

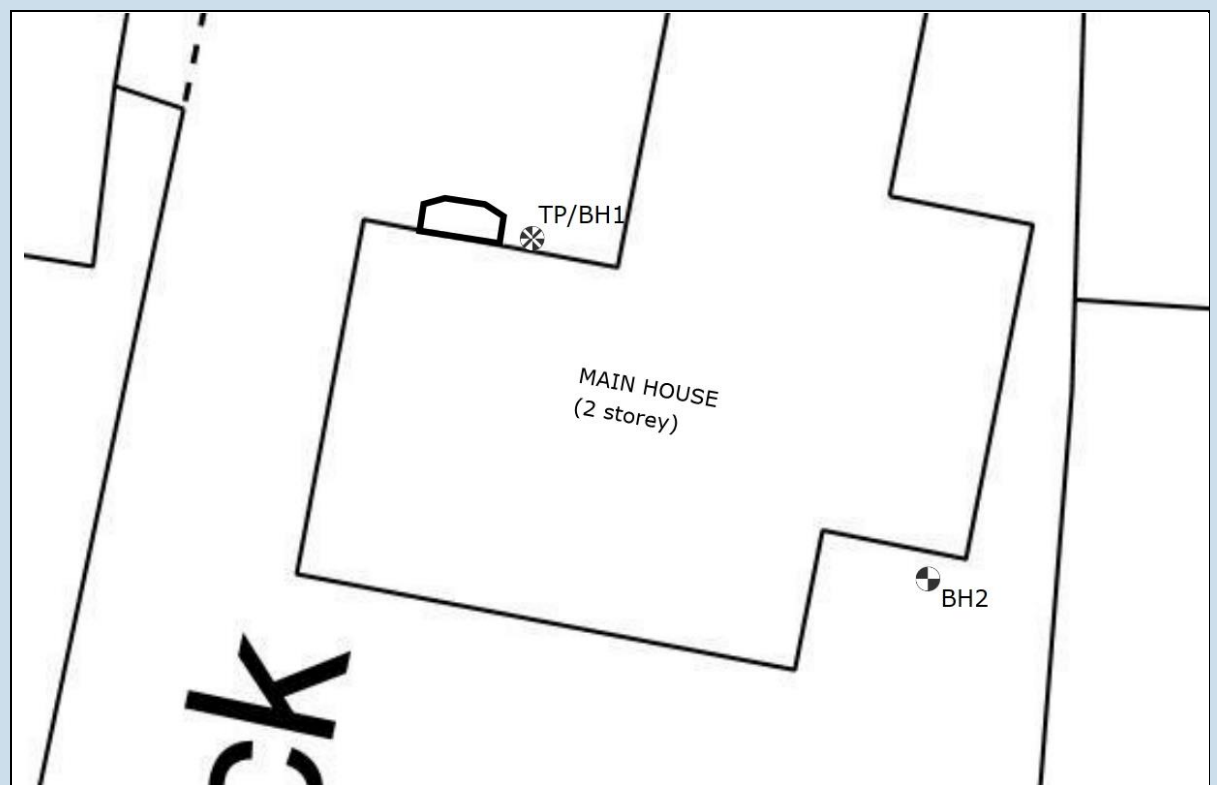
GEOTECHNICAL

for Subsidence Management Services

**Woodstock, COTTESMORE ROAD, ASHWELL, Oakham, RUTLAND,
LEICESTERSHIRE, LE15 7LJ**

Client: Subsidence Management Services
Client Contact: Fyaz Jan
Client Ref: IFS-PRE-SUB-22-0104778
Policy Holder: Mrs Yvonne Olive Walters
Report Date: 20 March 2023
Our Ref: C69569G31839

Site Plan

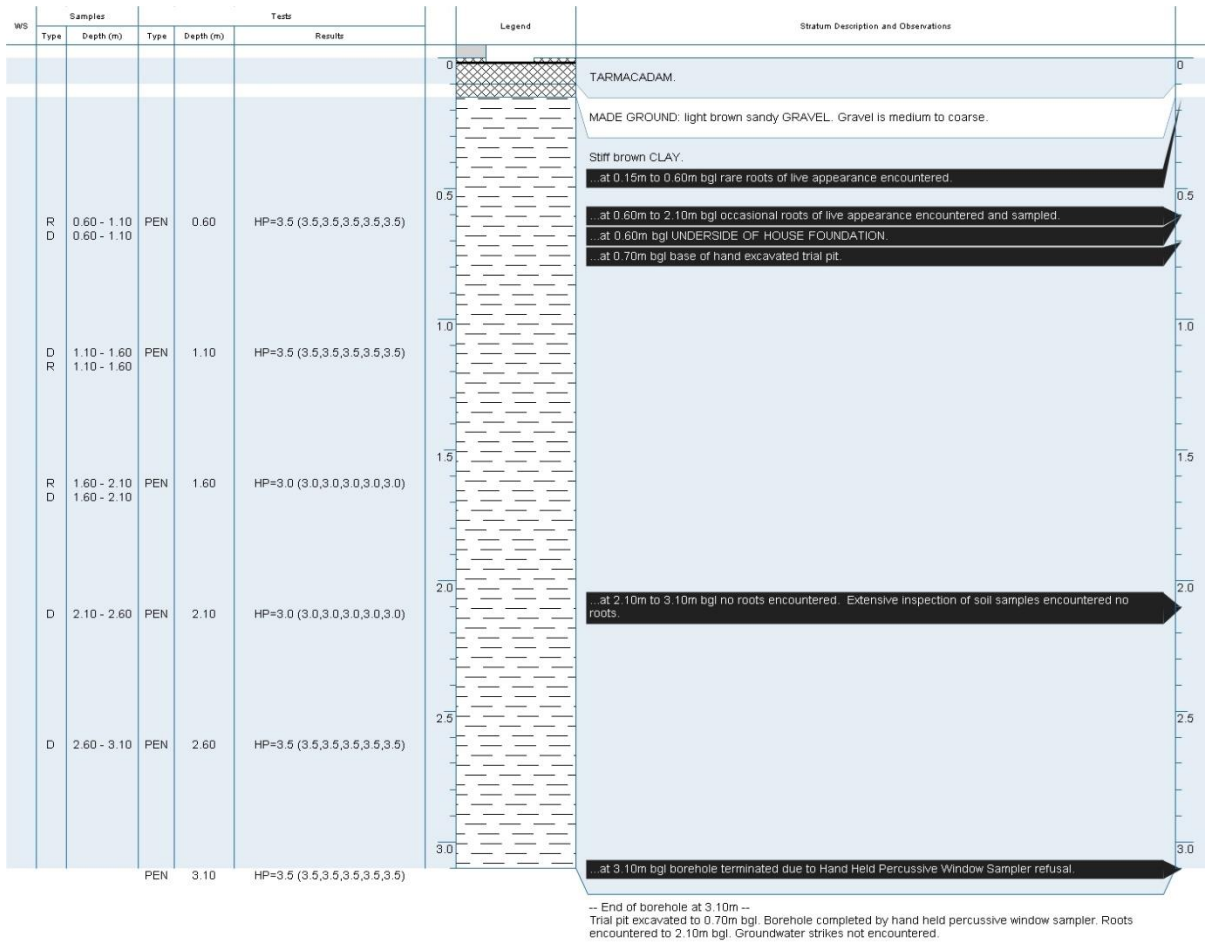
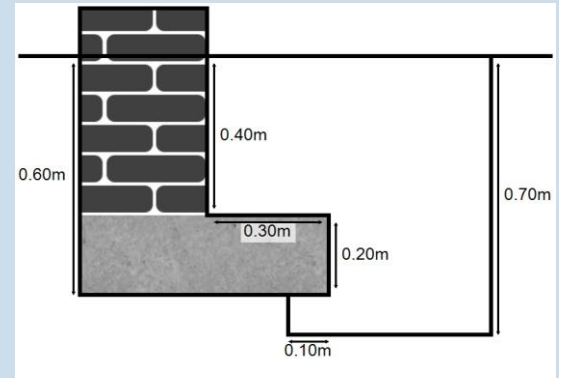


	Borehole		Foul Water Drain		Foul Manhole		Foul Rodding Point		Foul Vent Pipe
	Trial Pit / Borehole		Surface Water Drain		Rain Water Manhole		Surface Rodding Point		Rain Water Gully
	Trial Pit		Combined Drain		Combined Manhole				

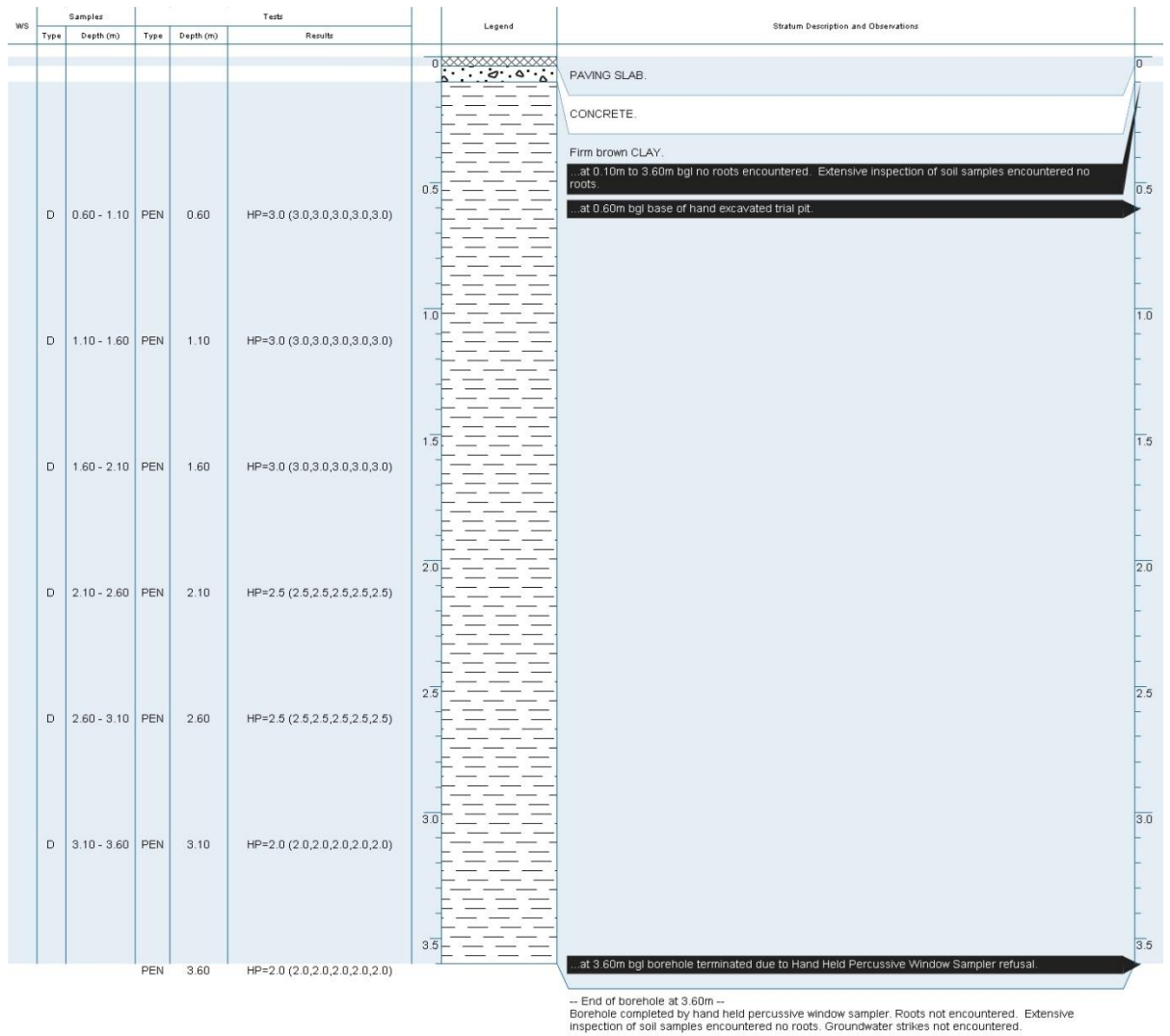
TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 400mm bgl, bearing on concrete to 600mm bgl, with a total projection of 300mm 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.



BH2 Borehole Log



Site Observations

GENERAL:

Site Investigation works (TP/BH 1 and BH 2) undertaken on 9 March 2023 during moderate rain.

HEALTH AND SAFETY:

Negative signal obtained in Power and Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH 1 and BH 2).

FOUNDATIONS:

House foundation was exposed and the underside of foundation (USF) recorded to be 0.60m bgl (TP/BH 1).

BOREHOLE:

Hand Held Percussive Window Sampler refusal at 3.10m and 3.60m bgl due to granular content within the clay (TP/BH 1 and BH 2). Borehole terminated. No further works undertaken.

ROOTS:

Roots encountered to 2.10m bgl (TP/BH 1).

Roots not encountered from 0.10m bgl to 3.60m bgl (BH 2). Extensive inspection of soil samples encountered no roots.

IN SITU TESTING:

Hand Penetrometer (PEN) undertaken at 0.60m bgl (TP/BH 1 and BH 2) within the hand excavated trial pit and thereafter in the window sampler at maximum 0.50m intervals.

WATER STRIKES:

No water strikes (NWS) encountered (TP/BH 1 and BH 2).

The groundwater observations do not necessarily indicate equilibrium conditions. It should be appreciated that groundwater levels are subject to both seasonal and weather induced variations. Other effects such as construction activities may also change groundwater levels.

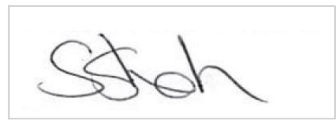
SOIL ANALYSIS

for Subsidence Management Services

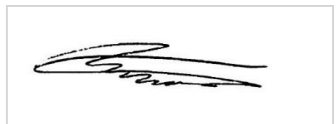
Woodstock, Leicestershire, LE15 7LJ

Client: Subsidence Management Services
Claim Number: 346516/H/AV/HSA/2022
Policy Holder: Mrs Yvonne Olive Walters
Report Date: 18/04/2023
Our Ref: L25304

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Technician	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received: 10-Mar-23
Water Content Test Date: 04-Apr-23
Atterberg Limits Test Date: 14-Apr-23



9265

Notes relating to soils testing

Unless otherwise stated, all soil testing was undertaken by Environmental Services at unit 10H Maybrook Business Park, B76 1AL for SubsNetUK of Unit 4 Linnet Court, Cawledge Business Park, Alnwick, NE66 2GD

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 2:1990 Section 4.4 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 with increasing water content. Atterberg results depicted in green have not been tested and are duplicates of the preceding sample, included for reference only.

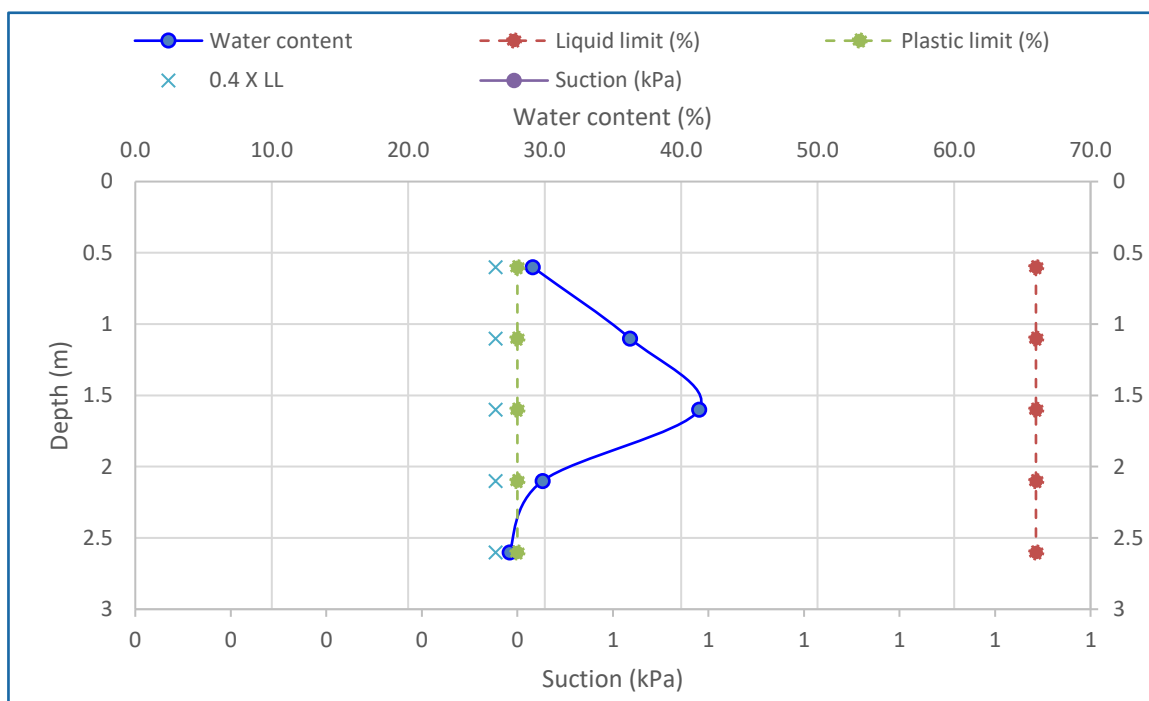
The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:1990. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

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.

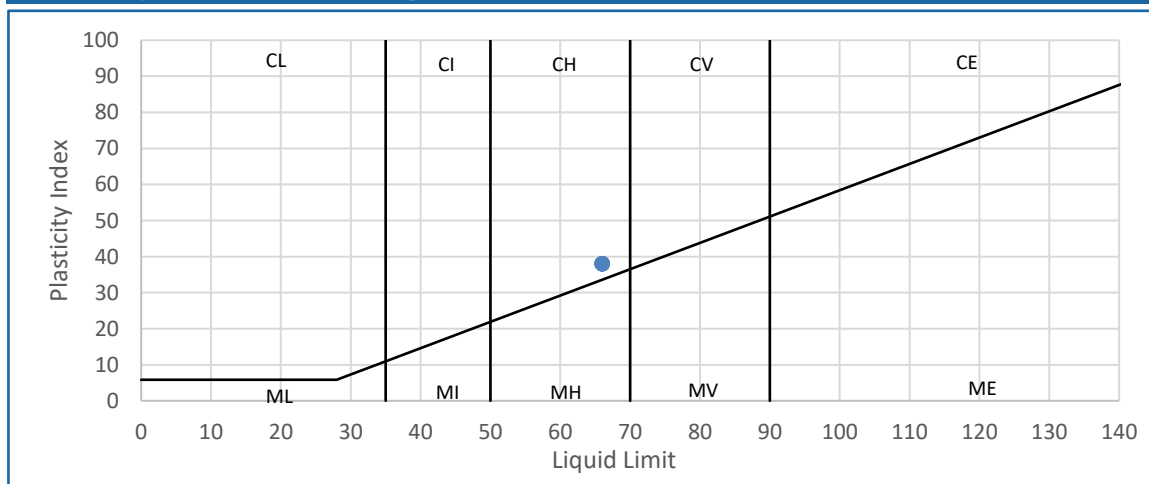
[Laboratory feedback form](#)

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.6	29.1	66	28	38	98	37		Soft to firm grey-brown silty CLAY with rare gravel. Gravel is fine
2	1.1	36.2	66	28	38	98	37		Soft to firm grey-brown silty CLAY with rare gravel. Gravel is fine
3	1.6	41.3	66	28	38	98	37		Soft to firm grey-brown silty CLAY with rare gravel. Gravel is fine
4	2.1	29.8	66	28	38	98	37		Soft to firm grey-brown silty CLAY with rare gravel. Gravel is fine
5	2.6	27.4	66	28	38	98	37		Soft to firm grey silty CLAY with rare gravel. Gravel is fine

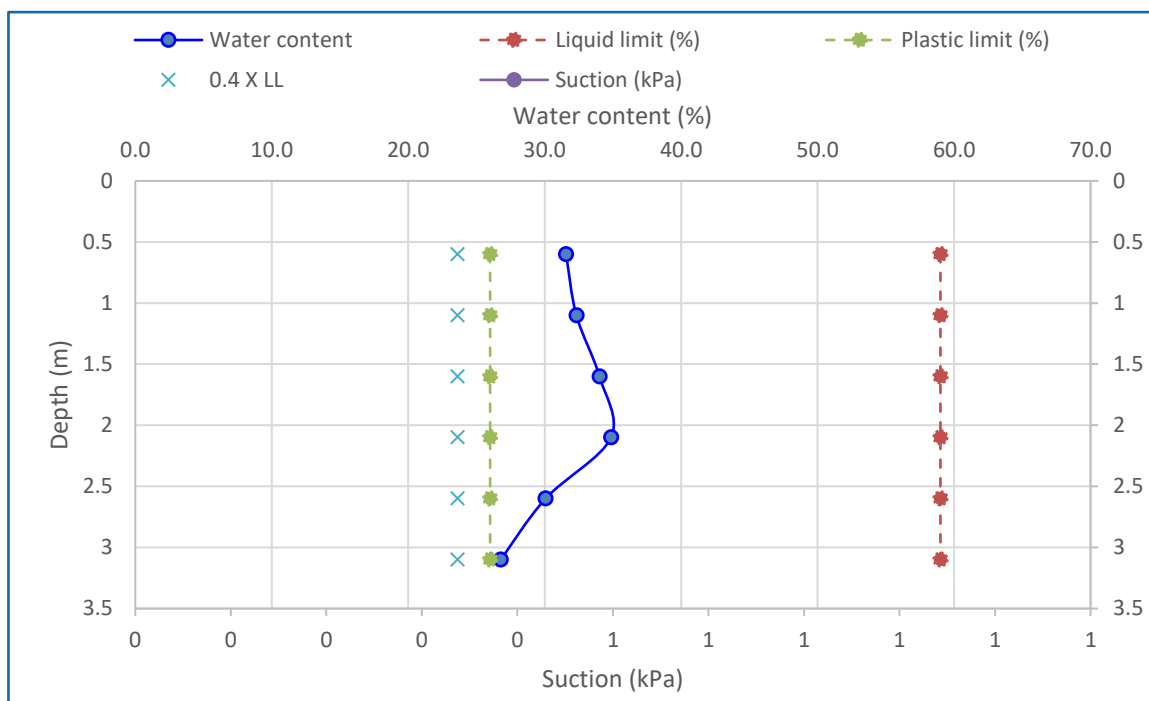


Plasticity Chart for Casagrande Classification

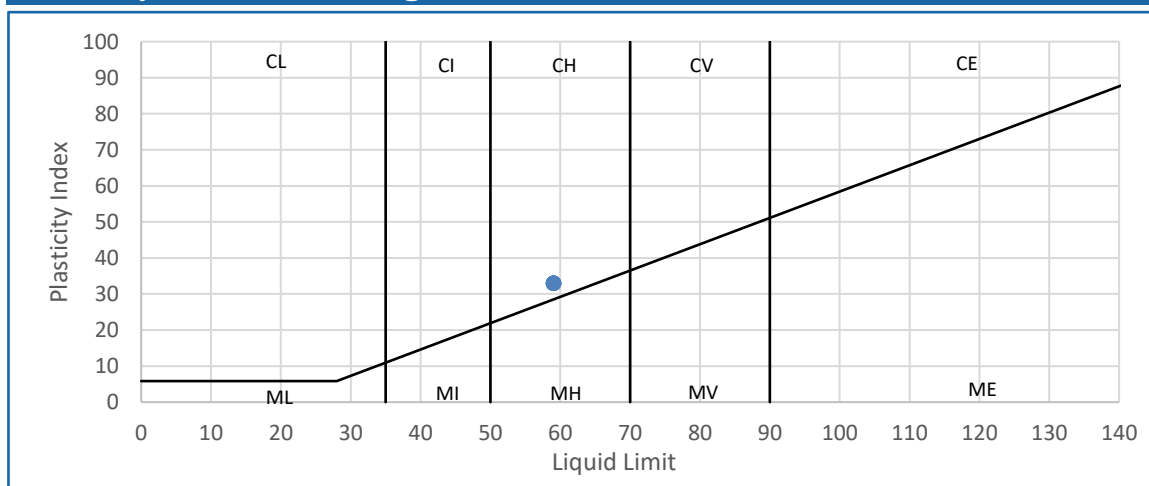


Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
6	0.6	31.6	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine
7	1.1	32.3	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine
8	1.6	34.0	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine
9	2.1	34.9	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine
10	2.6	30.1	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine
11	3.1	26.8	59	26	33	99	33		Soft to firm grey silty CLAY with rare gravel. Gravel is fine



Plasticity Chart for Casagrande Classification



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					

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 Subsidence Management Services

Woodstock, COTTESMORE ROAD, ASHWELL, RUTLAND, LE15 7LJ

Client: Subsidence Management Services
Client Contact: Fyaz Jan
Claim Number: 346516/H/AV/HSA/2022
Client Reference: IFS-PRE-SUB-22-0104778
Policy Holder: Mrs Yvonne Olive Walters
Report Date: 21 March 2023
Our Ref: R49933



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

Sub Sample	Species Identified		Root Diameter	Starch
TP/BH1:				
0.6-1.1m	<i>Populus</i> spp. *	1	2 mm	Low
1.1-1.6m	<i>Populus</i> spp. *	2	1 mm	Low
1.6-2.1m	<i>Populus</i> spp. *	3	1 mm	Low

Comments:

- 1 - Plus a large fragment, probably the same.
- 2 - Plus 2 others, probably the same.
- 3 - Plus 2 others probably the same.

Populus spp. are poplars and aspens.

* EPSL research has developed a unique ability to differentiate Willows from Poplars. No other laboratory in the UK can currently provide this service. We now offer this benefit at no extra cost.

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.

Drainage Investigation Report

For Subsidence Management Services

Client Mrs Yvonne Olive Walters

Risk Address: Woodstock Cottesmore Road, Ashwell Oakham, Rutland, LE15 7LJ

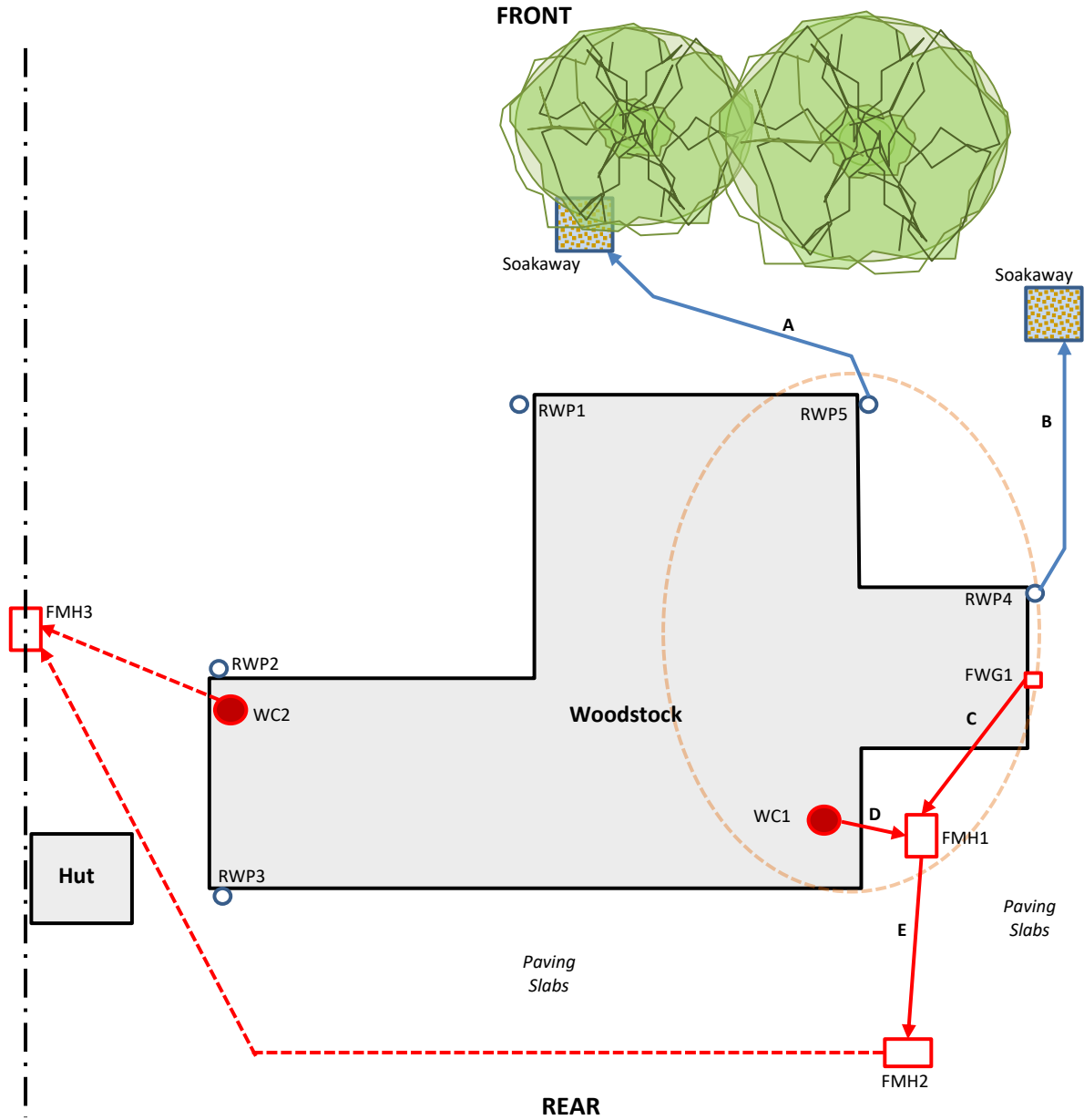
Visit Date: 15/06/2023

Client Reference: IFS-PRE-SUB-22-0104778

Our Reference: C69569 D25427

Report Date: 24/06/2023

Report Content: Front Page
Site Plan
CCTV Coding
Drain Overview
Quote



Key

	Tree		Building		Combined Drains		Unsurveyed Drains
	Shrubs		Water Supply		Foul Drains		Excavation
	Bushes		Launch Pit		Storm Drains		Area of Concern
	Boundary		Stop Valve		WC		
			Soak-Away		Exploratory Hole		
					Bore Hole		

Notes:

Address:

Woodstock Cottesmore Road, Ashwell Oakham, Rutland, LE15 7LJ

Following the receipt of your instruction, we attended site to carry out a CCTV survey.

The CCTV survey was undertaken in general accordance with the Manual of Sewer Classification and the WRc Drain Repair Book.

The following presents a summary of the findings with recommendations to repair and/or return the drains to a serviceable state, where necessary.

Drain Run A: RWP5 Downstream to Soakaway

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

Drain Run B: RWP4 Downstream to Soakaway

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

Drain Run C: FMH1 Upstream to FWG1

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

Drain Run D: FMH1 Upstream to SVP1

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

Drain Run E: FMH1 Downstream to FMH2

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

We were unable to complete the CCTV survey as we were unable to lift FMH3 cover as its currently sitting underneath a fence. The home owner is aware that this needs to be lifted but we would require permission from next door to do this as its their fence.

We were unable to lift out the rainwater downpipes at RWP's 1, 2 and 3 due to the brackets being so low to ground level. The downpipes run underneath the hard standing surface also and therefore require excavation for access or cut-ins.

Once we have lifted it, we would require the following works as there was debris building up between MH2 and FMH3:

- 1) Carry out extensive high pressure water jetting
- 2) Lift FMH3 frame and cover for access
- 3) Carry out a further CCTV survey of all laterals into FMH3 and report findings.
- 4) Perform 3x cut-ins to RWP's 1, 2 and 3 for access.
- 5) Carry out a further CCTV survey downstream of the RWP's and report findings.

NOTE: The re-instatement will be carried out on a like-for-like basis but where concrete or tarmac has been re-instated these surfaces will not match to the existing surface and will be seen as its new material.

Water Main Test	From	To	Result	Notes
	ESV	ISV	PASS	No drop in 10 minutes

ENABLING WORKS:

Enabling contractor require dto lift up / take out boundary fence (see photographs page). This will need to be reinstated by the contractors upon completion of our works / further investigations.

Address:

Woodstock Cottesmore Road, Ashwell Oakham, Rutland, LE15 7LJ



Address:

Woodstock Cottesmore Road, Ashwell Oakham, Rutland, LE15 7LJ

RUN / LOCATION: FURTHER INVESTIGATIONS

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0510	CCTV survey of underground drainage & report.	nr	£320.00	1.00	£320.00
UK0525	High Pressure Water Jetting - up to 1 hour on site.	hr	£59.38	1.00	£59.38
UK0530	High Pressure Water Jetting - Additional 1/2 hours on site.	1/2hr	£27.31	2.00	£54.63
UK008	Cut access into above ground pipework for access to survey. Reinststate and seal on completion with a removable access point.	nr	£56.25	3.00	£168.75
Total (Excl VAT)					£602.75

REPAIR ESTIMATE TOTALS:

Run / Location	Amount (£)
FURTHER INVESTIGATIONS	£602.75
Total (Excl VAT)	£602.75

Address:

Woodstock Cottesmore Road, Ashwell Oakham, Rutland, LE15 7LJ

CRACK MONITORING

for Subsidence Management Services

**Woodstock, COTTESMORE ROAD, ASHWELL, Oakham, RUTLAND,
LEICESTERSHIRE, LE15 7LJ**

Client:	Subsidence Management Services
Client Contact:	Fyaz Jan
Claim Number:	346516/H/AV/HSA/2022
Client Reference:	IFS-PRE-SUB-22-0104778
Policy Holder:	Mrs Yvonne Olive Walters
Report Date:	14 June 2023
Our Ref:	M20509

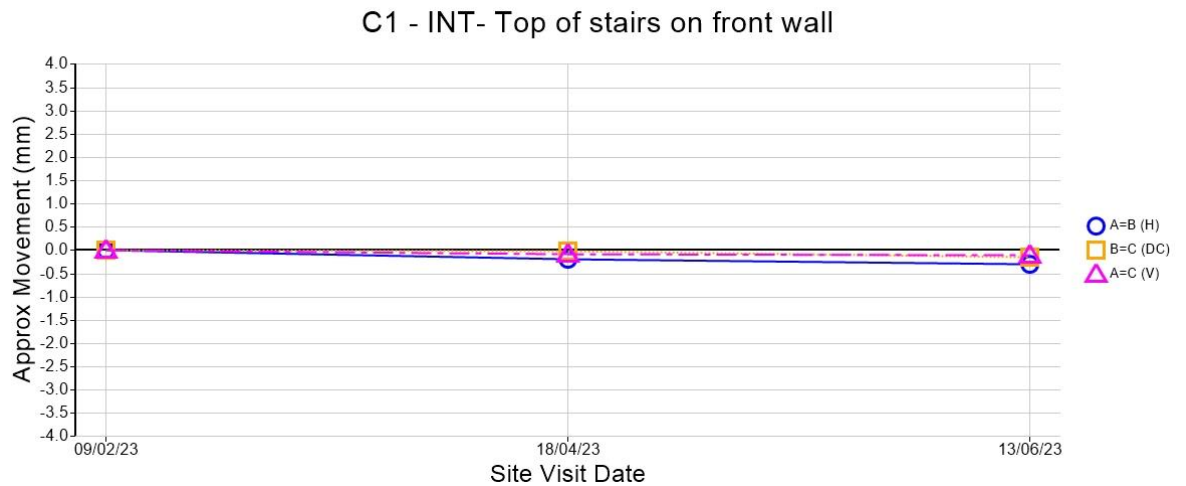
Crack Monitoring Readings

The following table shows the reading levels of the Crack Monitoring Stations.

Date	A=B (H)	B=C (D)(C)	A=C (V)	Crack Width
C1 - INT- Top of stairs on front wall				
9 February 2023	101.30	127.27	83.19	0.30 - 0.40
18 April 2023	101.12	127.25	83.12	
13 June 2023	101.00	127.12	83.10	

Crack Monitoring Difference Graphs

The following graphs display the progressive movement that each Crack Monitoring Station recorded at each separate site visit date to give an overall look at how much the property is moving.



LEVEL MONITORING

for Subsidence Management Services

**Woodstock, COTTESMORE ROAD, ASHWELL, Oakham, RUTLAND,
LEICESTERSHIRE, LE15 7LJ**

Client:	Subsidence Management Services
Client Contact:	Fyaz Jan
Claim Number:	346516/H/AV/HSA/2022
Client Reference:	IFS-PRE-SUB-22-0104778
Policy Holder:	Mrs Yvonne Olive Walters
Report Date:	14 June 2023
Our Ref:	M20509

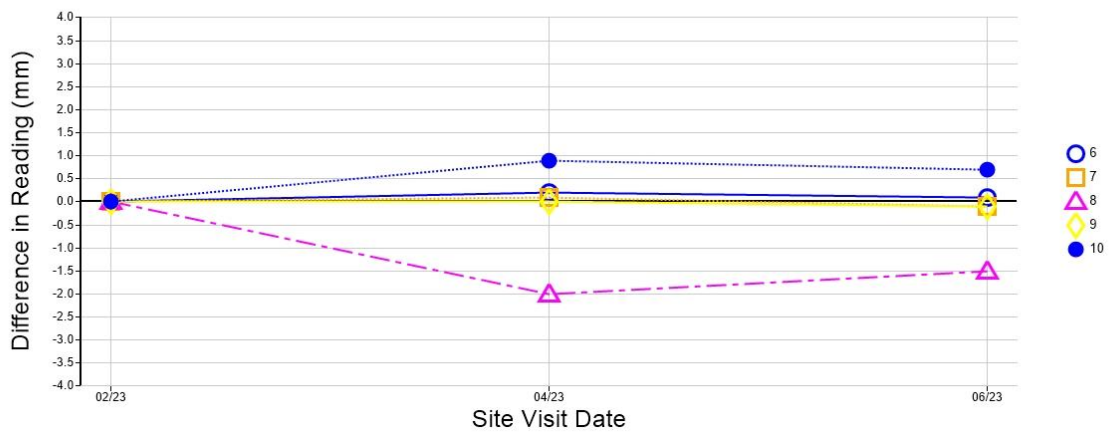
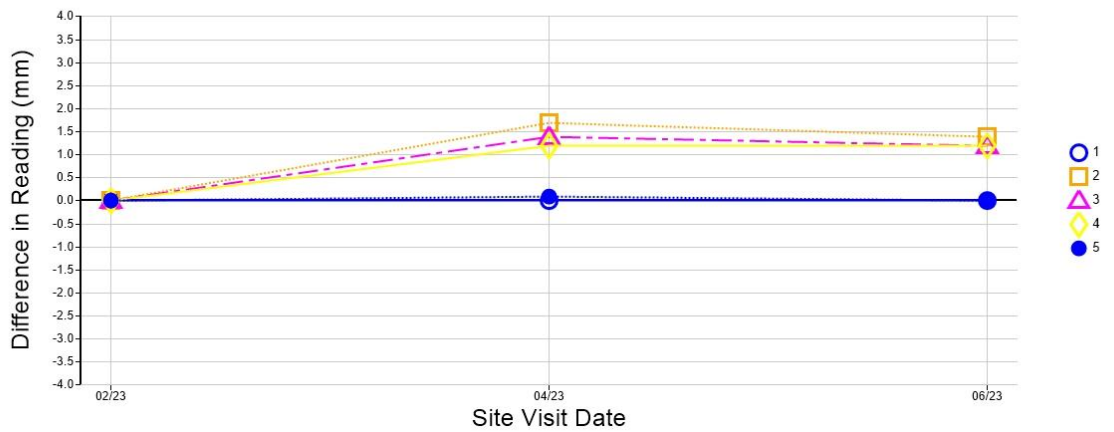
Level Monitoring Readings

The following table shows the reading levels of the various Level Monitoring Station points.

Date	1	2	3	4	5	6	7	8	9	10
09/02/2023	10.0000	10.0604	9.9769	9.9927	9.9895	9.9918	9.9931	9.9884	9.9745	9.9730
18/04/2023	10.0000	10.0621	9.9783	9.9939	9.9896	9.9920	9.9932	9.9864	9.9745	9.9739
13/06/2023	10.0000	10.0618	9.9781	9.9939	9.9895	9.9919	9.9930	9.9869	9.9744	9.9737

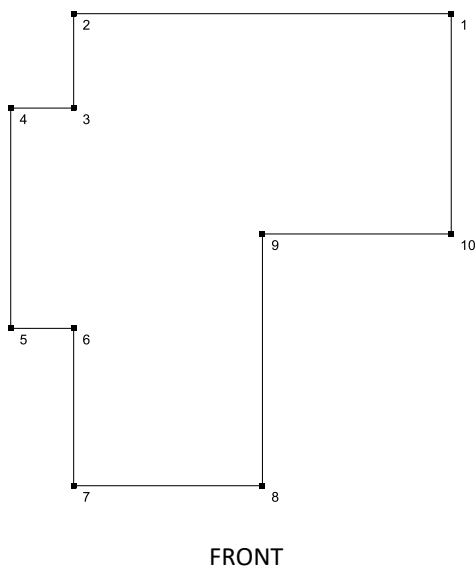
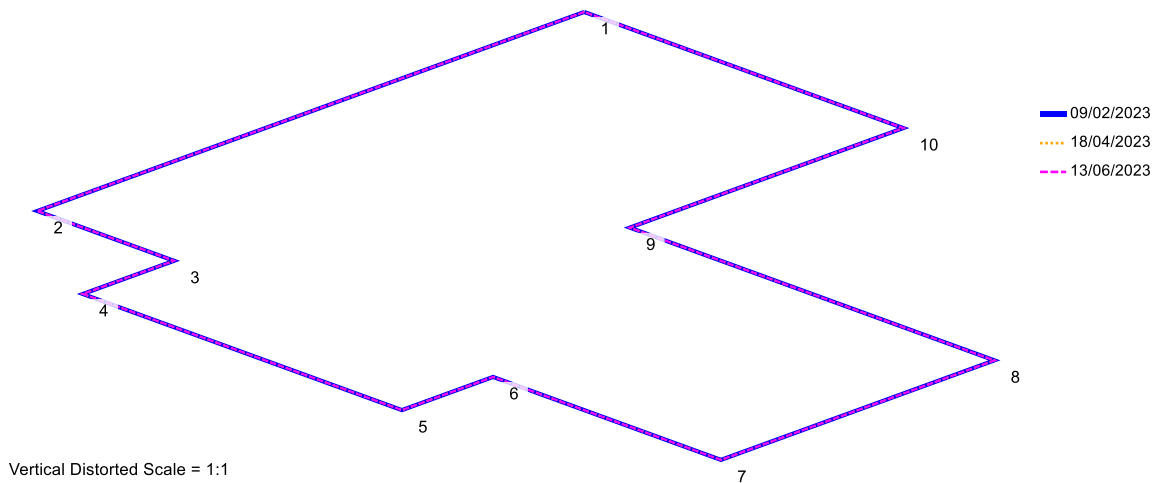
Level Monitoring Difference Graphs

The following graphs display the progressive movement that each Level Monitoring Station recorded at each separate site visit date to give an overall look at how much the property is moving.



Level Monitoring Displacement Map

The following image shows an isometric representation of the movement of the property, based on the Level Monitoring Stations that were installed.



Site Visit Notes

Datum is relative to point 1 away from damage. It has an assumed value of 10.0000m. There is no suitable secondary TBM available. If this is not suitable, a deep datum is recommended.