation of the test results by comparison of the results to published classifications. The Atterberg Limit test may be used to classify the plasticity of soils; the plasticity classes defined in BS5930:2015 "Code of Practice for Site Investigations" are as follows.

- CL (ML) CLAY and CLAY/SILT of Low plasticity
- CI (MI) CLAY and CLAY/SILT of Intermediate plasticity
- CH (MH) CLAY and CLAY/SILT of High plasticity
- CV (MV) CLAY and CLAY/SILT of Very High plasticity
- CE (ME) CLAY and CLAY/SILT of Extremely High plasticity
- O The letter O is added to prefixes to symbolise a significant proportion of organic matter.
- NP Non-plastic

The Plasticity Index (PI) Result obtained from the Atterberg Limit tests may also be used to classify the potential for volume change of fine soils, in accordance with the National House Building Council's standards - Chapter 4.2 (2003) "Building Near Trees", as summarised below.

- | | |
|-----------------------------|---------------------------------|
| Modified PI < 10 | Non Classified. |
| Modified PI = 10 to <20 | Low volume change potential. |
| Modified PI = 20 to <40 | Medium volume change potential. |
| Modified PI = 40 or greater | High volume change potential. |

The 2003 edition of Chapter 4.2 also permits use of the Plasticity Index without modification. The classifications for this are grouped by soil type (soils with similar visual soils description and using unmodified Plasticity Indices).

ROOT IDENTIFICATION

for SMS (LBG)

85C Green Lane, Northwood, HA6 1AH

Client: SMS (LBG)
Client Contact: Refer to iSubs
Claim Number: 102463424
Client Reference: IFS-LBG-SUB-25-0115754
Policy Holder: Mr and Mrs David and Julie Payne
Report Date: 6 March 2025
Our Ref: R59979



Intec
Parc Menai, Bangor,
Gwynedd, North Wales
LL57 4FG
Tel: 01248 672652

Sub Sample	Species Identified		Root Diameter	Starch
TP/BH1:				
0.8-1.8m	<i>Quercus</i> spp.	1	2 mm	Abundant
0.8-1.8m	probably Cupressaceae spp.	2	3 mm	Absent
1.8-2.8m	<i>Quercus</i> spp.	3	<1 mm	Moderate

Comments:

- 1 - Plus 1 other also identified as *Quercus* spp.
- 2 - Plus one other the same. Both in a state of decay.
- 3 - Plus 2 others also identified as *Quercus* spp.

Quercus spp. are oaks (both deciduous and evergreen).

Cupressaceae spp. include Lawson cypress, western red cedar, Monterey cypress, Leyland cypress and junipers.

Signed: R. Shaw

Unless we are otherwise instructed in writing, the above sample material will normally be disposed of 6 years after the date of this report.