Auger House, Cross Lane,
Wallasey, Wirral, CH45 8RH

Tel: 0151 630 5886
Fax: 0151 630 5884

admin@auger.co.uk
www.auger.co.uk

Site Investigation Report

Auger Ref:

102230.5.BSI

Job Information	
Client	Sedgwick International UK
Client ref	8767150
Visit date	01/12/2020
Report date	07/12/2020

Job Summary

- 1 trial hole undertaken. Read more.
- Requested soil samples taken. Read more.
- Requested root samples taken. Read more.

Job Information

Overview	
Brief	Auger were commissioned by Sedgwick International UK to undertake a site investigation within the area of concern at the property.

Photographs

Trial Hole 1

Fig 1.1: Trial Hole 1 Location (borehole)

Fig 1.2: Trial Hole 1 Samples

Other Photos

Fig 7.1: Mechanical rig on site

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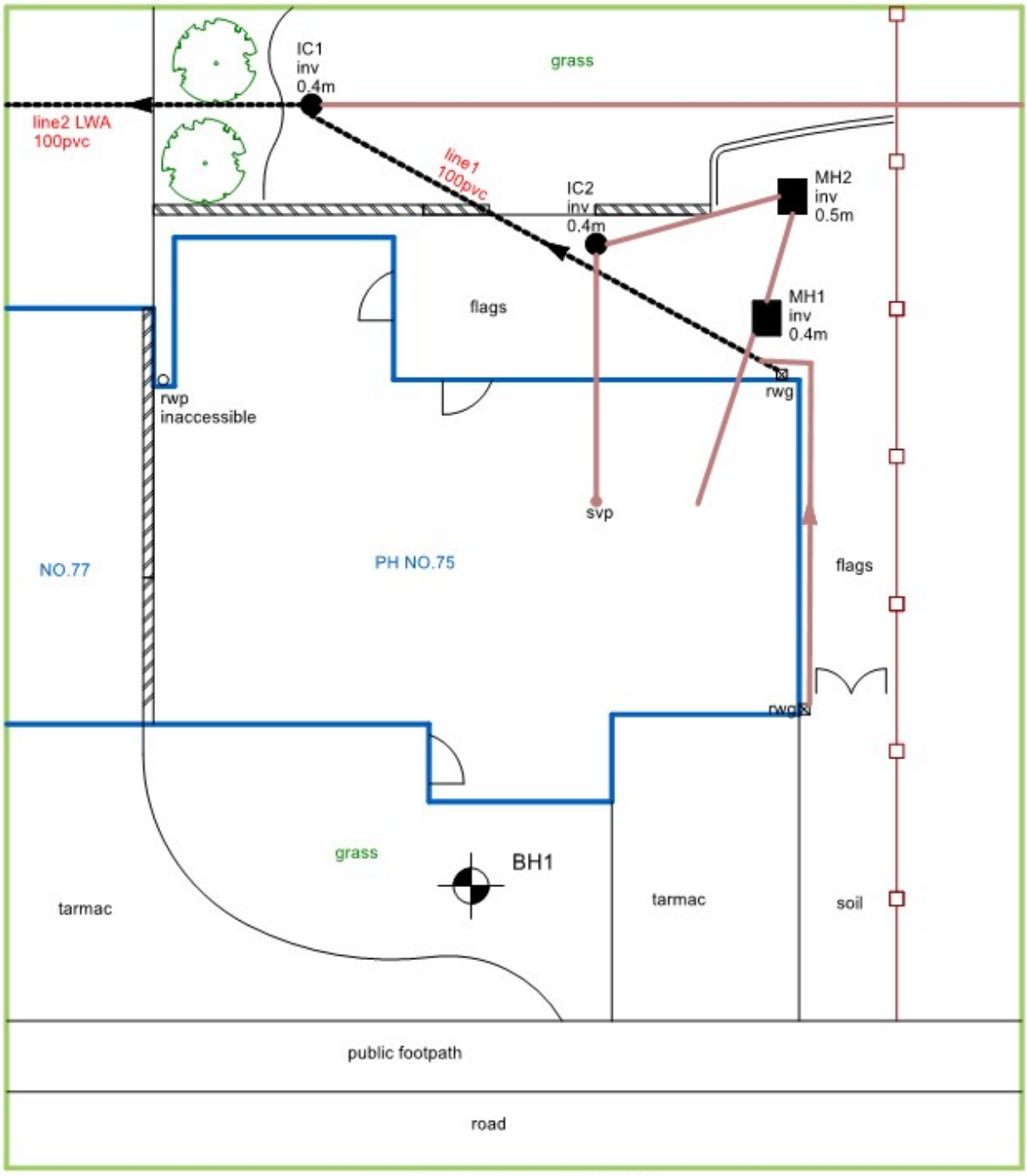
Existing Layout

Job Ref: 102230.1

Date: 15/01/2020



FRONT OF PROPERTY

LEGEND

- = Manhole
- = Inspection Chamber
- = Inspection Pot
- X = Blockage
- = svp/w/c
- = wg/fwg
- = rwg
- = rwp
- = Lines not camera surveyed
- = Lines camera surveyed
- = Assumed water mains feed
- = Walls
- = Fences
- = Building Outline
- = Steps
- = gate / door
- = Trial hole
- = Borehole
- = Direction of flow
- = Shrubs/bush
- = Hedge
- = Tree

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Trial Hole Log No.1

Location: RBH in front garden

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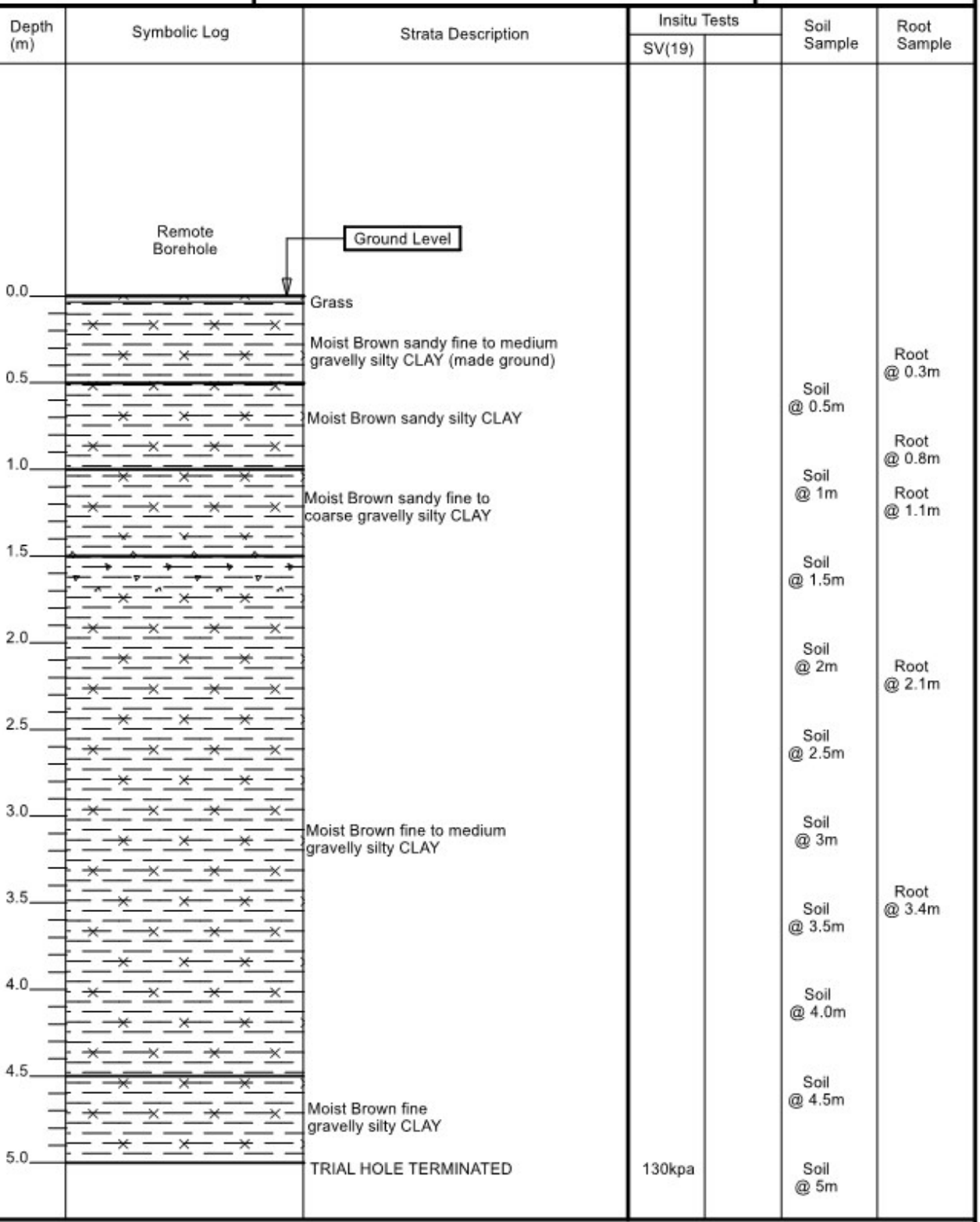

GSTL	Geotechnical Testing Analysis Report	auger environmental + claims mgmt + subsidence + drainage +
Unit 3 & 4, Heol Aur, Dafen Ind Estate, Dafen Llanelli, Carmarthenshire, SA14 8QN		Auger House, Cross Lane, Wallasey, Wirral, CH45 8RH

Summary Of Claim Details

Policy Holder	Unknown
Risk Address	Unknown
SI Date	01/12/2020
Issue Date	01/12/2020
Report Date	18/12/2020
Auger Reference	102230.5.3.RSS
Insurance Company	Fairmead Insurance Limited
LA Claim Reference	8767150
LA Co. Reference	

	Checked	18/12/2020	Wayne Honey	W. Honey
	Approved	18/12/2020	Paul Evans	P Evans

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GSTL	LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5) DESCRIPTIONS	auger environmental + claims mgmt + subsidence + drainage +
GSTL Contract Number	**51672**	
Risk Address	**Unknown**	
Auger Reference	**102230.5.3.RSS**	

TH Trial Hole	Sample Type	Depth (m)	Sample Description
TH1	D	0.50	Brown sandy fine to medium gravelly silty CLAY
TH1	D	1.00	Brown sandy silty CLAY
TH1	D	1.50	Brown sandy fine to coarse gravelly silty CLAY
TH1	D	2.00	Brown fine to medium gravelly silty CLAY
TH1	D	2.50	Brown fine to medium gravelly silty CLAY
TH1	D	3.00	Brown fine to medium gravelly silty CLAY
TH1	D	3.50	Brown fine to medium gravelly silty CLAY
TH1		4.00	Brown fine to medium gravelly silty CLAY
TH1	D	4.50	Brown fine gravelly silty CLAY
TH1	D	5.00	Brown fine gravelly silty CLAY

Test Operator	Checked	18/12/2020	Wayne Honey	W. Honey
Luke Williams	Approved	18/12/2020	Paul Evans	P Evans

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GSTL	LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)	auger environmental + claims mgmt + subsidence + drainage +
GSTL Contract Number	**51672**	
Risk Address	**Unknown**	
Auger Reference	**102230.5.3.RSS**	
Remarks	NP - (Non-Plastic), # - (Liquid Limit and Plastic Limit Wet Sieved)	

TH Trial Hole	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing .425mm %	NHBC Chapter 4.2	Remarks
TH1	D	0.50	18	48	20	28	87	MEDIUM VCP	CI Intermediate Plasticity
TH1	D	1.00	16						
TH1	D	1.50	18	54	20	34	71	MEDIUM VCP	CH High Plasticity
TH1	D	2.00	22						
TH1	D	2.50	19	54	22	32	76	MEDIUM VCP	CH High Plasticity
TH1	D	3.00	18						
TH1	D	3.50	20	54	23	31	89	MEDIUM VCP	CH High Plasticity
TH1		4.00	19						
TH1	D	4.50	23	59	25	34	97	MEDIUM VCP	CH High Plasticity
TH1	D	5.00	19	53	22	31	95	MEDIUM VCP	CH High Plasticity

Modified Plasticity Index (PI) <10	: Non Classified
Modified PI = 10 to <20	: Low volume change potential (LOW VCP)
Modified PI = 20 to <40	: Medium volume change potential (Med VCP)
Modified PI = 40 or greater	: High volume change potential (HIGH VCP)

The Atterberg Limits May also be used to classify the volume change potential of fine soils using the National House building system, as given in the NHBC's Standards Chapter 4.2 (2003) "Building Near Trees"

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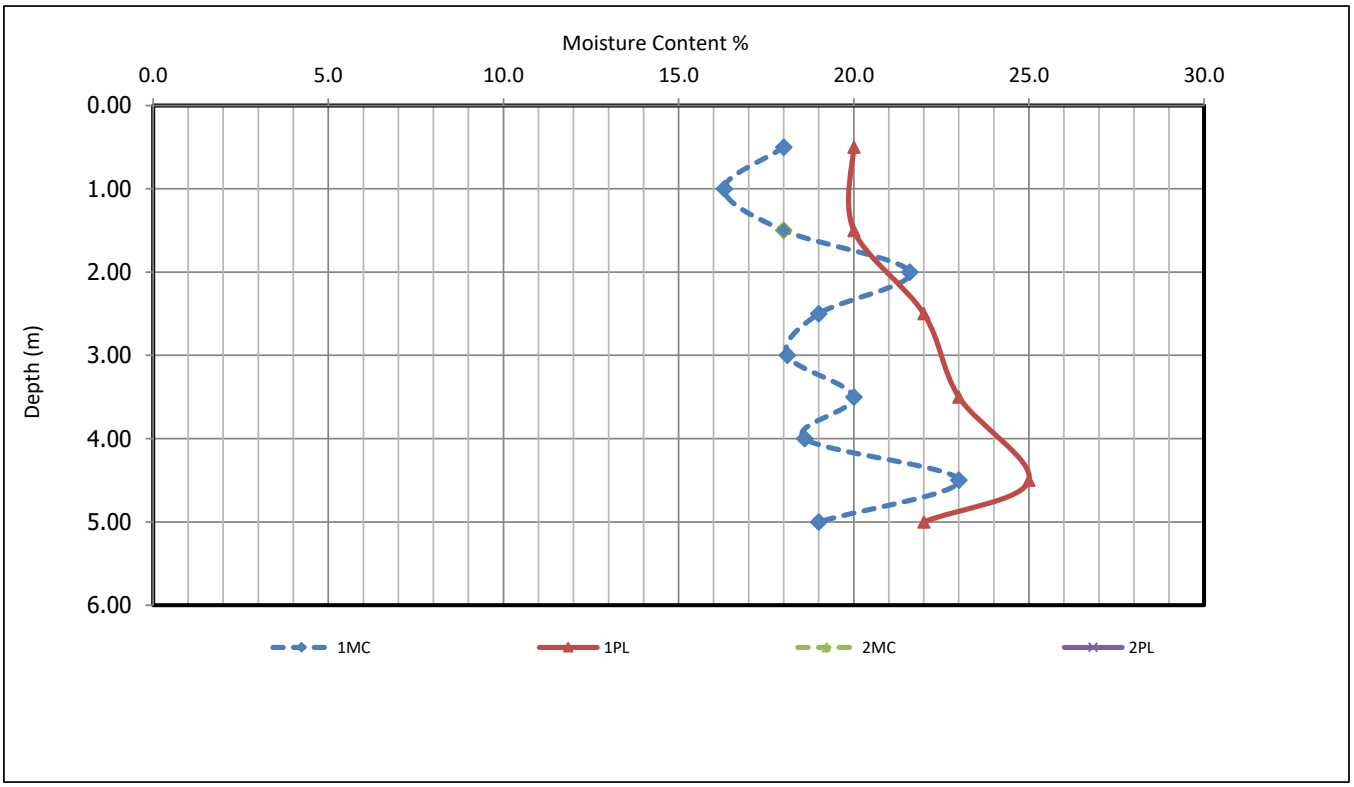
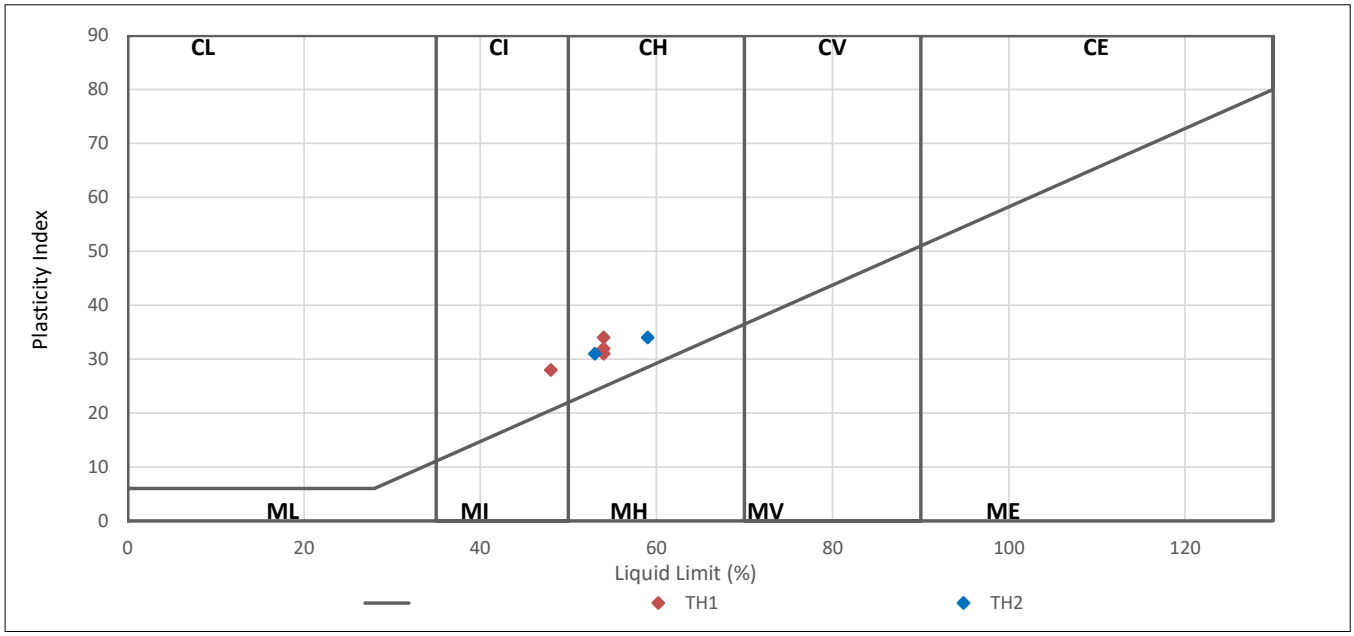


PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:1999+A2:2010



Modified Plasticity Index (PI) <10	: Non Classified
Modified PI = 10 to <20	: Low volume change potential (LOW VCP)
Modified PI = 20 to <40	: Medium volume change potential (Med VCP)
Modified PI = 40 or greater	: High volume change potential (HIGH VCP)

The Atterberg Limits May also be used to classify the volume change potential of fine soils using the National House building system, as given in the NHBC's Standards Chapter 4.2 (2003) "Building Near Trees"

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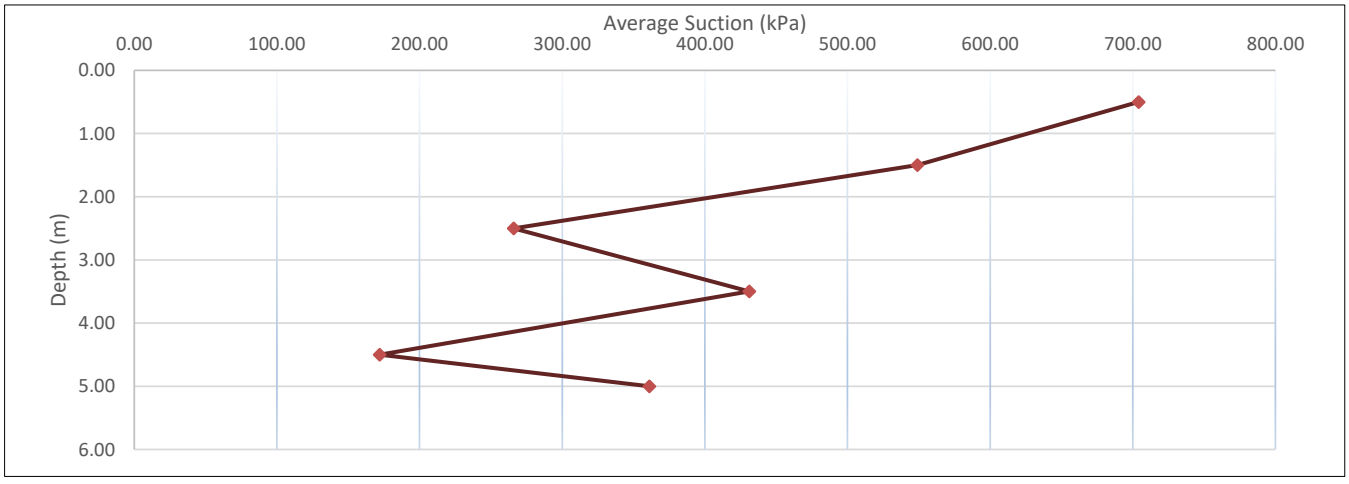
GSTL	SUMMARY OF SOIL CLASSIFICATION TESTS, BRE Information Paper IP 4/93 February 1993 (CI/SfB p1), BRE Information Paper Digest 412 ci/sFb (A3s) February 1996	auger environmental + claims mgmt + subsidence + drainage +
GSTL Contract Number	**51672**	
Risk Address	**Unknown**	
Auger Reference	**102230.5.3.RSS**	
Remarks	D - Disturbed (Recompacted 2.5kg Rammer), U - Undisturbed Sample	

TH Trial Hole	Depth (m)	Filter Paper Location	Filter Paper	Sample Prep Method	Test Duration (Days)	Water Content (%)	Soil Suction Pk (kPa)	Average Soil Suction Pk (kPa)	Cumalative Heave Potential (mm) from bottom of the hole
TH1	0.50	Top	I	D	5	31.2	796	704	20
TH1		Middle	II	D	5	32.1	693		
TH1		Bottom	III	D	5	32.9	624		
TH1	1.00								
TH1									
TH1									
TH1	1.50	Top	I	D	5	35.4	435	549	20
TH1		Middle	II	D	5	34.6	485		
TH1		Bottom	III	D	5	31.8	727		
TH1	2.00								
TH1									
TH1									
TH1	2.50	Top	I	D	5	38.9	263	266	11
TH1		Middle	II	D	5	40.2	218		
TH1		Bottom	III	D	5	37.6	317		
TH1	3.00								
TH1									
TH1									
TH1	3.50	Top	I	D	5	33.2	598	431	8
TH1		Middle	II	D	5	33.8	544		
TH1		Bottom	III	D	5	42.8	150		

Heave potential is calculated from the bottom of the hole and heaves above the bottom of the hole are reported as a cumalative value.
The values reported for heave above only apply to the strata the suction and plasticity have been performed on. The shallowest depth reported is assumed to be a strata thickness to GL and Heave is calculated based on that layer thickness, if the next sample is in 0.5m increments the heave is calculated based on the layer thickness of 0.5m and depths 1m from the sample above will include heave over 1m.
Consideration should be made for other stratas where values are not reported and when working out the heave potential over the entire trial hole.



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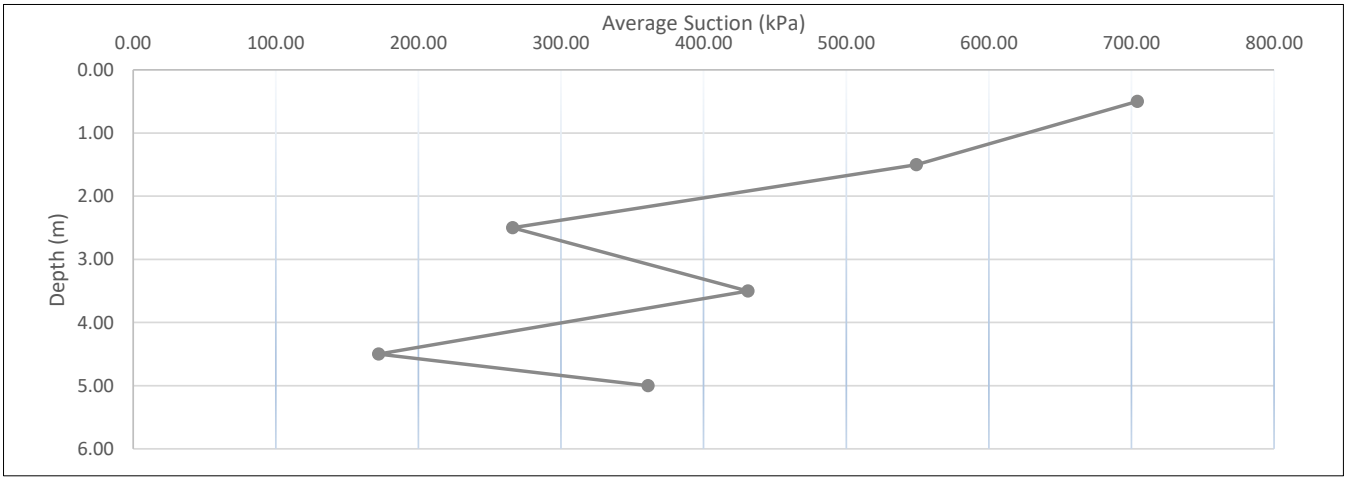
GSTL	SUMMARY OF SOIL CLASSIFICATION TESTS, BRE Information Paper IP 4/93 February 1993 (CI/SfB p1),	auger environmental + claims mgmt + subsidence + drainage +
GSTL Contract Number	**51672**	
Risk Address	**Unknown**	
Auger Reference	**102230.5.3.RSS**	
Remarks	D - Disturbed (Recompacted 2.5kg Rammer), U - Undisturbed Sample	

TH Trial Hole	Depth (m)	Filter Paper Location	Filter Paper	Sample Prep Method	Test Duration (Days)	Water Content (%)	Soil Suction Pk (kPa)	Average Soil Suction Pk (kPa)	Cumalative Heave Potential (mm) from bottom of the hole
TH1	4.00								
TH1	4.00								
TH1	4.00								
TH1	4.50	Top	I	D	5	42.6	156		
TH1	4.50	Middle	II	D	5	42.0	169	172	3
TH1	4.50	Bottom	III	D	5	41.1	192		
TH1	5.00	Top	I	D	5	37.8	309		
TH1	5.00	Middle	II	D	5	36.2	389	361	3
TH1	5.00	Bottom	III	D	5	36.3	384		

Heave potential is calculated from the bottom of the hole and heaves above the bottom of the hole are reported as a cumalative value.

The values reported for heave above only apply to the strata the suction and plasticity have been performed on. The shallowest depth reported is assumed to be a strata thickness to GL and Heave is calculated based on that layer thickness, if the next sample is in 0.5m increments the heave is calculated based on the layer thickness of 0.5m and depths 1m from the sample above will include heave over 1m.

Consideration should be made for other stratas where values are not reported and when working out the heave potential over the entire trial hole.



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Richardson's Botanical Identifications

Root identification
Vegetation surveys
Tree/Building investigations
Plant taxonomy

Dr Ian B K Richardson
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James Richardson
BSc (Hons. Biology)

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Auger Solutions
Auger House
Cross Lane
WALLASEY
Wirral CH45 8RH

Your ref: **102230-5-2**

Our ref: 81/3601

24/12/2020

Dear Sirs

Root ID

The samples you sent in relation to the above have been examined. Their structures were referable as follows:

BH1, 0.3-0.4m		
9 no.	Examined root: QUERCUS (Oak).	Alive, recently*.
BH1, 0.8m		
7 no.	Examined root: QUERCUS (Oak).	Dead*.
BH1, 1.1m		
2 no.	Examined root: QUERCUS (Oak).	Alive, recently*.
BH1, 2.3m		
1 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). This was a very IMMATURE sample.	Dead*.
1 no.	Microscopic examination showed insufficient cells for recognition.	
BH1, 3.4m		
1 no.	Examined root: essentially too immature for identification (less than 0.03mm in diameter). Definitely NOT a conifer; NOR is it particularly referable to any of the above described types.	Dead* (note this 'dead' result can be unreliable with such thin samples).

Click here for more information: CASTANEA QUERCUS

I trust this is of help. Please call us if you have any queries; our Invoice is enclosed.

Yours faithfully

Dr Ian B K Richardson

* Based mainly on the Iodine test for starch. Starch is present in some cells of a living woody root, but is more or less rapidly broken down by soil micro-organisms on death of the root, sometimes before decay is evident. This result need not reflect the state of the parent tree.

Identified with no information on vegetation, on or off site.