

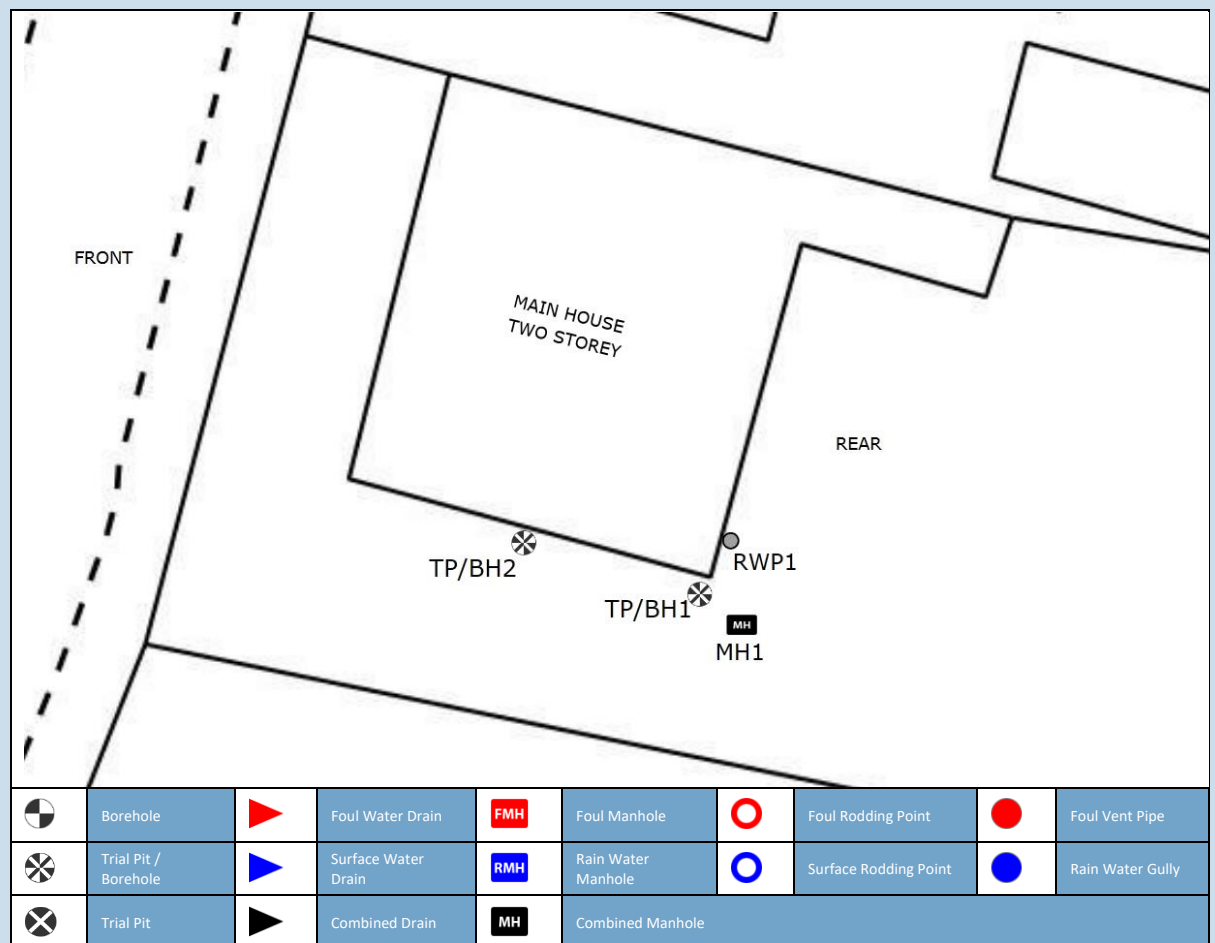
GEOTECHNICAL

for Subsidence Management Services

69 The Green, West Drayton, UB7 7PW

Client: Subsidence Management Services
Client Contact: Ian Domigan
Client Ref: IFS-AVI-SUB-20-0087509
Policy Holder: Mr & Mrs Thomas and Krisztina Wormald
Report Date: 26 September 2020
Our Ref: C56101G24946

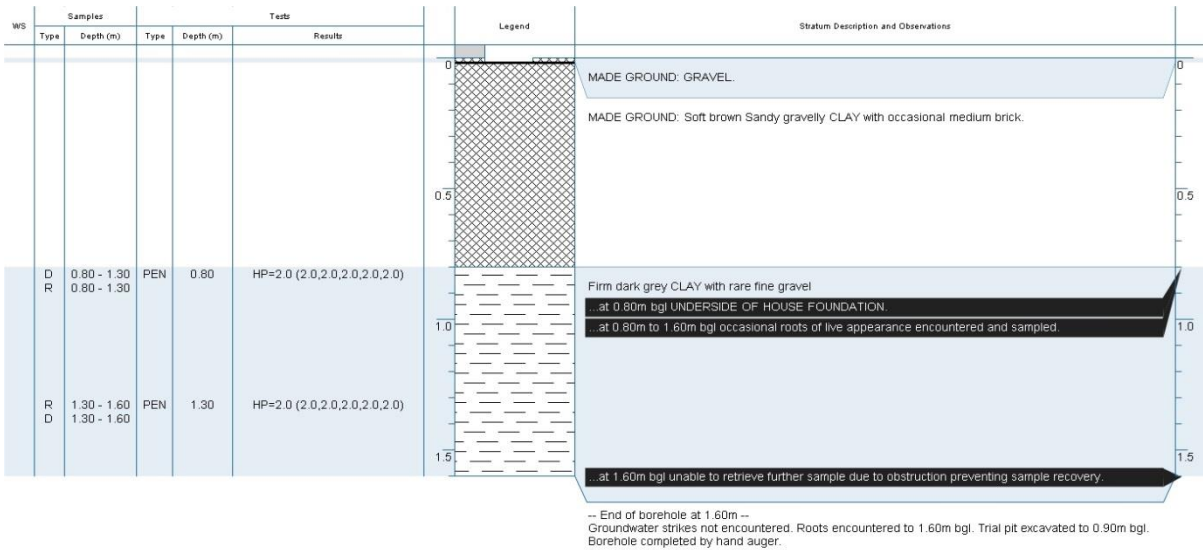
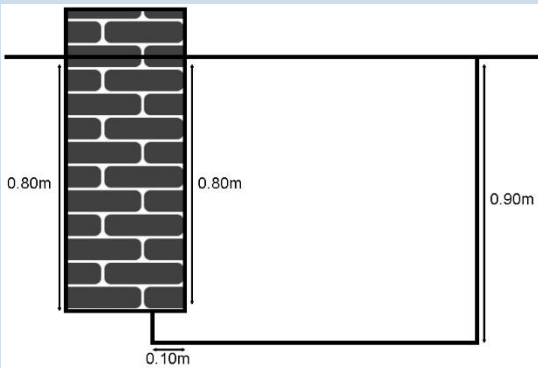
Site Plan



TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 800mm bgl with no projection. Underside of foundation was exposed to 100mm back from the face of the foundation and probed 300mm back from the face of the foundation.



The diagram shows a rectangular structure divided into two vertical sections. The left section is a brick wall, and the right section is a white wall. The brick wall has a height of 0.80m and a width of 0.10m. The white wall has a height of 0.80m and a width of 0.90m. The total height of the structure is 0.90m.

SubsNetuk

Site Observations

GENERAL:

Site Investigation works (TP/BH 1) &(TP/BH2)undertaken on 11 September 2020 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).

FOUNDATIONS:

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

BOREHOLE:

At 1.60m bgl unable to retrieve further sample due to obstruction preventing sample recovery in TP/BH1.

ROOTS:

At 0.80m to 1.60m bgl occasional roots of live appearance encountered and sampled in TP/BH1.

IN SITU TESTING:

Hand Penetrometer (PEN) undertaken at 0.80m bgl (TP/BH 1) within the hand excavated trial pit and thereafter in the hand auger 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:

No water strikes (NWS) encountered (TP/BH 1) &(TP/BH2)

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.

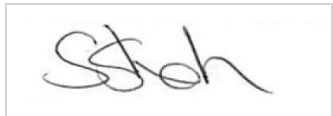
SOIL ANALYSIS

for Subsidence Management Services

69 The Green, West Drayton, UB7 7PW

Client: Subsidence Management Services
Claim Number: 4501123167
Policy Holder: Mr & Mrs Thomas and Krisztina Wormald
Report Date: 28/09/2020
Our Ref: L19310

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Technician	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received: 14-Sep-20
Water Content Test Date: 22-Sep-20



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

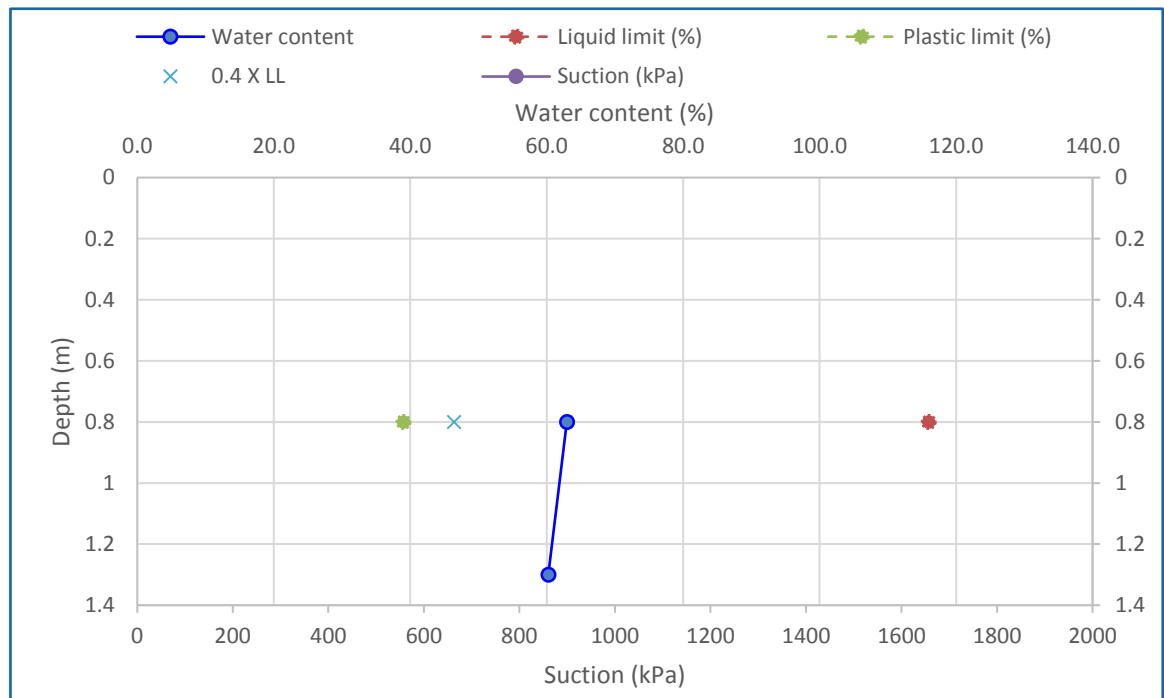
The Liquid Limit test is undertaken in accordance with BS1377:Part 2:1990 Section 4.4 using an 80g cone with a 30° tip. Sieve percentages reported in blue denote that the sample has been sieved otherwise it has been prepared from its natural state.

Unless otherwise specified herein, the four-point cone penetrometer method has been used with increasing water content

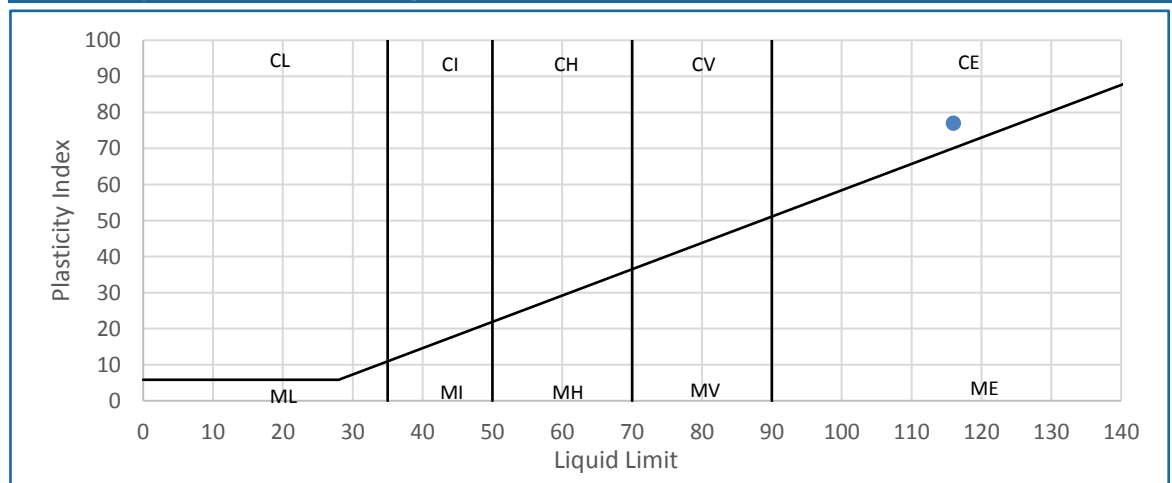
The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:1990. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

Samples from BH1

Lab Ref	Depth (m)	MC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.8	62.9	116	39	77	100	77		Soft dark grey CLAY with rare gravel. Gravel is fine
2	1.3	60.2							Soft to firm dark grey CLAY with rare gravel. Gravel is fine and medium.

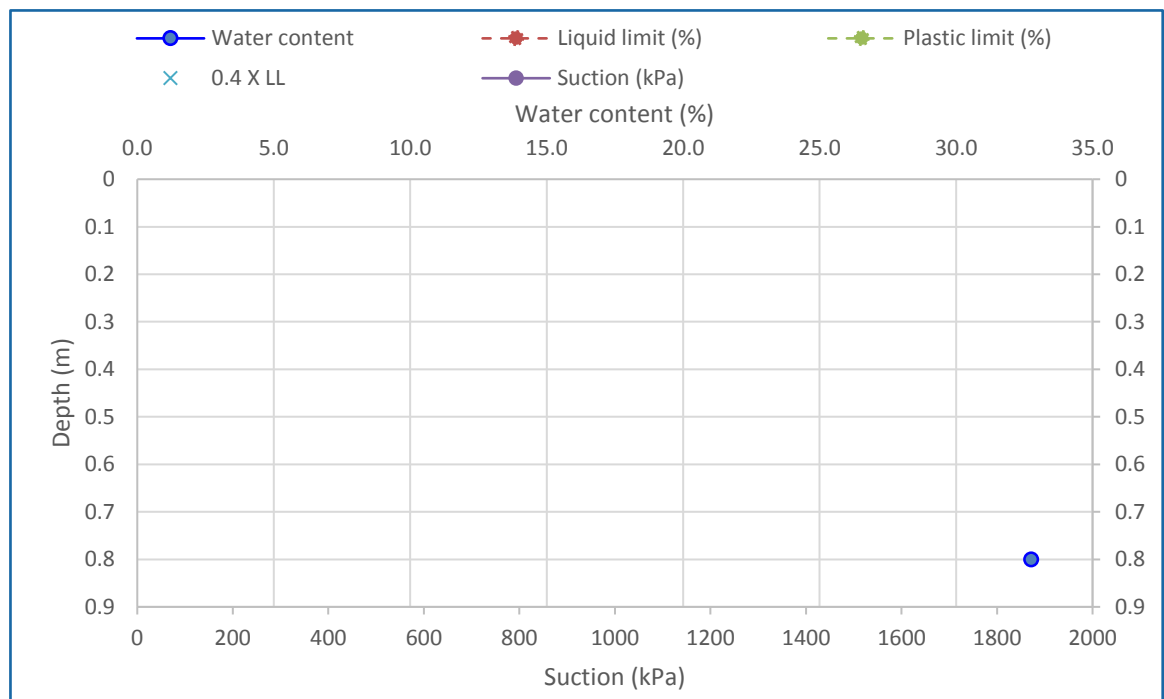


Plasticity Chart for Casagrande Classification

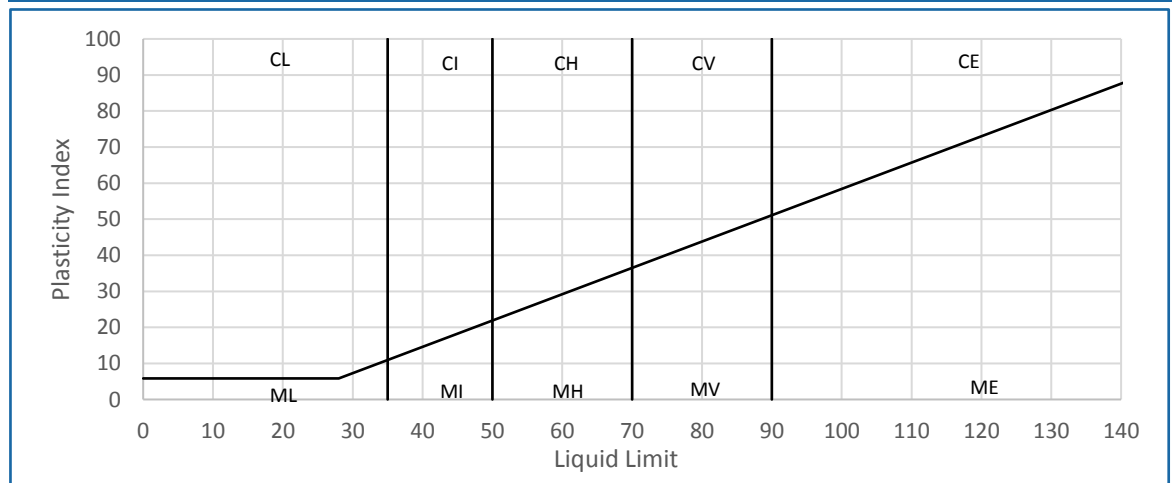


Samples from BH2

Lab Ref	Depth (m)	MC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
3	0.8	32.7							Firm grey-brown/dark grey slightly gravelly CLAY with rare sand. Gravel is fine and medium.



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					

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

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

69 The Green, West Drayton, UB7 7PW

Client: Subsidence Management Services
Client Contact: Ian Domigan
Claim Number: 4501123167
Client Reference: IFS-AVI-SUB-20-0087509
Policy Holder: Mr & Mrs Thomas and Krisztina Wormald
Report Date: 16 September 2020
Our Ref: R37330



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

Sub Sample	Species Identified		Root Diameter	Starch
TP/BH1:				
0.8-1.6m	Cupressaceae spp.	1	5 mm	Abundant
TP/BH2:				
0.8-1.3m	Cupressaceae spp.	2	3 mm	Abundant

Comments:

- 1 - Plus 3 others also identified as Cupressaceae spp.
- 2 - Plus 3 others also identified as Cupressaceae spp.

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

Signed: M D Mitchell

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 Aviva

Risk Address: 69 The Green, West Drayton, UB7 7PW

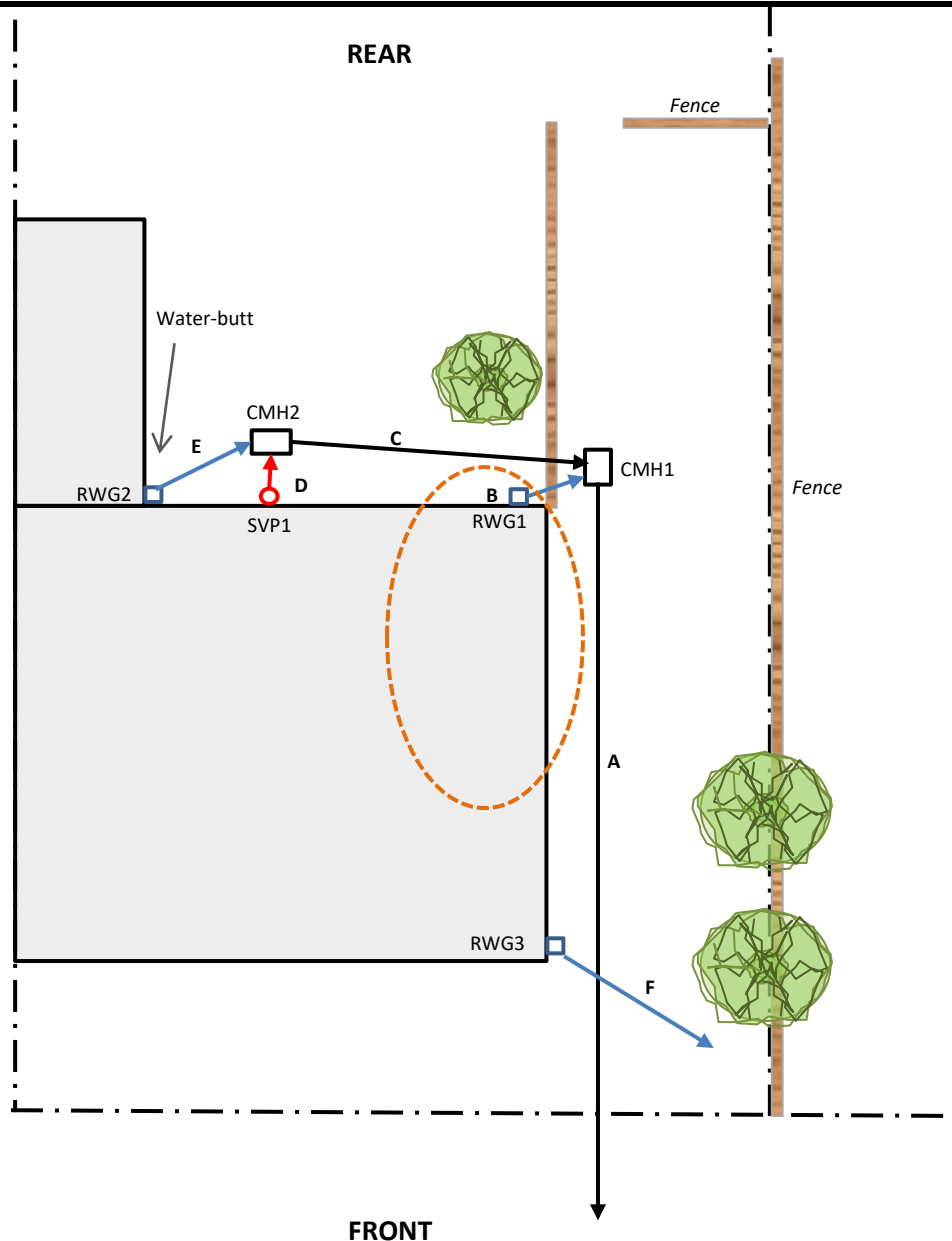
Visit Date: 28/08/2020

Client Reference: IFS-AVI-SUB-20-0087509

Our Reference: C56101 D18491

Report Date: 04/09/2020

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:

69 The Green, West Drayton, UB7 7PW

RUN	Start From :	CMH1	Finish at :	Downstream Node	Pipe Ø:	100mm
A	Invert Level (m):	0.6	Invert Level (m):	n/a	Material:	Plastic
COMBINED	Condition grade:	A	Direction:	Downstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Unable to test due to limited downstream access</i>				
0.00	SN	Start Node from CMH1				
10.60	MC	Material of drain changes at this point to clay				
11.93	FN	Finish Node - Beyond Area of Concern				
RUN	Start From :	CMH1	Finish at :	RWG1	Pipe Ø:	100mm
B	Invert Level (m):	0.6	Invert Level (m):	n/a	Material:	Plastic
STORM	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Pass</i>				
0.00	SN	Start Node from CMH1				
0.80	CUW	Camera Under Water (loss of vision)				
1.18	FN	Finish Node at RWG1				
RUN	Start From :	CMH1	Finish at :	CMH2	Pipe Ø:	100mm
C	Invert Level (m):	0.6	Invert Level (m):	n/a	Material:	Plastic
COMBINED	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Pass</i>				
0.00	SN	Start Node from CMH1				
4.94	FN	Finish Node at CMH2				
RUN	Start From :	CMH2	Finish at :	SVP1	Pipe Ø:	100mm
D	Invert Level (m):	0.6	Invert Level (m):	n/a	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Unable to test due to limited access</i>				
0.00	SN	Start Node from CMH2				
0.49	LU	Line of drain deviates up 90°				
0.87	FN	Finish Node at SVP1				
RUN	Start From :	CMH2	Finish at :	RWG2	Pipe Ø:	100mm
E	Invert Level (m):	0.6	Invert Level (m):	n/a	Material:	Liner
STORM	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Pass</i>				
0.00	SN	Start Node from CMH2				
0.30	MC	Material of drain changes at this point to Plastic				
1.03	LL	Line of drain deviates left 45°				
1.67	FN	Finish Node at				
RUN	Start From :	RWG3	Finish at :	Downstream Node	Pipe Ø:	100mm
F	Invert Level (m):	0.2	Invert Level (m):	n/a	Material:	Clay
STORM	Condition grade:	C	Direction:	Downstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Unable to test due to limited downstream access</i>				
0.00	SN	Start Node from RWG3				
0.15	MC	Material of drain changes at this point to Plastic				
0.23	REM	Remark - Pipe has been cut lengthways				
0.42	CX	Defective Connection				
1.63	DES	Settled Deposits (fine)				
1.64	SA	Survey Abandoned - Unable to push past blockages				

Address:

69 The Green, West Drayton, UB7 7PW

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: CMH1 Downstream

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: CMH1 Upstream to RWG1

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 C: CMH1 Upstream to CMH2

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: CMH2 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: CMH2 Upstream to RWG2

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 F: RWG3 Downstream

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not tested

CCTV Survey Result: Structural damage

Recommended Repair:

- 1) To excavate and replace existing gully including 2m of adjacent pipe work.
- 2) To carry out a further look-see CCTV survey and report findings.

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

Address:

69 The Green, West Drayton, UB7 7PW

RUN / LOCATION: RUN F

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0010	Remove existing UPVC pipework in isolated lengths, refix with new 69mm UPVC pipework (incl. brackets).	nr	£14.25	1.00	£14.25
UK0015	Extra over for bends.	nr	£8.31	1.00	£8.31
UK0595	Gully, 225mm x 225mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .	nr	£146.43	1.00	£146.43
UK0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	£14.89	4.00	£59.57
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	£1.79	4.00	£7.17
UK8120300	Hardcore Filling to excavations over 250 mm average thick.	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	m	£81.39	1.00	£81.39
UK1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	£54.19	2.00	£108.37
	CCTV survey of underground drainage & report (where undertaken as part of other drainage works on site)	nr	£165.00	1.00	£165.00
Total (Excl VAT)					£817.02

REPAIR ESTIMATE TOTALS:

Run / Location	Amount (£)
RUN F	£817.02
Total (Excl VAT)	£817.02

Address:

69 The Green, West Drayton, UB7 7PW