

Site Investigation Report

Auger Ref:

191036.1.USI



Job Information

Client	Sedgwick International UK
Client ref	10802411
Visit date	12/09/2025
Report date	25/09/2025

Job Summary

- ✓ CCTV survey undertaken. [Read more.](#)
- ! Drainage repairs required. [Read more.](#)



Job Information

Overview

Brief

Auger were commissioned by Sedgwick International UK to undertake a site investigation and CCTV inspection of the underground drainage within the area of concern (AOC) at the property.

Findings

Trial Hole Findings

Trial Hole 1

Within Trial hole 1 we revealed the footing and augered to the required depth (3m) in the proposed location. We took the requested soil and root samples. These measurements are shown in Trial hole log 1 below.

Drain Survey

We carried out a CCTV survey of the below ground drainage system, our findings of which are as follows:

Line 1 - From MH1 upstream to kitchen waste.

Our survey of line 1 revealed no significant defects to the pipework on this line which could be allowing an escape of water. We would note that there was a band sealed joint approximately 0.2m upstream which was displaced, but as this joint is sealed with the band seal it will not be allowing an escape of water.

Line 2 - From MH1 upstream to MH2

Our survey of line 2 revealed root ingress, joint displacements and fractures within the line. This included a fractured branch connection serving the SWG in the 3.5m run of pipework between the 2 manholes.

Line 3 - From RWG1 downstream to manhole 1.

Our survey of line 3 revealed no significant defects to the pipework on this line which could be allowing an escape of water.

Line 4 - From MH1 downstream to MH3.

Our survey of line 4 revealed root ingress, joint displacements and fractures within the 6.3m of pipework between the 2 manholes. We had found scale within the line but had removed this whilst on site.

Recommendations

Refer Back to Client

It is recommended that the following repairs are carried out to prevent an escape of water from the system:

Line 2

Install 3.5m of 100mm liner directly upstream of MH1 to MH2, covering over the defective branch connection.

Sonde, excavate and replace 1m of 100mm pipework including a the defective SWG branch connection approximately 0.8m upstream of MH1 at a depth no greater than 1.0m through block paving.

Line 4

Install 6.3m of 100mm liner directly downstream of MH1 to MH3.

During the clean-up/reinstatement process we will endeavour to leave the area we are working in clean and tidy and as close to how we found it as possible. There will always be an element of general debris/mud/waste that will build up in the area which cannot be prevented. There may however be elements of this process that are outside our remit i.e., Repainting or cleaning. If this is the case, then we will need to speak to the customer's insurers to help in this regard.

We will now refer the claim back to the client in order to progress the claim.

Repair Caveats

Once repairs have been undertaken the customer should ensure the drainage system is periodically inspected in the future for any deterioration and kept free flowing / free of blockages. Any damage noted during future inspections should be repaired immediately in accordance with current Building Regulations.

With any repair process, complications and unforeseen circumstances can arise. These scenarios will be reported whilst on-site and could potentially cause an increase in repair costs and inconvenience.

The proposed repairs will require radio detection in order to confirm the location of the defects. Although this is usually very accurate, a number of factors such as depth of pipework and presence of other services below ground can have an effect on the signal. This can result in a change of the location of the proposed excavation as well as the assumed depth and this may impact the scope of works. Costs may be subject to change due to the potential of excavating to a different depth and/or through different surfaces.

Where any excavation reinstatement of the surface is required, the reinstatement will always attempt to match the previous surface patterns and colouring, however we cannot guarantee an exact match.

If any of the above lining recommendations fail then excavation and replacement of the pipework would be required. This would severely increase the cost of repairs and would provide greater inconvenience to the residents. The relining of a severe joint displacement is normally unadvised due to the potential for complications in the future.

*Recommendations have been made to reline or patch reline sections of the drainage system at the property. This process combines a number of chemicals in a resin, which then harden in a fibreglass matting to create a new section of drain within the original. The reaction creates **a strong smell which can linger for up to 72 hours** once works are completed - this is not harmful. It is recommended that any areas where smells are experienced are kept well ventilated until the odour subsides.*

Photographs

Trial Hole 1

Fig 1.1: Trial Hole 1 Location



Fig 1.2: Trial Hole 1 Footing



Fig 2.1: Line 4.



Fig 2.2: Line 4.



Fig 2.3: Line 4.



Fig 2.4: Line 2.



Fig 2.5: Line 2.



Site Photos

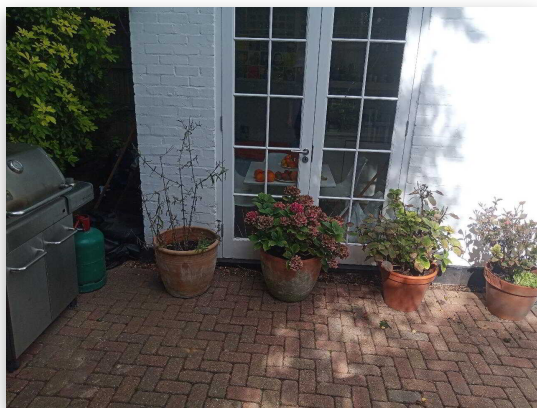
Fig 3.1: Access to the area of works.



Fig 3.2: Manhole 3.



Fig 3.3: Area of works.



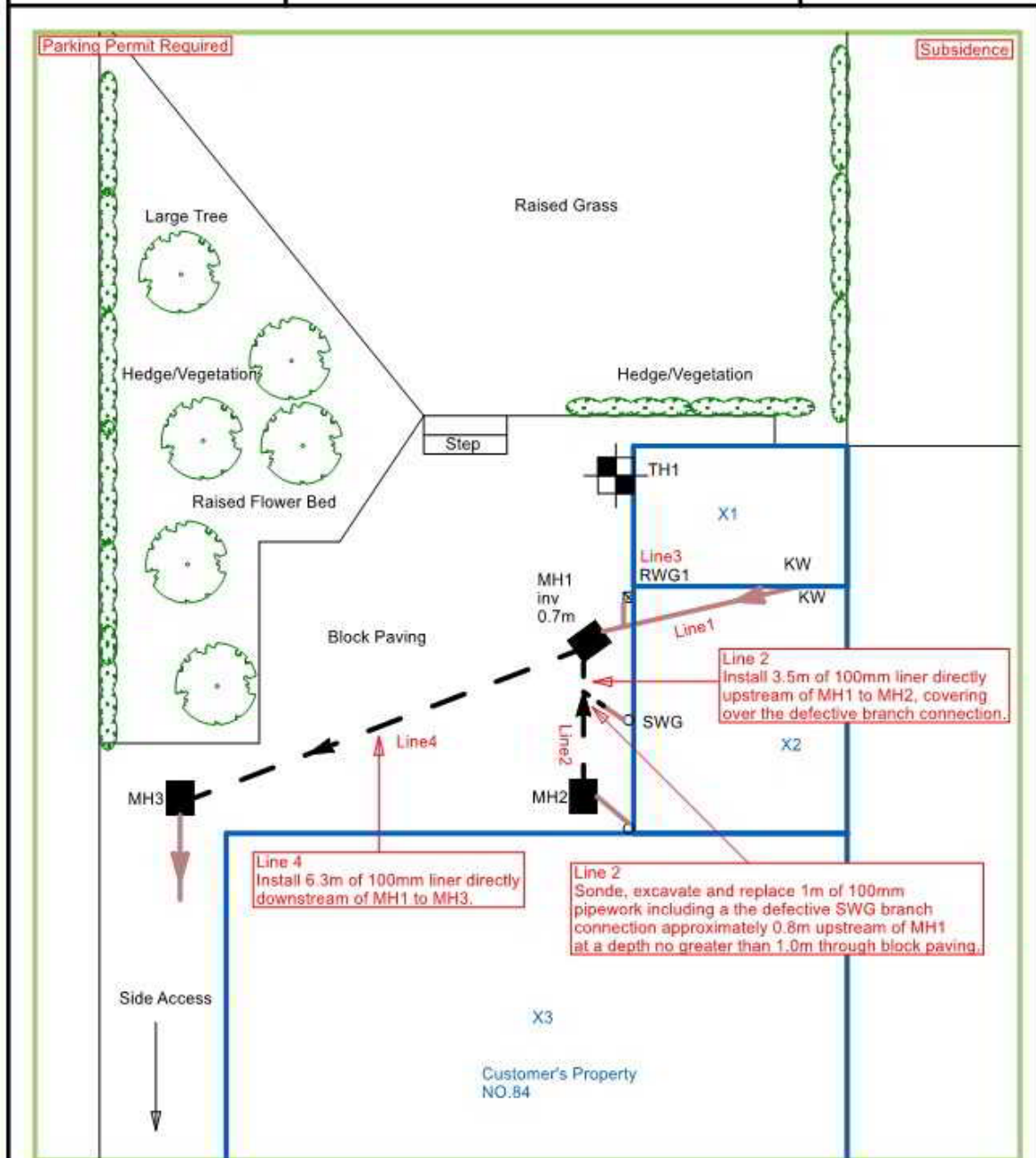
CCTV Survey – Inspection Listings (*WRc Guidelines Applied*)

L1			
Direction	Upstream	From	MH1
Pipe Size (mm)	100	Depth (m)	0.7
Pipe Material	VC	To	KW
0.0m	Start of Survey Length		
0.1m	Joint Displacement - Medium (Band Sealed)		
0.3m	Connection (RWG1)		
3.1m	Line of Sewer Deviates Up		
3.8m	Finish of Survey Length		

L2			
Direction	Upstream	From	MH1
Pipe Size (mm)	100	Depth (m)	0.7
Pipe Material	VC	To	MH2
0.0m	Start of Survey Length		
0.3m	Joint Displacement - Medium		
0.8m	Connection (SWG)		
0.8m	Fracture - Circumferential (OF BRANCH)		
1.5m	Fracture - Circumferential (JDM)		
2.0m	Joint Displacement - Medium		
2.7m	Roots - Fine (Joint)		
3.4m	Finish of Survey Length (ENTER MH2)		

L3			
Direction	Downstream	From	RWG1
Pipe Size (mm)	100	Depth (m)	D/S
Pipe Material	PVC	To	
0.0m	Start of Survey Length		
0.0m	Line of Sewer Deviates Down		
0.5m	Finish of Survey Length		

L4			
Direction	Downstream	From	MH1
Pipe Size (mm)	100	Depth (m)	0.7
Pipe Material	VC	To	MH3
0.0m	Start of Survey Length		
0.1m	Fracture - Circumferential		
0.5m	Fracture - Circumferential		
1.1m	Fracture - Longitudinal		
2.4m	Joint Displacement - Medium		
3.7m	Joint Displacement - Medium		
4.3m	Roots - Fine (Joint)		
5.6m	Joint Displacement - Medium		
6.3m	Finish of Survey Length		



FRONT OF PROPERTY

This drawing should be used for diagrammatic purposes only. Auger are not responsible or liable for any 3rd party works undertaken using the details outlined in this drawing. Confirmation of the drainage configuration can only be confirmed by excavation or detailed technical survey.

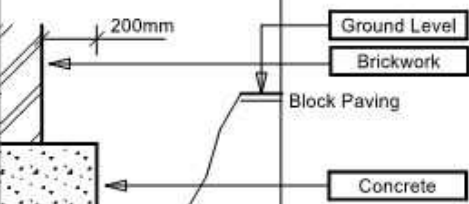
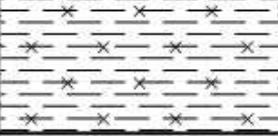
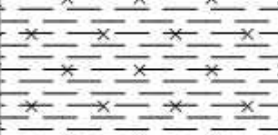
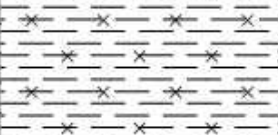
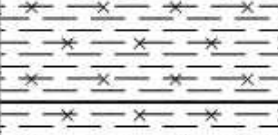
LEGEND			
	= Manhole (MH)		= Blockage / Collapse
	= Inspection Chamber (IC)		= Soil Vent Pipe (SVP) / WC
	= Inspection Point (IP)		= Combined Waste Gully (CWG) / Foul Waste Gully (FWG)
			= Rainwater Gully (RWG)
			= Rainwater Pipe (RWP)
			= Lines not to be repaired
			= Lines to be repaired
			= Assumed water mains feed
			= Walls
			= Fences
			= Building Outline
			= Trial hole
			= Borehole
			= Direction of flow
			= Gate / Door
			= Shrubs / Bush
			= Hedge
			= Tree
			= Steps



Trial Hole Log No.1

Location: Rear lhs corner of extension

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Depth (m)	Symbolic Log	Strata Description	Insitu Tests		Soil Sample	Root Sample
			SV(19)			
0.0		Ground Level Brickwork Block Paving Concrete				
0.5		Very dry very stiff brown fine to medium gravelly silty CLAY	140kpa		Soil @ 0.4m	Root @ 0.4m
1.0			140kpa		Soil @ 0.9m	Root @ 0.9m
1.5		Very dry very stiff brown fine gravelly silty CLAY	140kpa		Soil @ 1.4m	Root @ 1.4m
2.0			140kpa		Soil @ 1.9m	Root @ 1.9m
2.5		Very dry very stiff brown fine to medium gravelly silty CLAY	140kpa		Soil @ 2.4m	Root @ 2.4m
3.0		Very dry very stiff brown fine gravelly silty CLAY	140kpa		Soil @ 2.9m	Root @ 2.9m
		TRIAL HOLE TERMINATED	140kpa			
3.5						

Unit 3 & 4,
 Heol Aur,
 Dafen Ind Estate,
 Dafen
 Llanelli,
 Carmarthenshire,
 SA14 8QN

***The testing results contained within this report have been performed by GSTL a UKAS accredited laboratory on behalf of Auger.**

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

Summary Of Claim Details

Policy Holder
GSTL Job Reference

80919

SI Date

12/09/2025

Issue Date

12/09/2025

Report Date

06/10/2025

Auger Reference

191036.1.2.RSS

Insurance Company

John Lewis & Partners Home Insurance

LA Claim Reference

10802411

LA Co. Reference

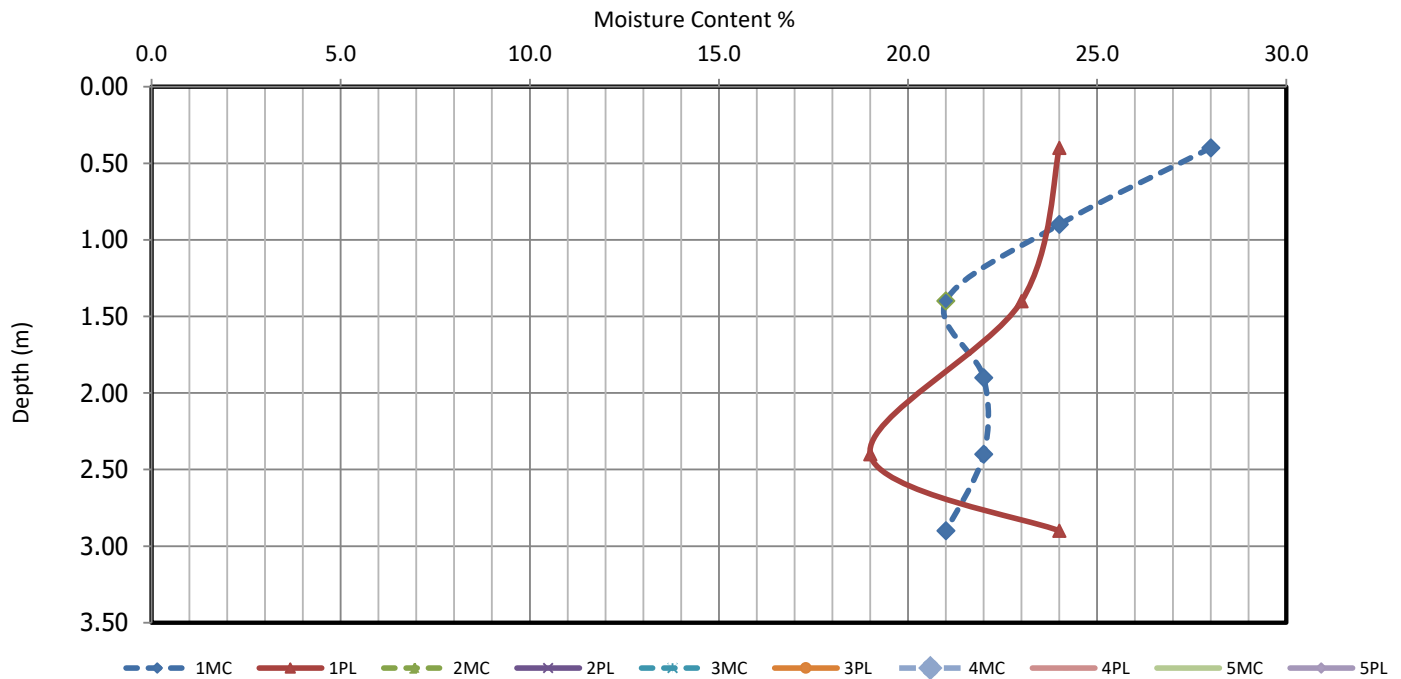
Sedgwick International UK

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

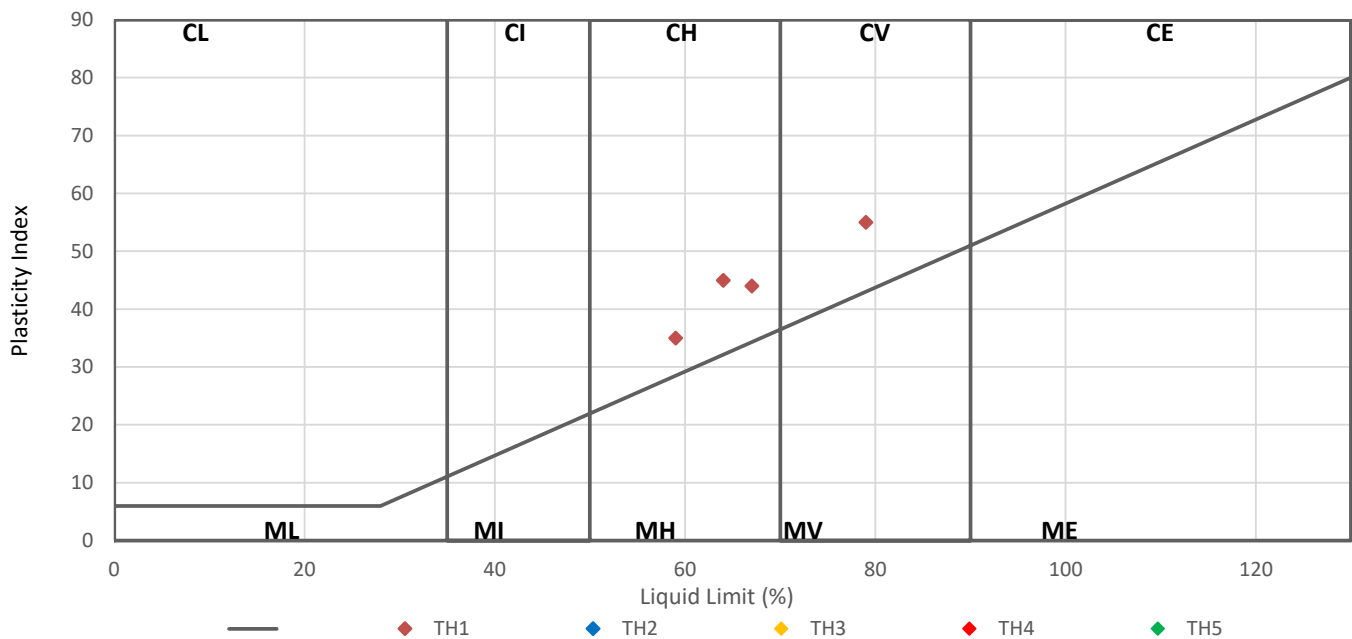
Checked and approved

06/10/2025

R.John



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"

Test Operator

Jason Smith

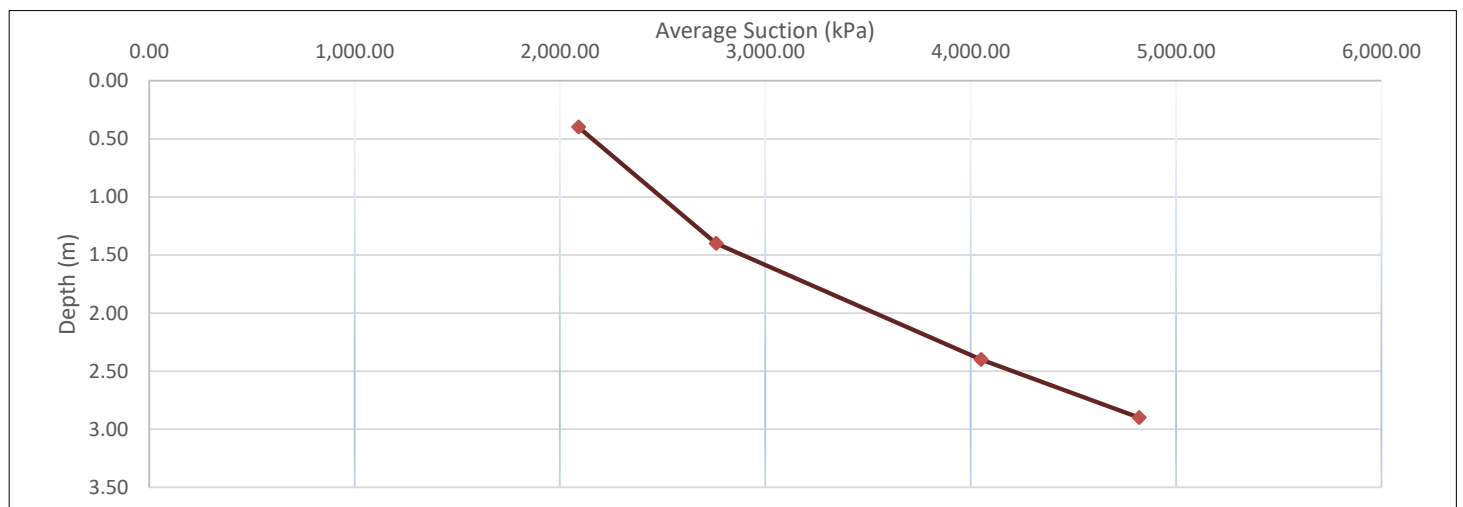
GSTL Contract Number	80919	
Report Date	06/10/2025	
Auger Reference	191036.1.2.RSS	
Remarks	D - Disturbed (Recompacted 2.5kg Rammer), U - Undisturbed Sample	

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)	Cumulative Heave Potential (mm) from bottom of the hole
TH1	0.40	Top	I	D	5	24.6	2030	2090	81
TH1		Middle	II	D	5	24.4	2110		
TH1		Bottom	III	D	5	24.4	2110		
TH1	0.90								
TH1									
TH1									
TH1	1.40	Top	I	D	5	22.7	2680	2760	59
TH1		Middle	II	D	5	22.3	2830		
TH1		Bottom	III	D	5	22.5	2770		
TH1	1.90								
TH1									
TH1									
TH1	2.40	Top	I	D	5	19.9	4020	4050	38
TH1		Middle	II	D	5	19.8	4060		
TH1		Bottom	III	D	5	19.8	4070		
TH1	2.90	Top	I	D	5	18.8	4690	4820	16
TH1		Middle	II	D	5	18.7	4780		
TH1		Bottom	III	D	5	18.4	5000		

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



Test Operator
Jason Smith



Root identification
Vegetation surveys
Tree/Building investigations
Plant taxonomy

Richardson's Botanical Identifications

Dr Ian B K Richardson
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James Richardson
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E-mail: richardsons@botanical.net

Web: www.botanical.net

Auger Solutions

Auger House

Cross Lane

WALLASEY

Wirral CH45 8RH

29/09/2025

Your ref: **191036-1-1**

Our ref: 89/7714

Dear Sirs

Root ID

The samples you sent in relation to the above on 12/09/2025 have been examined. Their structures were referable as follows:

TH1, 0.4m		
7 no.	Examined root: FICUS (Fig).	Alive, recently*.
3 no.	Examined root: we cannot rule out PRUNUS (Cherries, Plums and Damsons, Almonds, Peaches and Apricots, Blackthorn/Sloe, as well as the shrubby Cherry-laurel and Portugal-laurel).	Dead*.
1 no.	Examined root: a SHRUB, similar in many ways to the family CAPRIFOLIACEAE (the most common members being Viburnum (Laurestinus and Guelder-rose), Weigela, Symphoricarpos (Snowberry), Lonicera (Honeysuckle)). Only 0.35mm in diameter.	Dead* (note this 'dead' result can be unreliable with such thin samples).
1 no.	A piece of BARK only, insufficient material for identification.	
1 no.	Microscopic examination showed insufficient cells for recognition.	
TH1, 0.9m		
1 no.	Examined root: FICUS (Fig).	Alive, recently*.
1 no.	Examined root: a SHRUB - definitely NOT the same as the above described type. Extremely THIN.	Alive, recently*.
1 no.	A piece of BARK only, insufficient material for identification.	
TH1, 1.4m		
1 no.	Examined root: only around 0.6mm in diameter. Similar in many ways to FAGUS (Beech).	Alive, recently*.
1 no.	Examined root: SHRUBBY - could be PITTOSPORUM (shrubs, often with 'wavy-edged' leaves which are spirally arranged; some types have sweetly scented flowers). Slightly tentative - this sample was in very THIN and immature.	Alive, recently*.

/ continued overleaf

2 no.	Both samples revealed too few cells for microscopic identification.	
TH1, 1.9m		
1 no.	Examined root: in many ways like FAGUS (Beech).	Alive, recently*.
3 no.	Unfortunately all with insufficient cells for identification.	
TH1, 2.4m		
3 no.	Examined root: only 0.7mm in diameter. Could be FAGUS (Beech).	Dead* (again note that this 'dead' result could be unreliable).
1 no.	Microscopic examination showed insufficient cells for recognition.	
TH1, 2.9m		
4 no.	Examined root: a THIN sample (0.8mm in diameter) - also with NO BARK. We cannot rule out FAGUS (Beech).	Dead* (as previously, this 'dead' result could be unreliable).
4 no.	Unfortunately all with insufficient cells for identification.	

Click here for more information: [FAGUS](#) [FICUS](#) [PRUNUS](#)

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.

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