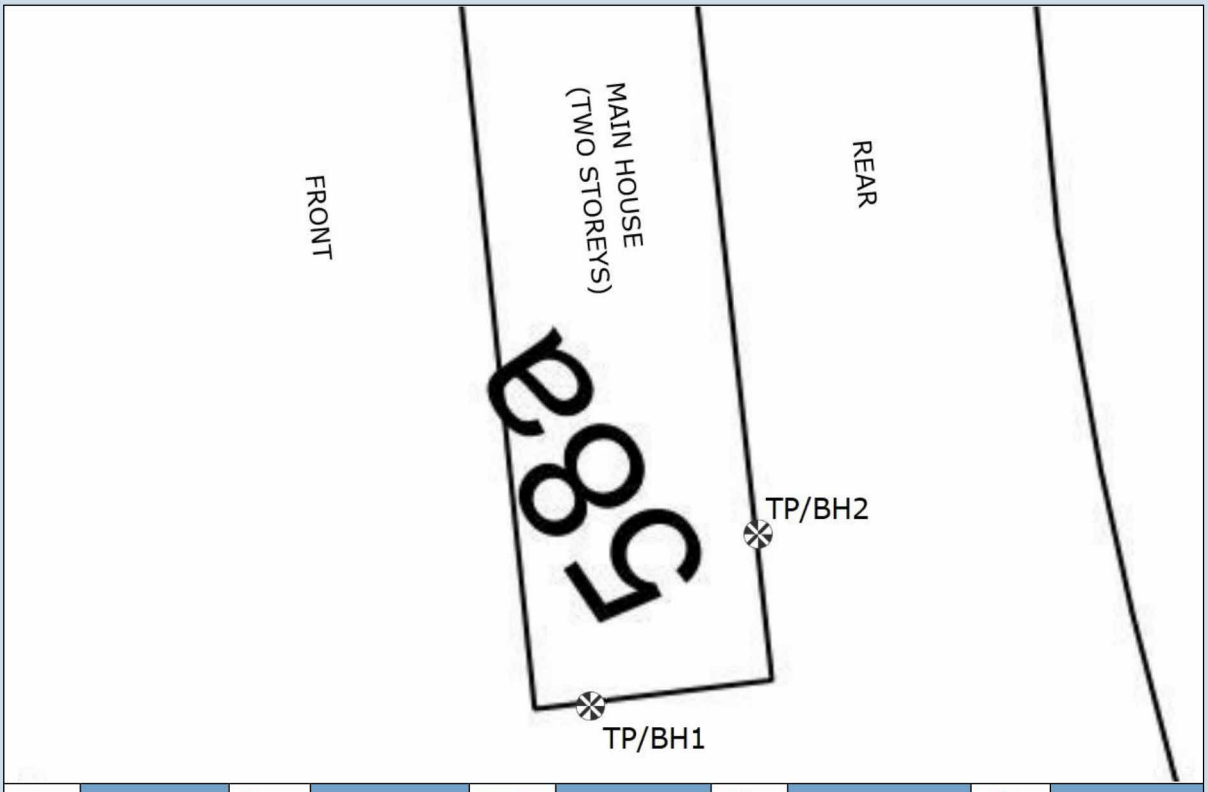
GEOTECHNICAL
for Subsidence Management Services

58a Commercial End, Swaffham Bulbeck, Cambridge, CB25 0NE

Client:	Subsidence Management Services
Client Contact:	Peter Hughes
Client Ref:	IFS-AVI-SUB-22-0101842
Policy Holder:	[redacted]
Report Date:	30 September 2022
Our Ref:	C65587G29670

Site Plan

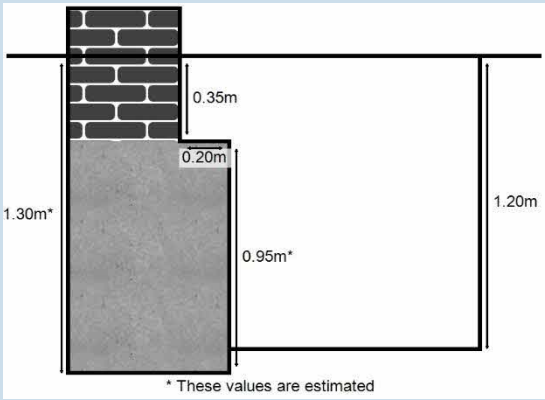


SubsNetUK

TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 350mm bgl, bearing on concrete to an estimated depth of 1300mm bgl, with a total projection of 200mm from the elevation. Underside of foundation (USF) was estimated by pushing a probe, approximately 200mm back from the face of the foundation, at an angle with no apparent contact with the face of the foundation beyond the estimated depth.



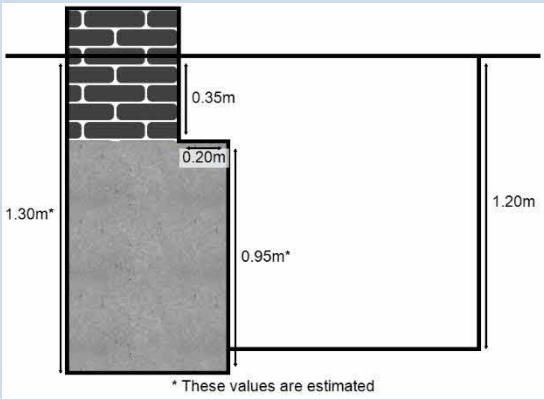
WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Stratum Description and Observations
						0	PAVING SLAB.
							MADE GROUND: brown mottled grey gravelly CLAY with occasional fine to medium brick. Gravel is fine to medium.
							...at 0.10m to 1.30m bgl occasional roots of live appearance encountered.
						0.5	Hard grey gravelly CLAY. Gravel is fine to medium mudstone lithorelicts.
						1.0	...at 1.20m bgl base of hand excavated trial pit.
	D R	1.30 - 1.80 1.30 - 1.80	PEN	1.30	HP=4.5 (4.5,4.5,4.5,4.5,4.5)		...at 1.30m to 1.80m bgl occasional roots of live appearance encountered and sampled. ...at 1.30m bgl ESTIMATED UNDERSIDE OF HOUSE FOUNDATION.
						1.5	
	D	1.80 - 2.30	PEN	1.80	HP=4.5 (4.5,4.5,4.5,4.5,4.5)		...at 1.80m to 2.50m bgl no roots encountered. Extensive inspection of soil samples encountered no roots.
						2.0	
	D	2.30 - 2.50	PEN	2.30	HP=5.0 (5.0,5.0,5.0,5.0,5.0)		
						2.5	...at 2.50m bgl unable to retrieve further sample due to friable soils preventing sample recovery.

-- End of borehole at 2.50m --
PEN = Hand Penetrometer (kg/sq cm). Groundwater strikes not encountered. Trial pit excavated to 1.20m bgl. Borehole completed by mech window sampler. Borehole completed by mech window sampler. Roots encountered to 1.80m bgl.

TP/BH2 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 350mm bgl, bearing on concrete to an estimated depth of 1300mm bgl, with a total projection of 200mm from the elevation. Underside of foundation (USF) was estimated by pushing a probe, approximately 200mm back from the face of the foundation, at an angle with no apparent contact with the face of the foundation beyond the estimated depth.



WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Stratum Description and Observations
						0	PAVING SLAB.
							MADE GROUND: brown mottled grey gravelly CLAY with occasional fine to medium brick. Gravel is fine to medium.
							...at 0.10m to 1.30m bgl occasional roots of live appearance encountered.
						0.5	
							Hard grey gravelly CLAY. Gravel is fine to medium mudstone lithorelicts.
						1.0	
							...at 1.20m bgl base of hand excavated trial pit.
	D R	1.30 - 1.80 1.30 - 1.80	PEN	1.30	HP=4.5 (4.5,4.5,4.5,4.5,4.5)		...at 1.30m bgl ESTIMATED UNDERSIDE OF HOUSE FOUNDATION. ...at 1.30m to 1.80m bgl occasional roots of live appearance encountered and sampled.
						1.5	
	D	1.80 - 2.30	PEN	1.80	HP=4.5 (4.5,4.5,4.5,4.5,4.5)		...at 1.80m to 2.50m bgl no roots encountered. Extensive inspection of soil samples encountered no roots.
						2.0	
	D	2.30 - 2.50	PEN	2.30	HP=5.0 (5.0,5.0,5.0,5.0,5.0)		...at 2.50m bgl unable to retrieve further sample due to friable soils preventing sample recovery.
						2.5	

-- End of borehole at 2.50m --
PEN = Hand Penetrometer (kg/sq cm). Groundwater strikes not encountered. Roots encountered to 1.80m bgl. Trial pit excavated to 1.20m bgl. Borehole completed by hand held percussive window sampler. Borehole completed by hand held percussive window sampler.

Site Observations

GENERAL:
Site Investigation works (TP/BH 1) undertaken on 19 September 2022 during dry weather (i.e. no 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 1.30m bgl ESTIMATED UNDERSIDE OF HOUSE FOUNDATION in TP/BH1.
At 1.30m bgl ESTIMATED UNDERSIDE OF HOUSE FOUNDATION in TP/BH2.

BOREHOLE:
At 1.20m bgl base of hand excavated trial pit in TP/BH1.
At 2.50m bgl unable to retrieve further sample due to friable soils preventing sample recovery in TP/BH1.
At 1.20m bgl base of hand excavated trial pit in TP/BH2.
At 2.50m bgl unable to retrieve further sample due to friable soils preventing sample recovery in TP/BH2.

ROOTS:
At 0.10m to 1.30m bgl occasional roots of live appearance encountered in TP/BH1.
At 1.30m to 1.80m bgl occasional roots of live appearance encountered and sampled in TP/BH1.
At 1.80m to 2.50m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH1.
At 0.10m to 1.30m bgl occasional roots of live appearance encountered in TP/BH2.
At 1.30m to 1.80m bgl occasional roots of live appearance encountered and sampled in TP/BH2.
At 1.80m to 2.50m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH2.

IN SITU TESTING:
Hand Penetrometer (PEN) undertaken at 1.30m bgl (TP/BH 1) within the window sampler at maximum 0.50m intervals.
Hand Penetrometer (PEN) undertaken at 1.30m bgl (TP/BH 2) within the window sampler at maximum 0.50m intervals.

WATER STRIKES:
No water strikes (NWS) encountered.

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.

Environmental Services

SOIL ANALYSIS

for Subsidence Management Services

58a Commercial End, Cambridge, CB25 0NE.

Client:	Subsidence Management Services
Claim Number:	4502068685
Policy Holder:	Mr & Mrs Edward & Carol Taylor
Report Date:	06/10/2022
Our Ref:	L23427

	Name	Position	Signature
Compiled By:	[redacted]	Laboratory Technician	[redacted]
Checked By:	[redacted]	Laboratory Manager	[redacted]

Date samples received:	22-Sep-22
Water Content Test Date:	29-Sep-22
Atterberg Limits Test Date:	03-Oct-22

UKAS TESTING
9265

Environmental Services

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.

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.

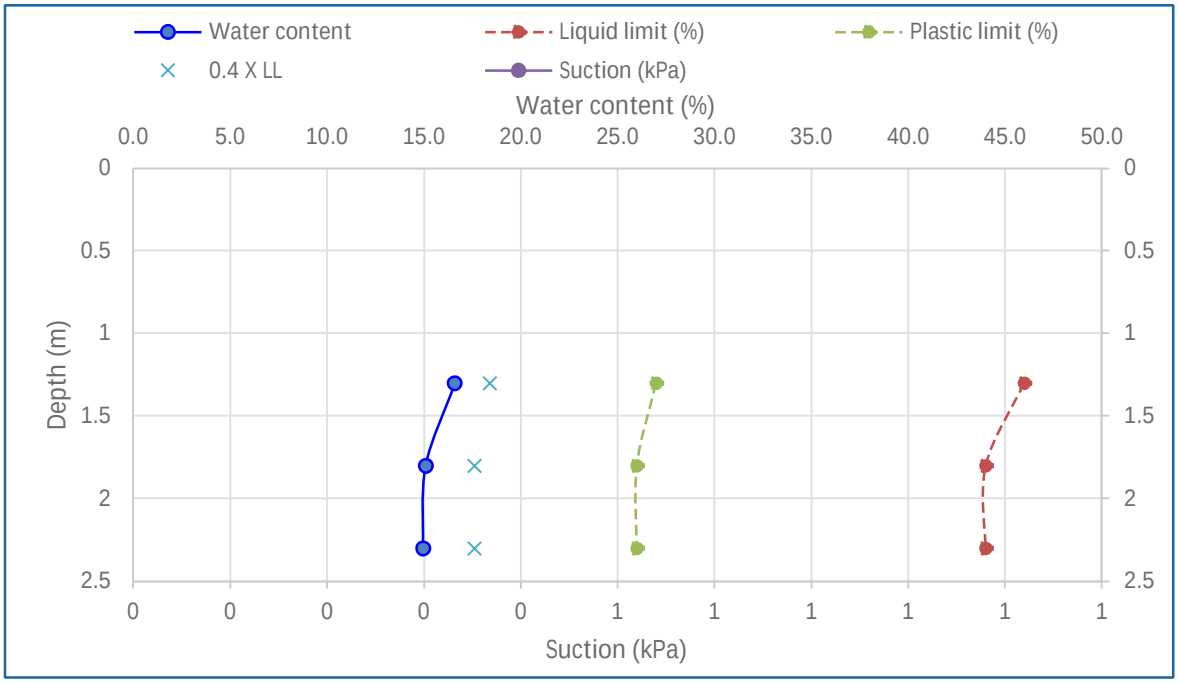
If you would like to provide feedback on this report or any laboratory services or performance, please complete the form below. All appropriate feedback will be used in the continual improvement of laboratory services.

Laboratory feedback form

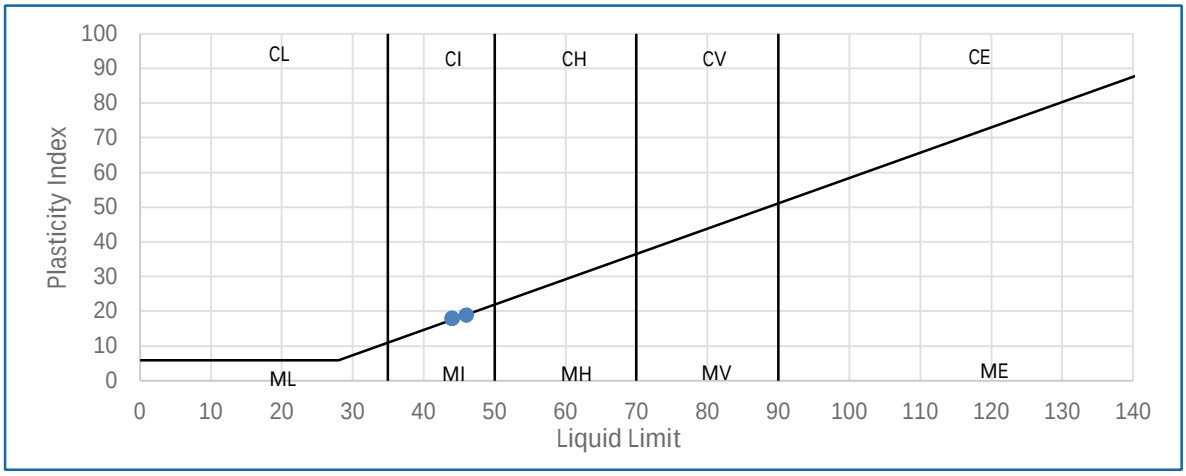
Environmental Services

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	1.3	16.6	46	27	19	88	17		Friable light grey slightly gravelly SILT . Gravel is fine, medium and coarse.
2	1.8	15.1	44	26	18	58	10		Friable light grey very gravelly SILT . Gravel is fine, medium and coarse.
3	2.3	15.0	44	26	18	58	10		Friable light grey very gravelly SILT . Gravel is fine, medium and coarse.

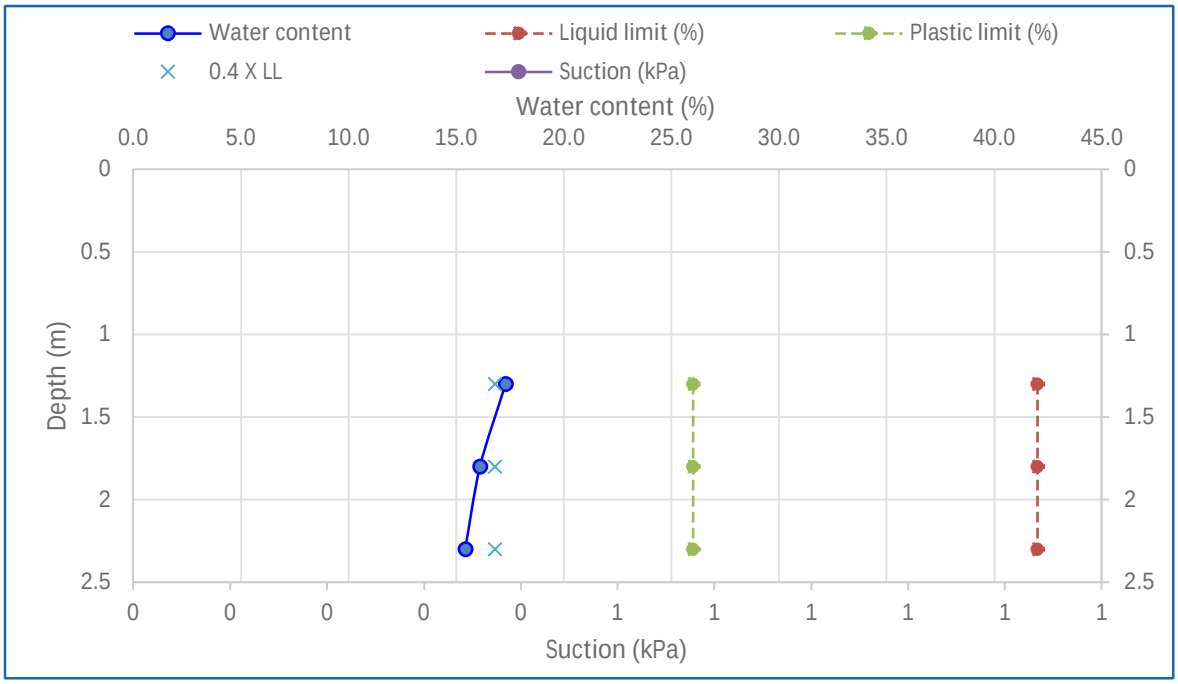


Plasticity Chart for Casagrande Classification

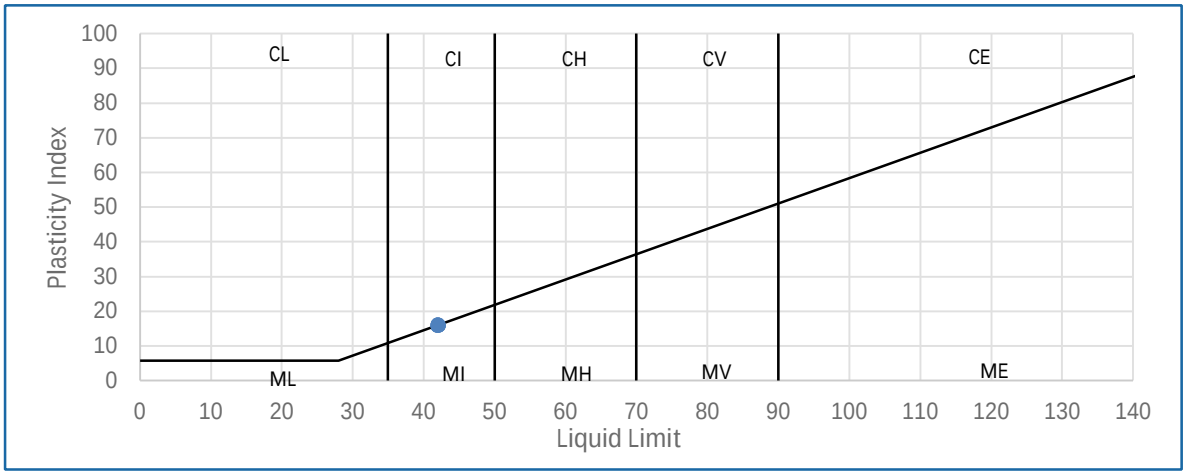


Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
4	1.3	17.3	42	26	16	98	16		Friable light grey slightly gravelly SILT . Gravel is fine, medium and coarse.
5	1.8	16.1	42	26	16	98	16		Friable light grey slightly gravelly SILT . Gravel is fine, medium and coarse.
6	2.3	15.4	42	26	16	58	9		Friable light grey very gravelly SILT . Gravel is fine, medium and coarse.



Plasticity Chart for Casagrande Classification



Environmental Services

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					

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.

SubsNetUK

Drainage Investigation Report

For Subsidence Management Services

Client Mr & Mrs Taylor

Risk Address: 58a Commercial End, Swaffham Bulbeck, Cambridge, CB25 0NE

Visit Date: 16th September 2022

Client Reference: IFS-AVI-SUB-22-0101842

Our Reference: C65587 D230398

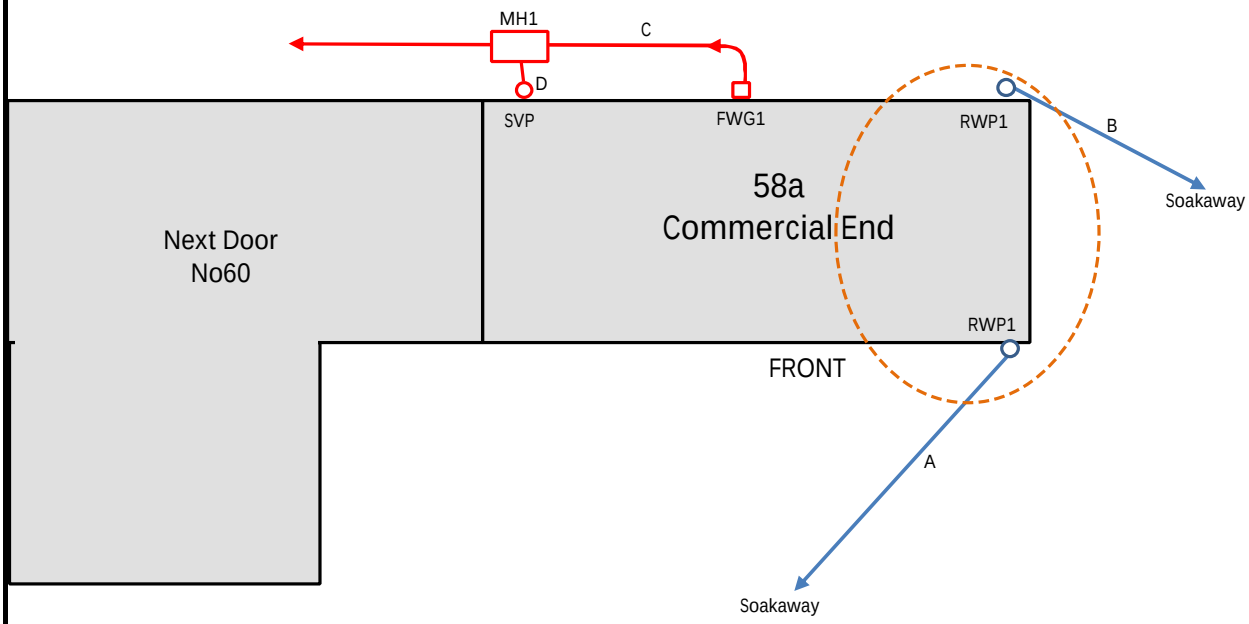
Report Date: 20th October 2022

Report Content: Front Page
Site Plan
CCTV Coding
Drain Overview

SubsNetUK

Site Plan

SubsNetUK



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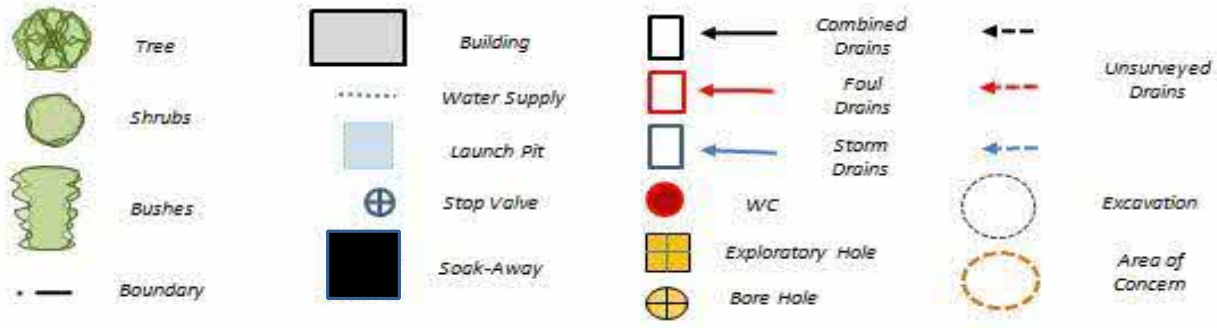

Notes:	

Address: 58a Commercial End, Swaffham Bulbeck, Cambridge, CB25 0NE

CCTV Survey

RUN	Start From :	RWP1	Finish at :	Soakaway	Pipe Ø:	100mm
A	Invert Level (m):	N/a	Invert Level (m):	N/a	Material:	Plastic
STORM	Condition grade:	A	Direction:	Downstream	Responsibility:	Home Owner
Distance	Code	Hydraulic Test - Not Tested				
0.00	SN	Start Node from RWP1				
0.00	WL	Water Level 0%				
6.00	FN	Finish Node at Soakaway				
RUN	Start From :	RWP2	Finish at :	Soakaway	Pipe Ø:	100mm
B	Invert Level (m):	N/a	Invert Level (m):	N/a	Material:	Plastic
STORM	Condition grade:	A	Direction:	Downstream	Responsibility:	Home Owner
Distance	Code	Hydraulic Test - Not Tested				
0.00	SN	Start Node from RWP2				
0.00	WL	Water Level 0%				
6.00	FN	Finish Node at Soakaway				
RUN	Start From :	MH1	Finish at :	FWG1	Pipe Ø:	100mm
C	Invert Level (m):	N/a	Invert Level (m):	N/a	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
Distance	Code	Hydraulic Test - Pass				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
1.95	LR	Line of drain deviates right °				
4.00	FN	Finish Node at FWG1				
RUN	Start From :	MH1	Finish at :	SVP	Pipe Ø:	100mm
D	Invert Level (m):	N/a	Invert Level (m):	N/a	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
Distance	Code	Hydraulic Test - Pass				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
1.95	LU	Line of drain deviates up °				
4.00	FN	Finish Node at SVP				

Address: 58a Commercial End, Swaffham Bulbeck, Cambridge, CB25 0NE

Drainage Overview

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: RWP1 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: RWP2 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: MH1 Upstream to FWG
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Pass
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: MH1 Upstream to SVP
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Pass
CCTV Survey Result: No structural damage
Recommended Repair:
No repairs have been recommended as the drain line was found to be free from defects.