

Site Investigation and Drainage Report



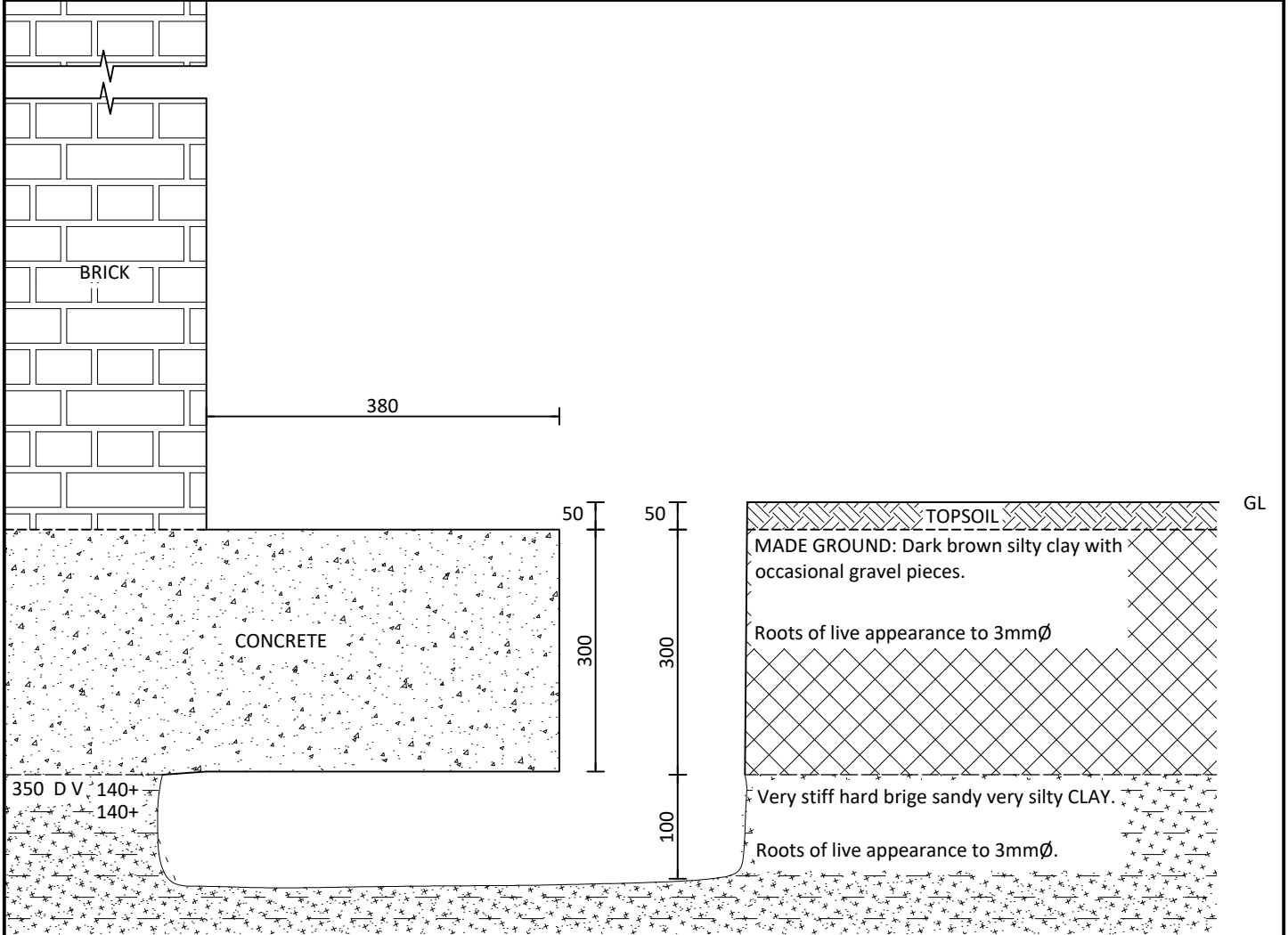
Site	2 Ebury Close Northwood Middlesex HA6 2PF
Client	Davies Managed Systems C/o GHG
Date	16/07/19
Our Ref	10877



SITE INVESTIGATION AND DRAINAGE REPORT CONTENT

1.0	SITE PLAN
2.0	TRIAL PIT SECTION DRAWINGS / TRIAL PIT PHOTOGRAPHS
3.0	BOREHOLE LOGS
4.0	ROOT IDENTIFICATION
5.0	GEOTECHNICAL SOIL TESTING RESULTS
6.0	CCTV DRAINAGE SURVEY
7.0	REPORT NOTES

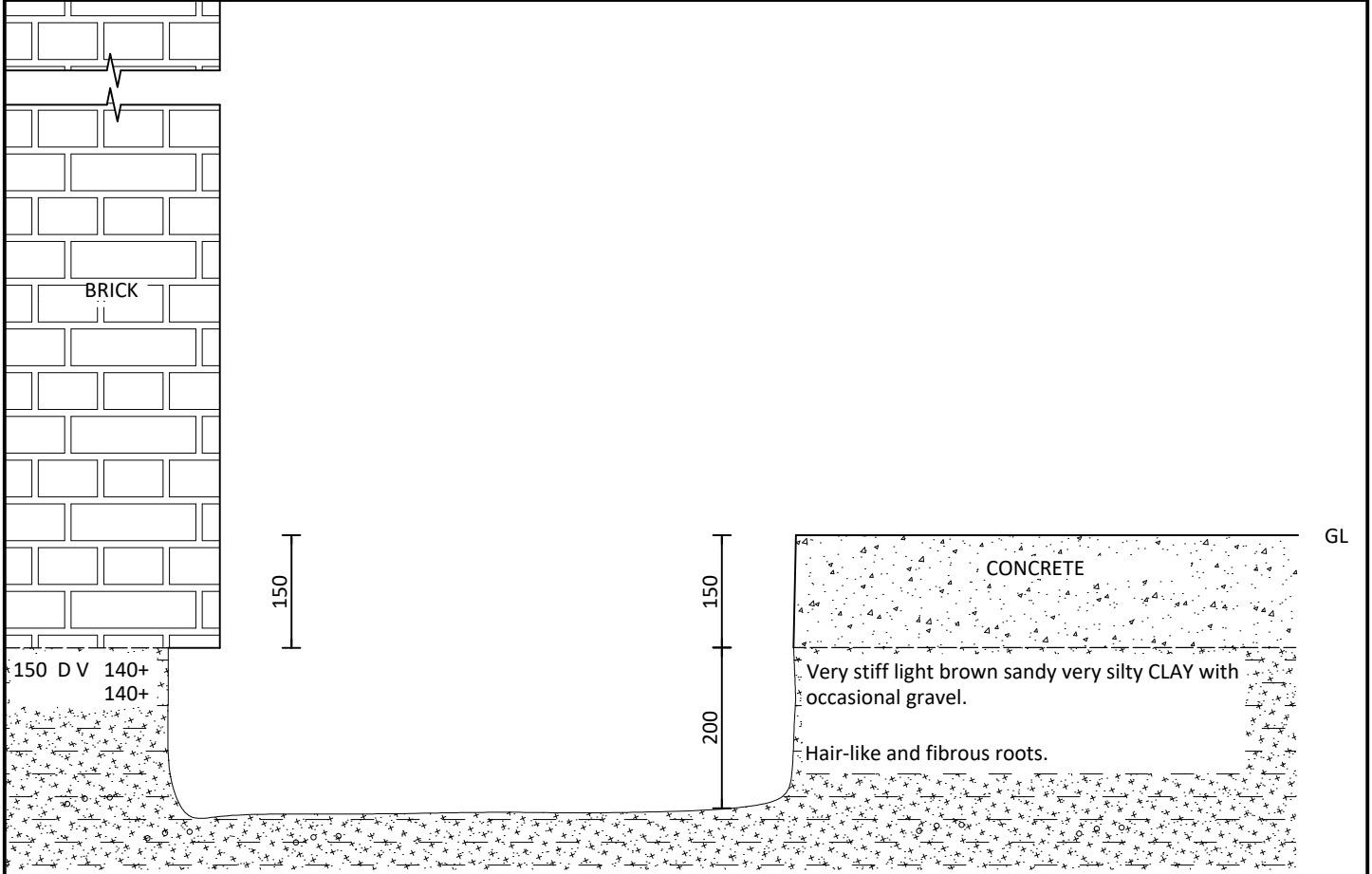
	Site:			Client:		Identification
	2 Ebury Close, Northwood, Middlesex, HA6 2PF			Davies Managed Systems C/o GHG		
	Contract Number:	Date:	Logged By:	Checked by:	Drawn by:	Sheet 1 of 1
	10877	16/07/2019	LS	ME	GT	
Trial Pit Log	Easting:	Northing:	Ground Level:	Excavation Method:	Weather:	Scale:
	ND	ND	ND	Hand Tools	Dry	NTS



Remarks:	Key:
No groundwater encountered. All dimensions in millimetres.	ND No Data NTS Not to Scale GL Ground Level D Small Disturbed Sample V Pilcon Vane (kPa)

 Borehole Log			Site:			Client:			Identification	
			2 Ebury Close, Northwood, Middlesex, HA6 2PF			Davies Managed Systems C/o GHG			BH1	
			Contract Number:	Date:	Logged By:	Checked by:	Drawn by:			
			10877	16/07/2019	LS	ME	GT	Sheet 1 of 1		
			Easting:	Northing:	Ground Level:	Plant Used:	Weather:	Scale:		
			ND	ND	ND	CFA 100mmØ Secondman	Dry	NTS		
Samples & In Situ Testing			Strata Details					Roots and Groundwater		
Depth (m)	Sample	Test Result	Depth (m)	Thickness (m)	Legend	Strata Description		Roots Information	Groundwater (m)	
GL			GL			AS TRIAL PIT 1 LOG				
			0.45							
			0.45			Very stiff beige sandy very silty CLAY.		No roots observed.		
1.00	D	V 140+ 140+								
1.50	D	V 140+ 140+								
2.00	D	V 140+ 140+								
2.50	D	V 140+ 140+								
3.00	D	V 140+ 140+				BOREHOLE ENDS AT 3.00				
Remarks:						Key:				
Borehole 'dry' on completion. Borehole 'open' on completion. All dimensions in metres.						ND No Data CFA Continuous Flight Auger NTS Not to Scale GL Ground Level D Small Disturbed Sample				
						V Pilcon Vane (KPa)				

	Site:			Client:		Identification
	2 Ebury Close, Northwood, Middlesex, HA6 2PF			Davies Managed Systems C/o GHG		TP2
	Contract Number:	Date:	Logged By:	Checked by:	Drawn by:	
	Trial Pit Log	10877	16/07/2019	LS	ME	GT
Easting:		Northing:	Ground Level:	Excavation Method:	Weather:	Scale:
ND		ND	ND	Hand Tools	Dry	NTS



Remarks:	Key:
No groundwater encountered.	ND No Data
All dimensions in millimetres.	NTS Not to Scale
	GL Ground Level
	D Small Disturbed Sample
	V Pilcon Vane (kPa)

 Borehole Log			Site: 2 Ebury Close, Northwood, Middlesex, HA6 2PF			Client: Davies Managed Systems C/o GHG			Identification BH2	
			Contract Number: 10877	Date: 16/07/2019	Logged By: LS	Checked by: ME	Drawn by: GT	Sheet 1 of 1		
			Easting: ND		Northing: ND		Ground Level: ND	Plant Used: CFA 100mmØ Secondman	Weather: Dry	Scale: NTS
			Samples & In Situ Testing			Strata Details				
Depth (m)	Sample	Test Result	Depth (m)	Thickness (m)	Legend	Strata Description		Roots Information	Groundwater (m)	
GL			GL			AS TRIAL PIT 2 LOG				
0.50	D	V 140+ 140+	0.50	0.50						
1.00	D	V 140+ 140+				Very stiff light brown sandy very silty CLAY.		No roots observed.		
1.50	D	V 140+ 140+								
2.00	D	V 140+ 140+								
2.50	D	V 140+ 140+								
3.00	D	V 140+ 140+				BOREHOLE ENDS AT 3.00				
Remarks: Borehole 'dry' on completion. Borehole 'open' on completion. All dimensions in metres.						Key: ND No Data CFA Continuous Flight Auger NTS Not to Scale GL Ground Level D Small Disturbed Sample				
						V Pilcon Vane (KPa)				

 Borehole Log			Site:			Client:			Identification	
			2 Ebury Close, Northwood, Middlesex, HA6 2PF			Davies Managed Systems C/o GHG			BH3	
			Contract Number:	Date:	Logged By:	Checked by:	Drawn by:			
			10877	16/07/2019	LS	ME	GT	Sheet 1 of 1		
			Easting:	Northing:	Ground Level:	Plant Used:	Weather:	Scale:		
			ND	ND	ND	CFA 100mmØ Secondman	Dry	NTS		
Samples & In Situ Testing			Strata Details					Roots and Groundwater		
Depth (m)	Sample	Test Result	Depth (m)	Thickness (m)	Legend	Strata Description		Roots Information	Groundwater (m)	
GL			GL							
			0.20	0.20		TOPSOIL		No roots observed.		
0.50	D	V 140+ 140+		0.40		MADE GROUND: Brown sandy silt with brick fragments.				
1.00	D	V 140+ 140+	0.60			Very stiff brown mottled grey silty very sandy CLAY.				
1.50	D	V 140+ 140+		2.40						
2.00	D	V 140+ 140+								
2.50	D	V 140+ 140+								
3.00	D	V 140+ 140+				BOREHOLE ENDS AT 3.00				
Remarks:						Key:				
Borehole 'dry' on completion. Borehole 'open' on completion. All dimensions in metres.						ND No Data CFA Continuous Flight Auger NTS Not to Scale GL Ground Level D Small Disturbed Sample				
						V Pilcon Vane (KPa)				

Chelmer Global Ltd

Unit 7 and 8 Hall Road Industrial Estate
Hall Road
Southminster
CM0 7DA

FAO: Martin Edwards

JCA Ref: 15224/TT
Client Ref: 10877

21st August 2019

Dear Martin,

Re: 2 Ebury Close, Northwood, Greater London, HA6 2PF.

Please find overleaf, details of our analysis of root material recovered during the ground investigation at the above site and an explanation of the results and methods used.

I hope that this report meets your requirements.

Assuring you of our best attention at all times.

Yours sincerely,



Toby Thwaites BSc (Hons) HND (Arboriculture).

Tree Root Identification Report

at: 2 Ebury Close, Northwood, Greater London, HA6 2PF.

JCA Ref: 15224/TT

Client Ref: 10877

21st August 2019

1. Microscopic Analysis

Trial Pit/ Borehole	Sample Depth (mm)	Family	Genus	Diameter (mm)	Starch Test
TP1	U/S Foundation 350	<i>Rosaceae</i> (most likely)	-	<2	Negative (dead)

The two roots were dead and in poor structural condition.

Members of the Family *Rosaceae* include for example; June Berry (*Amelanchier spp.*), Cotoneaster (*Cotoneaster spp.*), Pear (*Pyrus spp.*), Apple (*Malus spp.*), Quince (*Cydonia oblonga*), Loquat (*Eriobotrya japonica*), Medlar (*Mespilus germanica*), Hawthorn (*Crataegus spp.*), Service-tree, Rowan and Whitebeam (*Sorbus spp.*), Cherry, Blackthorn, Plum, Portugal/Cherry Laurel (*Prunus spp.*) and Rose (*Rosa spp.*).

1. MICROSCOPIC ANALYSIS

- 1.1 Microscopic examination generally enables the genus of roots recovered during the ground investigation to be established. However, it rarely identifies individuals to species level.
- 1.2 Certain species, for instance Willows and Poplars, are indistinguishable by these methods and identification can only be made at family level.
- 1.3 The diameter of the root and the direction in which it is growing can be an indication of its significance. In addition, the depth at which it is found is critical.
- 1.4 To establish whether the root is alive, iodine is used to test for starch, which is stored in some cells of living tree roots, but is broken down by micro-organisms upon the death of a root in the soil.

2. METHOD

- 2.1 Freshly collected sample material is washed to remove any soil from the root surface.
- 2.2 Root samples are then boiled in water for 5 to 10 minutes to prepare them for sectioning.
- 2.3 Sectioning is carried out using a Reichert OME sliding microtome to produce transverse and tangential longitudinal root sections of 15µm and 30µm (micrometers) in thickness. The sliding microtome secures the root sample in a universal clamp (a cork is sometimes used to secure the root) whilst the knife/blade is brought towards and over the sample.
- 2.4 The sliced root sample is then placed on a glass microscope slide and stained with Chlor-zinc-iodine (Schulze's solution).
- 2.5 The slide is then observed under a high power microscope using magnifications of 50 X, 100 X and 400 X and compared to known root samples.

Laboratory Report



Site	2 Ebury Close, Northwood, Middlesex, HA6 2PF
Client	Davies Managed Systems C/o GHG
Date	05-Aug-19
Our Ref	CSI/10877
CGL Ref	10877

Chelmer Global Ltd

Unit 7 Hall Road Industrial Estate, Hall Road, Southminster, Essex CM0 7DA

Essex: 01245 400930 | info@siteinvestigations.co.uk | www.siteinvestigations.co.uk



Content Summary

This report contains all test results as indicated on the test instruction/summary.

CGL Reference : 10877

Client Reference : CSI/10877

For the attention of : Davies Managed Systems C/o GHG

This report comprises of the following : 1 Cover Page

1 Inside Cover/Contents Page

2 Pages of Results

1 Moisture/Shear Strength Chart

1 Plasticity Chart

1 Moisture v Soil Suction

1 Limitations of Report Page

Notes :

General

Please refer to report summary notes for details pertaining to methods undertaken and their subsequent accreditations

Samples were supplied by **Chelmer Global Ltd**

All tests performed in-house unless otherwise stated

Deviant Samples

Samples were received in suitable containers Yes

A date and time of sampling was provided Yes

Arrived damaged and/or denatured No

Laboratory Testing Results

BS 1377 : 1990



Job Number : 10877
 Client : Davies Managed Systems C/o GHG
 Client Reference : CSI/10877
 Site Name : 2 Ebury Close, Northwood, Middlesex, HA6 2PF

Date Received : 29/07/2019
 Date Testing Started : 29/07/2019
 Date Testing Completed : 05/08/2019
 Laboratory Used : Chelmer Geotechnical, CM3 8AB

Sample Ref			Sample Type	*Moisture Content (%) [1]	*Soil Fraction > 0.425mm (%) [2]	*Liquid Limit (%) [3]	*Plastic Limit (%) [4]	*Plasticity Index (%) [5]	*Liquidity Index (%) [5]	*Modified Plasticity Index (%) [6]	*Soil Class [7]	Filter Paper Contact Time (h) [8]	*Soil Sample Suction (kPa)	Insitu Shear Vane Strength (kPa) [9]	Organic Content (%) [10]	*pH Value [11]	*Sulphate Content (g/l)		
BH/TPWS	Depth (m)	UID															SO ₃ [12]	SO ₄ [13]	Class [14]
TPBH1	0.4		D	25	<5	77	22	55	0.05	52	CV	168	342	140					
TPBH1	1.0		D	28	<5							168	302	140					
TPBH1	1.5		D	27	<5	79	23	56	0.08	53	CV	168	315	140					
TPBH1	2.0		D	22	<5							168	392	140					
TPBH1	2.5		D	16	<5	61	22	39	-0.16	37	CH	168	445	140					
TPBH1	3.0		D	14	<5							168	458	140					

Notes :- *UKAS Accredited Tests

- [1] BS 1377 : Part 2 : 1990, Test No 3.2
 [2] Estimated if <5%, otherwise measured
 [3] BS 1377 : Part 2 : 1990, Test No 4.4
 [4] BS 1377 : Part 2 : 1990, Test No 5.3
 [5] BS 1377 : Part 2 : 1990, Test No 5.4
 [6] BRE Digest 240 : 1993

- [7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils
 [8] In-house method S9a adapted from BRE IP 4/93
 [9] Values of shear strength were determined in situ by Chelmer Global using a Pilcon hand vane or Geonor vane (GV).
 [10] BS 1377 : Part 3 : 1990, Test No 4
 [11] BS 1377 : Part 2 : 1990, Test No 9

- [12] BS 1377 : Part 3 : 1990, Test No 5.6
 [13] SO₄ = 1.2 x SO₃

- [14] BRE Special Digest One (Concrete in Aggressive Ground) 2005

Note that if the SO₄ content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4m or DS-5m class respectively unless water soluble magnesium testing is undertaken to prove otherwise

Key
D - Disturbed sample
B - Bulk sample
U - U100 (undisturbed sample)
W - Water sample
ENP - Essentially Non-Plastic
UIS - Underside Foundation

Comments :-

Technician :- KL

Checked & Authorised By:-

Martin Edwards- Chelmer Global Company Director

Date Checked :- 03/10/2019

Laboratory Testing Results

BS 1377 : 1990



Job Number : 10877
 Client : Davies Managed Systems C/o GHG
 Client Reference : CSI/10877
 Site Name : 2 Ebury Close, Northwood, Middlesex, HA6 2PF

Date Received : 29/07/2019
 Date Testing Started : 29/07/2019
 Date Testing Completed : 05/08/2019
 Laboratory Used : Chelmer Geotechnical, CM3 8AB

Sample Ref			Sample Type	*Moisture Content (%) [1]	*Soil Fraction > 0.425mm (%) [2]	*Liquid Limit (%) [3]	*Plastic Limit (%) [4]	*Plasticity Index (%) [5]	*Liquidity Index (%) [5]	*Modified Plasticity Index (%) [6]	*Soil Class [7]	Filter Paper Contact Time (h) [8]	*Soil Sample Suction (kPa)	Insitu Shear Vane Strength (kPa) [9]	Organic Content (%) [10]	*pH Value [11]	*Sulphate Content (g/l)		
BH/TPWS	Depth (m)	UID															SO ₃ [12]	SO ₄ [13]	Class [14]
TPBH2	0.2		D	16	<5	65	18	47	-0.04	45	CH	168	424	140					
TPBH2	0.5		D	16	<5									140					
TPBH2	1.0		D	13	<5	65	20	45	-0.16	43	CH	168	460	140					
TPBH2	1.5		D	12	<5							168	464	140					
TPBH2	2.0		D	13	<5	41	19	22	-0.28	21	CI	168	458	140					
TPBH2	2.5		D	13	<5							168	455	140					
TPBH2	3.0		D	11	<5	43	18	25	-0.26	24	CI	168	472	140					

Notes :- *UKAS Accredited Tests																				
[1] BS 1377 : Part 2 : 1990, Test No 3.2			[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils			[12] BS 1377 : Part 3 : 1990, Test No 5.6														
[2] Estimated if <5%, otherwise measured			[8] In-house method S9a adapted from BRE IP 4/93			[13] SO ₄ = 1.2 x SO ₃														
[3] BS 1377 : Part 2 : 1990, Test No 4.4			[9] Values of shear strength were determined in situ by Chelmer Global using a Pilcon hand vane or Geonor vane (GV).			[14] BRE Special Digest One (Concrete in Aggressive Ground) 2005														
[4] BS 1377 : Part 2 : 1990, Test No 5.3																				
[5] BS 1377 : Part 2 : 1990, Test No 5.4			[10] BS 1377 : Part 3 : 1990, Test No 4																	
[6] BRE Digest 240 : 1993			[11] BS 1377 : Part 2 : 1990, Test No 9																	
Comments :-																				

Technician :- KL

Checked & Authorised By:-  Martin Edwards- Chelmer Global Company Director

Date Checked :- 03/10/2019

Laboratory Testing Results

BS 1377 : 1990



Job Number : 10877 Client : Davies Managed Systems C/o GHG Client Reference : CSI/10877 Site Name : 2 Ebury Close, Northwood, Middlesex, HA6 2PF	Date Received : 29/07/2019 Date Testing Started : 29/07/2019 Date Testing Completed : 05/08/2019 Laboratory Used : Chelmer Geotechnical, CM3 8AB
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Sample Ref			Sample Type	*Moisture Content (%) [1]	*Soil Fraction > 0.425mm (%) [2]	*Liquid Limit (%) [3]	*Plastic Limit (%) [4]	*Plasticity Index (%) [5]	*Liquidity Index (%) [5]	*Modified Plasticity Index (%) [6]	*Soil Class [7]	Filter Paper Contact Time (h) [8]	*Soil Sample Suction (kPa)	Insitu Shear Vane Strength (kPa) [9]	Organic Content (%) [10]	*pH Value [11]	*Sulphate Content (g/l)		
BH/TP/WS	Depth (m)	UID															SO ₃ [12]	SO ₄ [13]	Class [14]
BH3	0.5		D	13	<5									140					
BH3	1.0		D	16	<5	67	19	48	-0.06	46	CH	168	428	140					
BH3	1.5		D	16	<5							168	422						
BH3	2.0		D	18	<5	65	18	47	0.00	45	CH	168	412	140					
BH3	2.5		D	16	<5							168	424						
BH3	3.0		D	17	<5	46	18	28	-0.03	26	CI	168	416	140					

Notes :- *UKAS Accredited Tests			<table><tr><th>Key</th></tr><tr><td>D - Disturbed sample</td></tr><tr><td>B - Bulk sample</td></tr><tr><td>U - U100 (undisturbed sample)</td></tr><tr><td>W - Water sample</td></tr><tr><td>ENP - Essentially Non-Plastic</td></tr><tr><td>UIS - Underside Foundation</td></tr></table>		Key	D - Disturbed sample	B - Bulk sample	U - U100 (undisturbed sample)	W - Water sample	ENP - Essentially Non-Plastic	UIS - Underside Foundation
Key											
D - Disturbed sample											
B - Bulk sample											
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UIS - Underside Foundation											
[1] BS 1377 : Part 2 : 1990, Test No 3.2	[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils	[12] BS 1377 : Part 3 : 1990, Test No 5.6									
[2] Estimated if <5%, otherwise measured	[8] In-house method S9a adapted from BRE IP 4/93	[13] SO ₄ = 1.2 x SO ₃									
[3] BS 1377 : Part 2 : 1990, Test No 4.4	[9] Values of shear strength were determined in situ by Chelmer Global using a Pilcon hand vane or Geonor vane (GV).	[14] BRE Special Digest One (Concrete in Aggressive Ground) 2005									
[4] BS 1377 : Part 2 : 1990, Test No 5.3		Note that if the SO ₄ content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4m or DS-5m class respectively unless water soluble magnesium testing is undertaken to prove otherwise									
[5] BS 1377 : Part 2 : 1990, Test No 5.4	[10] BS 1377 : Part 3 : 1990, Test No 4										
[6] BRE Digest 240 : 1993	[11] BS 1377 : Part 2 : 1990, Test No 9										
Comments :-											
Technician :- KL											
Checked & Authorised By:-  Martin Edwards- Chelmer Global Company Director											
Date Checked :- 03/10/2019											

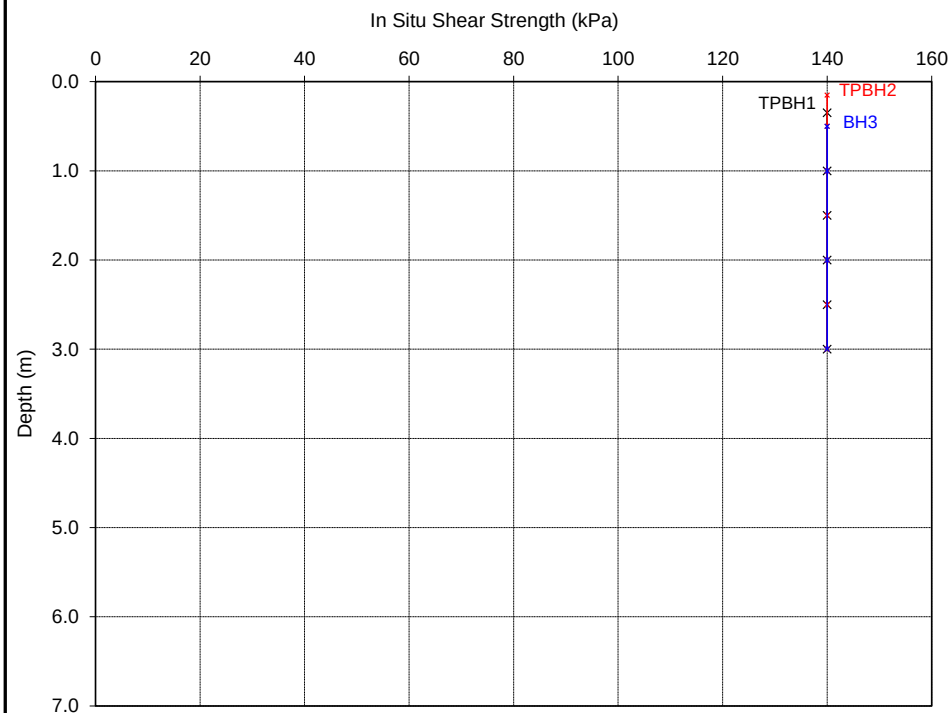
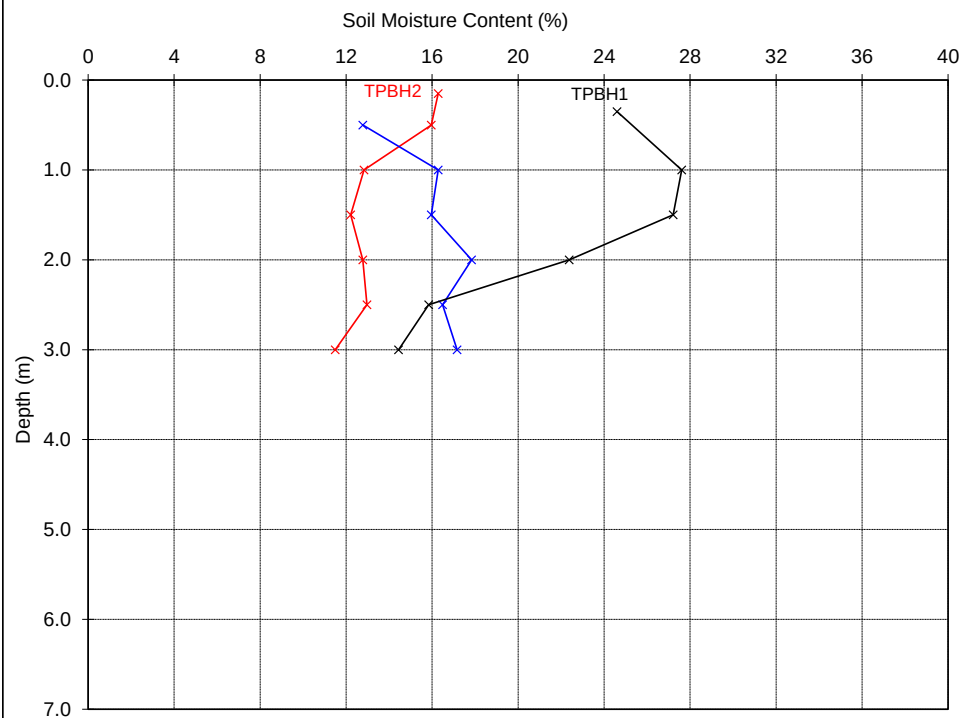
Laboratory Testing Results

Moisture Content/Shear Strength Profile



Job Number : 10877
 Client : Davies Managed Systems C/o GHG
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Date Received : 29/07/2019
 Date Testing Started : 29/07/2019
 Date Testing Completed : 05/08/2019
 Laboratory : Chelmer Geotechnical Laboratories, CM3 8AB



Notes :-

1. If the Soil Fraction > 0.425mm exceeds 5% the Equivalent Moisture Content of the remainder (calculated in accordance with BS 1377: Part 2 : 1990, cl.3.2.4 note 1) is also plotted and the alternative profile additionally shown as an appropriately coloured broken line.
2. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly over consolidated clays) at shallow depths.

Unless otherwise stated, values of Shear Strength were determined in situ by Chelmer Global Ltd using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 140 kPa. (Not UKAS accredited)

Comments :-

Checked & Authorised By:- Martin Edwards- Chelmer Global Company Director

Date: 03/10/2019

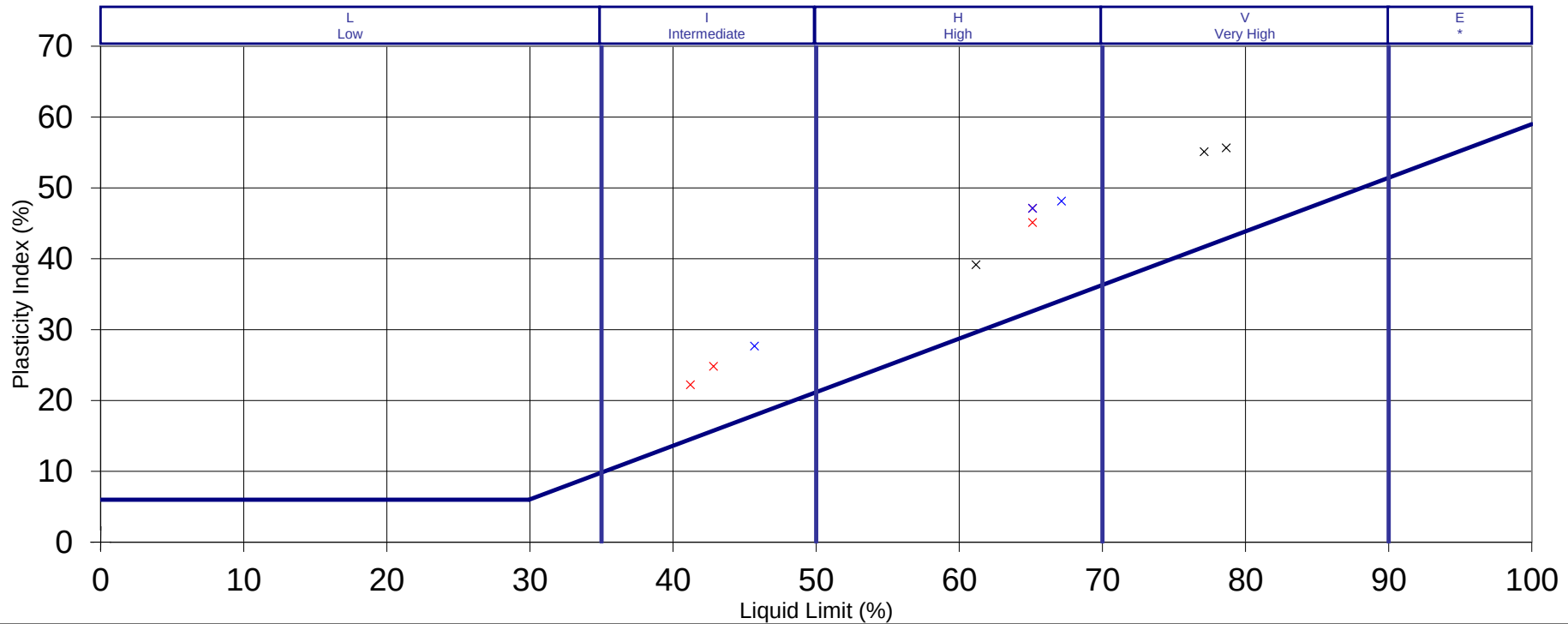
Laboratory Testing Results

Plasticity Chart for the classification of fine soils and the finer part of coarse soils
In Compliance with BS5930 : 1999



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Date Testing Completed : 05/08/2019
Laboratory : Chelmer Geotechnical Laboratories, CM3 8AB



Notes :-

SILT (M-SOIL), M, plots below A-Line
CLAY, C, plots above A-Line } M and C may be combined as FINE SOIL, F.

Key :-

TPBH1
TPBH2
BH3

Comments :-

Checked & Authorised By:- Martin Edwards- Chelmer Global Company Director

Date: 03/10/2019

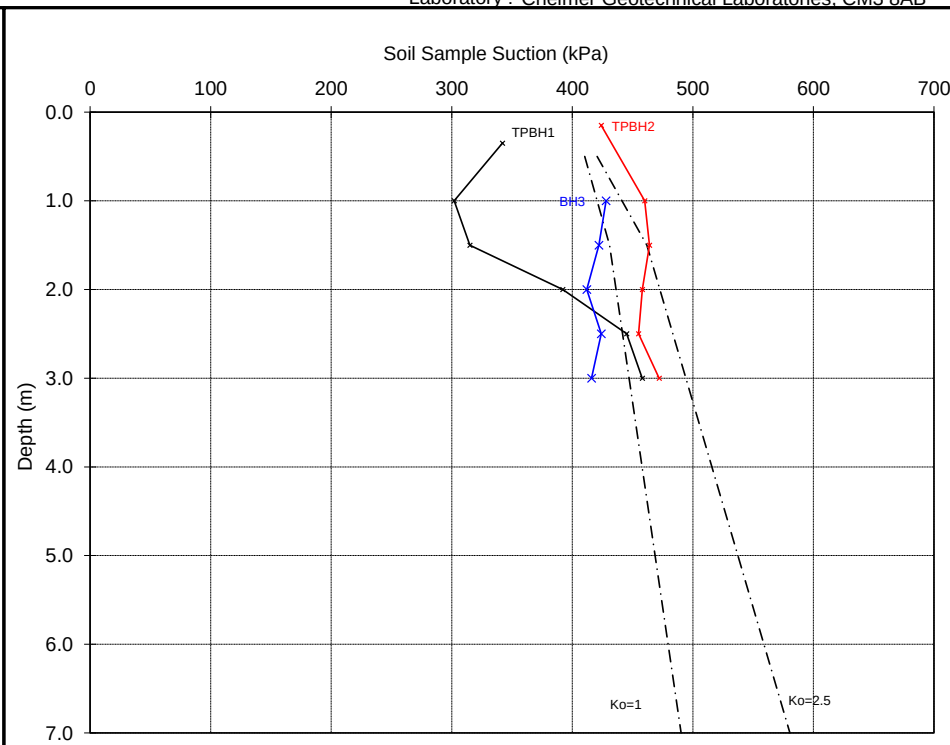
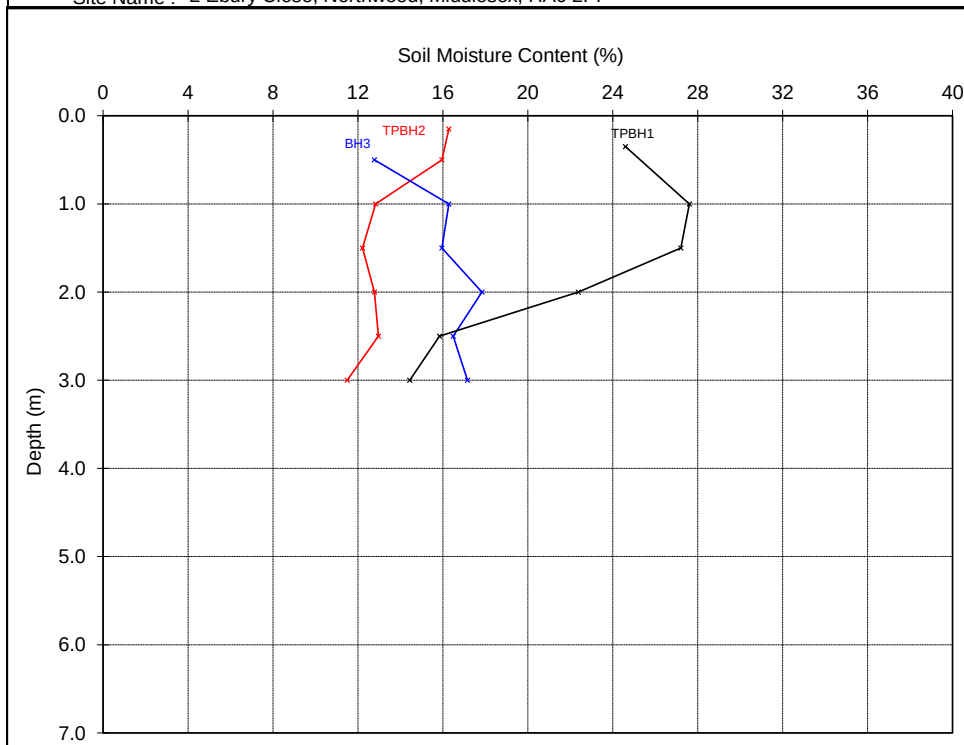
Laboratory Testing Results

Moisture Content/Soil Suction Profile



Job Number : 10877
 Client : Davies Managed Systems C/o GHG
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 Laboratory : Chelmer Geotechnical Laboratories, CM3 8AB



Notes :-

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Unless otherwise stated, values of Shear Strength were determined in situ by Chelmer Global Ltd using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 140 kPa.

Comments :-

Checked & Authorised By:-

Martin Edwards- Chelmer Global Company Director

Date: 03/10/2019



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This report shall not be reproduced, except in full, without the written approval of Chelmer Global Ltd.

Where our involvement consists exclusively of testing samples, the results and comments (if provided) relate only to the samples tested.

Any samples that are deemed to be subject to deviation will be recorded as such within the test summary.



Project

Project Name: 2 Ebury Close HA6 2PE
Project Description: WinCan Import in Miraculix WRc4 Standard
Project Status: Complete
Project Date: 19/07/2019





Table of Contents

Project Name
2 Ebury Close HA6 2PE

Project Number

Project Date
19/07/2019

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Scoring Summary	P-4
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Section: 1; FWMH2 > FWMH1 (FWMH2X)	1
Disclaimer	4

**Project Information****Project Name**
2 Ebury Close HA6 2PE**Project Number****Project Date**
19/07/2019**Client****Company:** CHELMER GLOBAL**Site****Company:** GHG
Street: 2 Ebury Close
Post Code: HA6 2PF**Contractor****Company:** Chelmer Global Ltd
Contact: Matthew Proctor
Street: Unit 15, East Hanningfield Industrial Estate
Town or City: East Hanningfield
County: Essex
Post Code: CM3 8AB
Email: info@chelmerglobal.co.uk

Project Information**Project Name**
2 Ebury Close HA6 2PE**Project Number****Project Date**
19/07/2019**Project Notes****Your Ref: 2 Ebury Close, HA6 2PF.****Date: 16/07/19****RE: 2 Ebury Close, HA6 2PF.****1. DESCRIPTION OF PROPERTY**

The above property is a privately-owned house.

2. DRAINAGE SYSTEM SURVEY

The cctv survey was carried out on all accessible drainage as instructed by the loss adjustor.

3. SHARED

The drains were for the sole use of the building.

4. CIRCUMSTANCES

The cctv survey was required to establish the condition of the drainage system.

5. CAUSE AND EXTENT OF DAMAGE

- 1) FWMH1-FWMH2: This drain is constructed from 100mm Vitrified Clay Pipe and appears to be visually in a serviceable condition and without any major structural defects. There are some attached deposits which are slightly restricting the bore and flow of the drain but it doesn't appear to have caused any blockages.

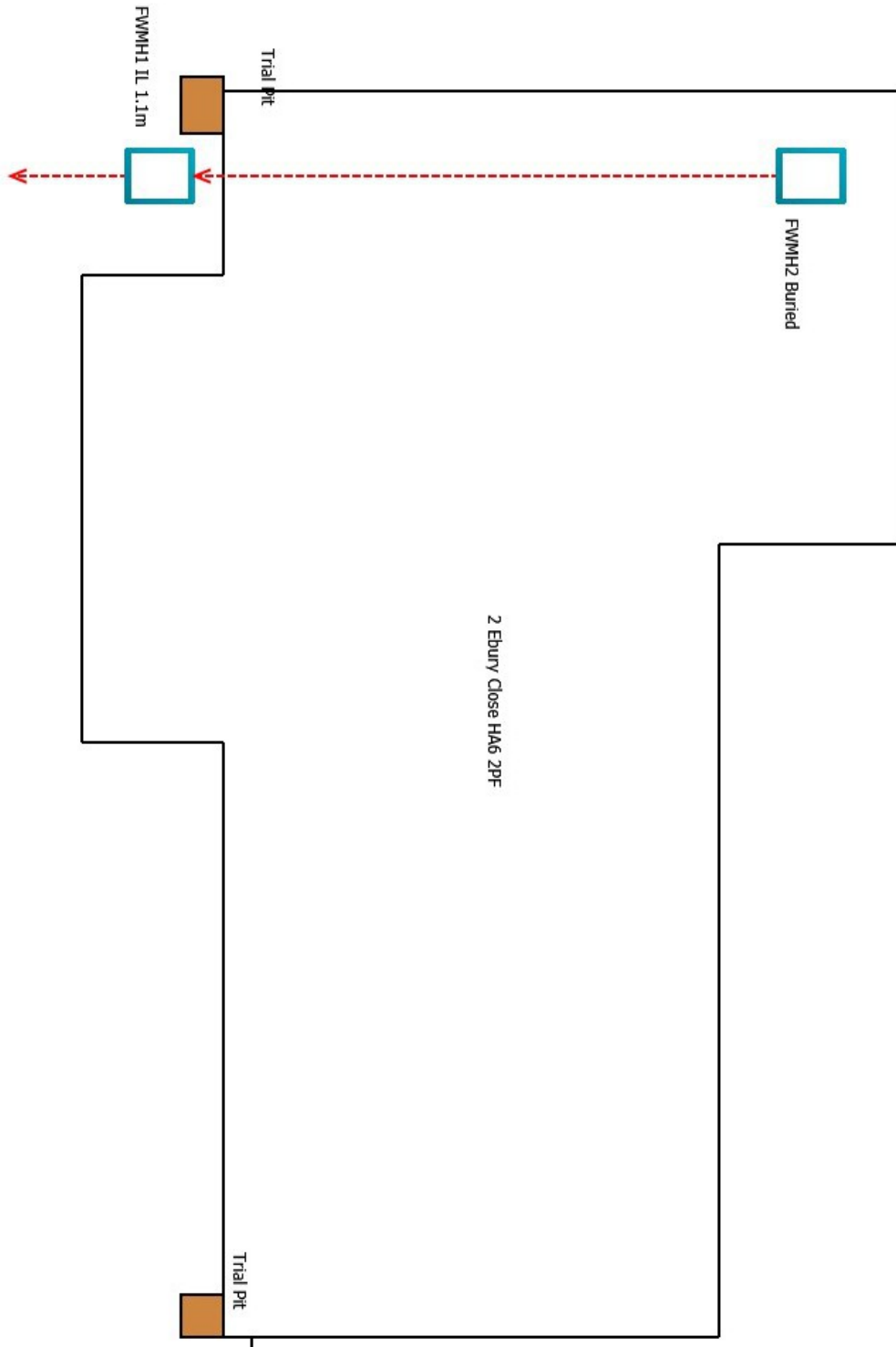
Project Information

Project Name
 2 Ebury Close HA6 2PE

Project Number

Project Date
 19/07/2019

Project Drawing



Scoring Summary

Project Name
2 Ebury Close HA6 2PE

Project Number

Project Date
19/07/2019

Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

Service / Operational Condition

- Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.
- Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.
- Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
1	FWMH 2X	3	Attached deposits, encrustation, from 05 to 07 o'clock, 15 % cross-sectional area loss

Abandoned Surveys

Section	PLR	Description
All inspections complete, none are abandoned.		

Information

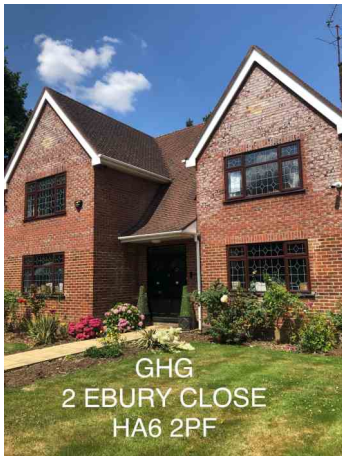
These scoring summaries are based on the SRM grading from the WRC.

Project Pictures

Project Name
 2 Ebury Close HA6 2PE

Project Number

Project Date
 19/07/2019



GHG
 2 EBURY CLOSE
 HA6 2PF
 FWMH 1
 1.1m



GHG
 2 EBURY CLOSE
 HA6 2PF
 FWMH 1
 1.1m



GHG
 2 EBURY CLOSE
 HA6 2PF
 FWMH 1
 1.1m

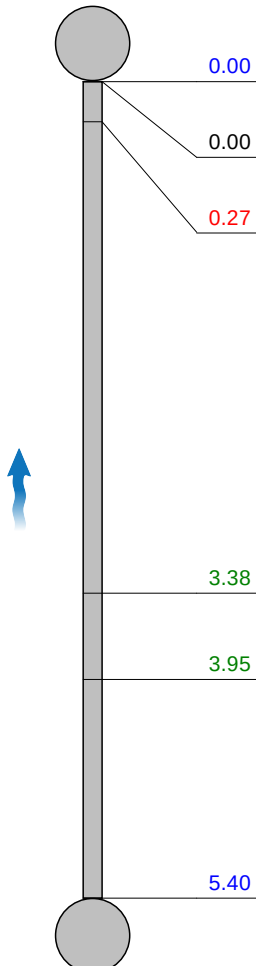
Section Inspection - 15/06/2019 - FWMH 2X

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
1	1	15/06/19	10:59	01	No Rain Or Snow	No	FWMH 2X
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID		
RONNIE	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified		

Town or Village:	Middlesex	Inspection Direction:	Upstream	Upstream Node:	FWMH 2
Road:	2 Ebury Close	Inspected Length:	5.40 m	Upstream Pipe Depth:	0.000 m
Location:	Under a permanent building	Total Length:	5.40 m	Downstream Node:	FWMH 1
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	1.100 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:		Lining Type:	No Lining		
Inspection Purpose:	Routine inspection of condition	Lining Material:	No Lining		
Comments:	FWMH 2 BURIED				
Recommendations:					

**WEB PROJECT**
CLICK TO OPEN THIS SECTION



Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.10 m FWMH 1 						
0.00	MH	Start node type, manhole, reference number: 1	00:00:01	20190615-105947-sn	ap0000.jpg	
0.00	WL	Water level, 0 % of the vertical dimension	00:00:02			
0.27	JDM	Joint displaced, medium	00:00:21	20190615-105947-sn	ap0001.jpg	1
3.38	DEE	Attached deposits, encrustation, from 05 to 07 o'clock, 15 % cross-sectional area loss	00:00:55	20190615-105947-sn	ap0002.jpg	3
3.95	DEE	Attached deposits, encrustation, from 09 to 03 o'clock, 5 % cross-sectional area loss	00:01:20	20190615-105947-sn	ap0003.jpg	2
5.40	MHF	Finish node type, manhole, reference number: 2: FWMH 2 BURIED	00:01:47	20190615-105947-sn	ap0004.jpg	
FWMH 2 Depth: 0.00 m						

Construction Features

Structural Defects

Miscellaneous Features

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.2	1.0	1.0	2	2.0	0.6	3.0	3.0

Section Pictures - 15/06/2019 - FWMH 2X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	FWMH 2X	01	



20190615-105947-snap0000.jpg, 00:00:01, 0.00 m
Start node type, manhole, reference number: 1



20190615-105947-snap0001.jpg, 00:00:21, 0.27 m
Joint displaced, medium



20190615-105947-snap0002.jpg, 00:00:55, 3.38 m
Attached deposits, encrustation, from 05 to 07 o'clock, 15 %
cross-sectional area loss



20190615-105947-snap0003.jpg, 00:01:20, 3.95 m
Attached deposits, encrustation, from 09 to 03 o'clock, 5 %
cross-sectional area loss

Section Pictures - 15/06/2019 - FWMH 2X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	FWMH 2X	01	



20190615-105947-snap0004.jpg, 00:01:47, 5.40 m
 Finish node type, manhole, reference number: 2, FWMH 2
 BURIED

Disclaimer

- 1)The cctv survey is based on a visual inspection of the drainage system which is accordingly limited in scope.
- 2)The cctv survey will report on defects that will affect the drainage system providing that they were reasonably detectable at the time of the cctv survey. The report and the results it contains are the view of the engineer appointed to carry out the cctv survey and are considered relevant on the day of the survey.
- 3) All defects noted within the cctv survey will be correct at the time and date of the survey. We cannot offer any guarantees regarding the future condition of the drainage system including existing defects or future defects. Drain and sewer performance can alter over time so we cannot be held responsible for any differences from the recorded condition after the report was generated.
- 4)CCTV subsidence investigations do not account for water tightness of drains and are purely a visual inspection of the drainage system. CCTV camera engineers are not qualified to report on the causes of subsidence and can only suggest remedial actions for the drains not the affected building.
- 5)Subsidence is a structural building failure which can occur for many reasons. Although failures within the drainage system can contribute to subsidence, we would advise that all other possibilities are investigated also. We would advise that drains within 10 metres of areas of subsidence are pressure tested to ensure the drains do not leak and remedial works should be actioned if these are found to lose pressure beyond acceptable levels.
- 6)This survey has been produced in accordance with WRC standards.



REPORT NOTES

Equipment Used

Hand tools, Mechanical Concrete Breaker and Spade, Hand Augers, 100mm/150mm diameter Mechanical Flight Auger Rig, GEO205 Flight Auger Rig, Window Sampling Rig, and Large or Limited Access Shell & Auger Rig upon request and/or access permitting.

On Site Tests

By Pilcon Shear-Vane Tester (kN/m) in clay soils, and/or Mackintosh Probe in granular soils or made ground and/or upon request Continuous Dynamic Probe Testing and Standard Penetration Testing.

Note:

Details reported in trial-pits and boreholes relate to positions investigated only as instructed by the client or engineer on the date shown.

We are therefore unable to accept any responsibility for changes in soil conditions not investigated i.e. variations due to climate, season, vegetation and varying ground water levels.

Full terms and conditions are available upon request.