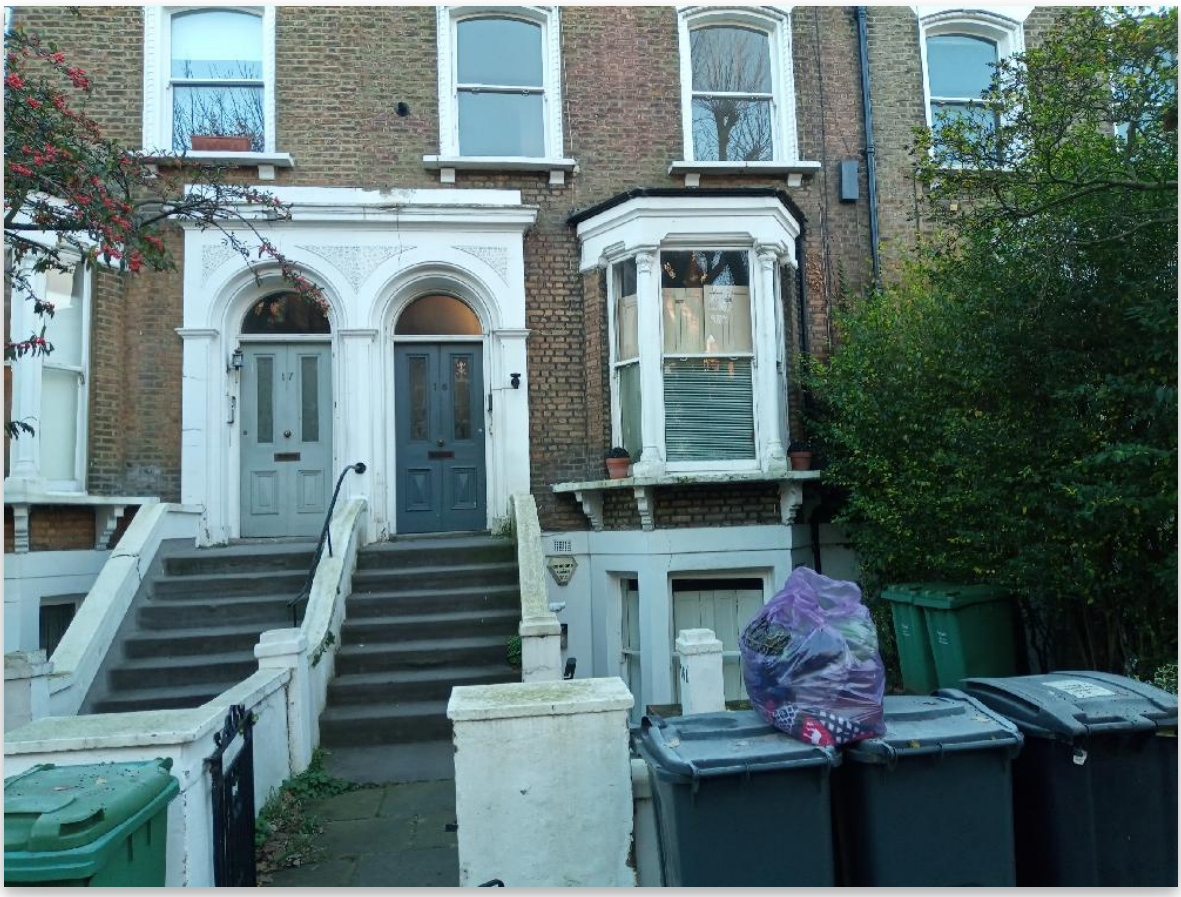
[redacted]

Site Investigation Report

[redacted]



	[redacted]

Summary

- 2 trial holes undertaken. Read more.
- No CCTV survey undertaken. _____.

Job Information

Overview

Brief	Auger were commissioned by Crawford & Co 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	Upon arrival our engineer found that the location of TH1 was 1.5m below ground level. The landlord did not wish for us to carry out a trial hole in the proposed location as he would require more notice to inform the tenants. As well as this, the hole would be through concrete and so access to power would be required to break through the concrete. Please note in this location is also a 2 storey bay, this bay will have a different footing to the main house meaning the trial hole will need to be done either side of the bay, however there are drainage pipes that are located either side of the bay on the main house meaning they would most likely be broken and need to be replaced at a further cost if trial holes are to be done there. Alternatively a trial hole can be done against the bay, however this may feature a different footing to the main house. Soil and root samples were taken from a remote borehole in the front garden, this reached 3m depth. TH2 was attempted in the proposed location. Our engineer determined the footing to consist of brick steps onto concrete however our engineer hit some sort of concrete layer at 1.1m depth. Despite this our engineer was able to probe the footing down to at least 1.6m depth however the base of the footing cannot be confirmed. Our engineer therefore stepped back 1m to attempt a borehole, this borehole hit refusal at a depth of 1.1m also due to a solid obstruction which our engineer believes to be the same concrete as in TH1. Another remote borehole was conducted in the garden which collected soil and roots down to 3m, however for the footing to be confirmed in the proposed location 2 men must return for a full day at a further cost. A quote for a deep trial hole has been included however please be aware this cost may change due to factors on site such as samples and thick concrete to be broken through.
Drain Survey	No CCTV survey of the underground drainage was undertaken whilst on site because our engineer ran out of time to survey the drains. However, as the manhole will be at least 1.5m depth a second man will be required for safety reasons to survey the drains in this area.

Recommendations

Refer Back to Client	Please instruct us as to what you would like us to do next. We will now refer the claim back to the client in order to progress the claim.

Photographs

Trial Hole 1

Fig 1.1: MH Location (Above TH1 Location)

Fig 1.2: Gully to the left of Bay

Fig 1.3: Pipe to right of Bay

Fig 1.4: TH1 Borehole

Fig 2.1: Trial Hole 2 Location

Fig 2.2: TH2 Footing

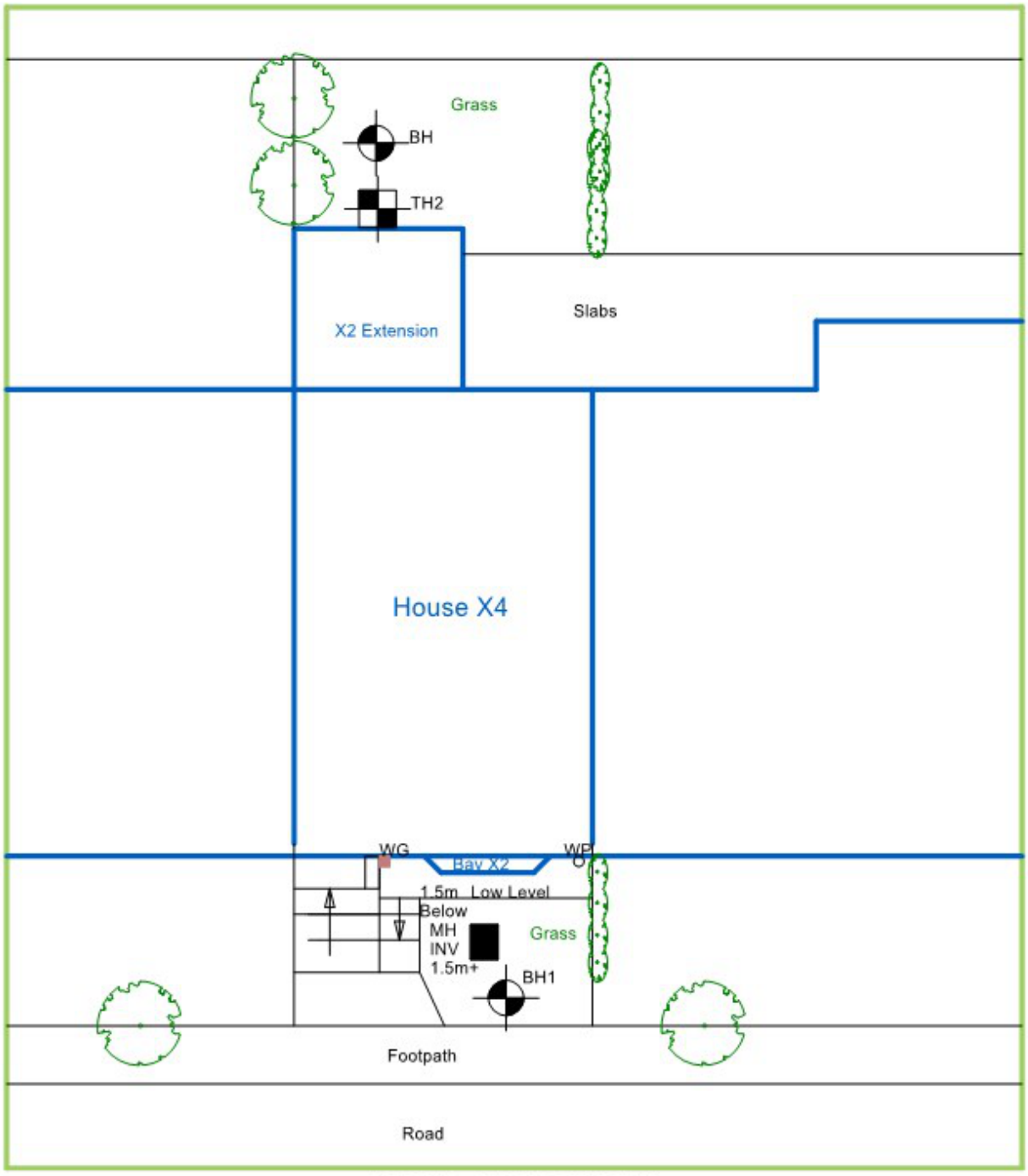
Fig 2.3: TH2 Borehole

auger

Existing Layout

[redacted]

Date: 18/01/2023



FRONT OF PROPERTY

LEGEND

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

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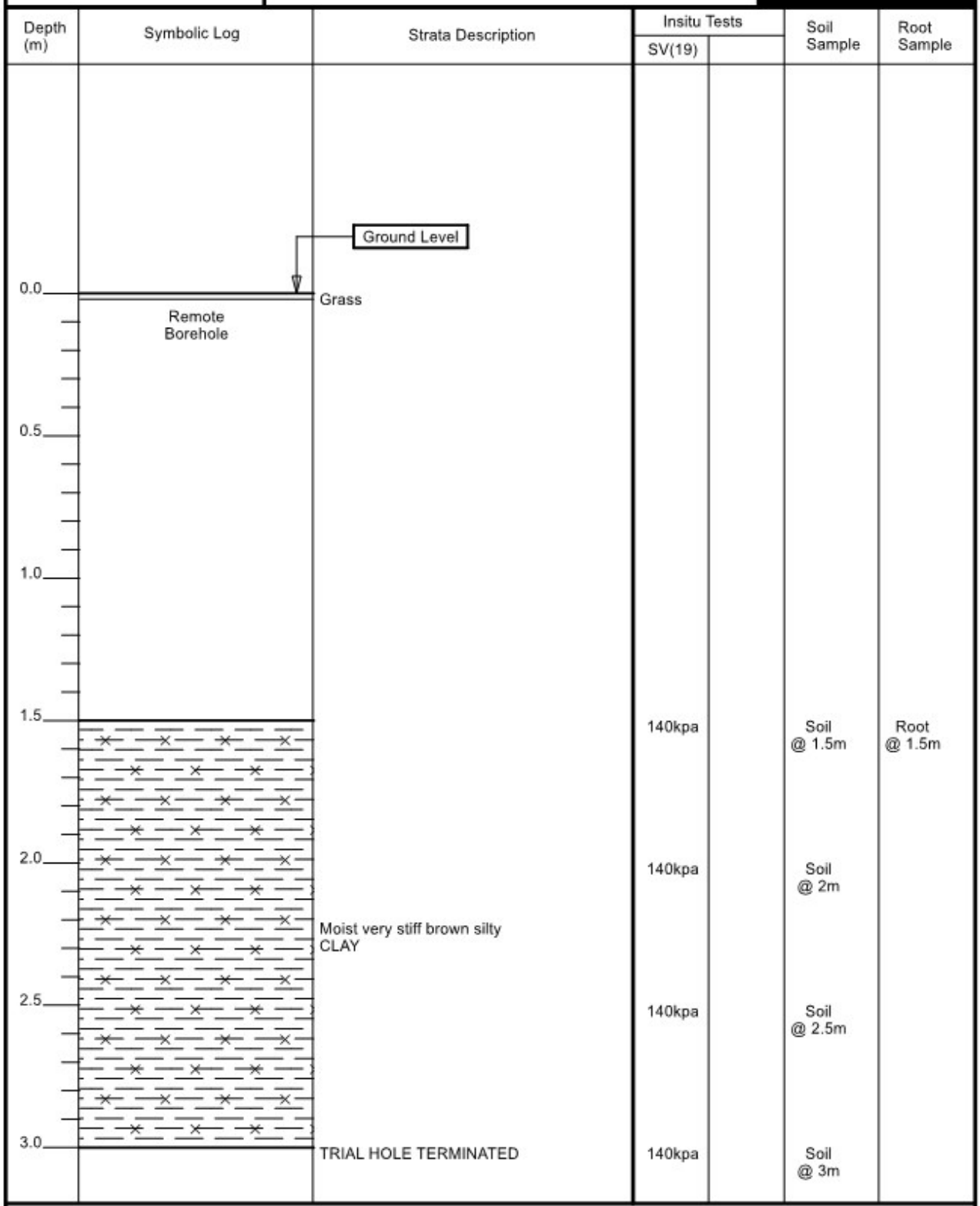
Trial Hole Log No.1

Location: Front garden in grass

[redacted]



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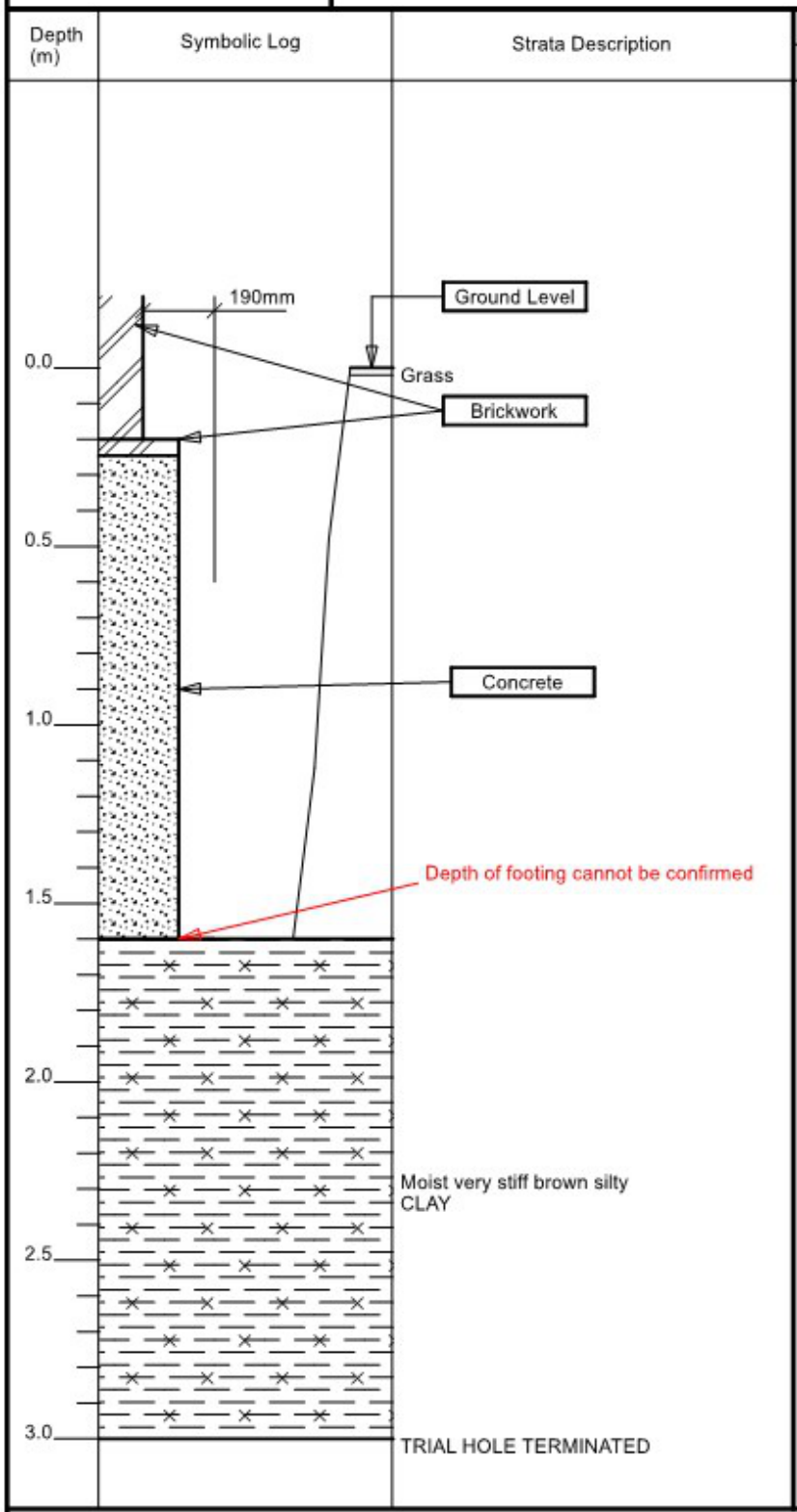
Trial Hole Log No.2

Location: Rear middle of rear extension



Insitu Tests		Soil Sample	Root Sample
SV(19)			
140kpa		Soil @ 1.6m	Root @ 1.6m
140kpa		Soil @ 2.1m	
140kpa		Soil @ 2.6m	
140kpa			

Richardson's Botanical Identifications

Root identification
Vegetation surveys
Tree/Building investigations
Plant taxonomy

Dr Ian B K Richardson
BSc, MSc, PhD, MRSB, FLS
James Richardson
BSc (Hons. Biology)

Enterprise House
49-51 Whiteknights Road
Reading
RG6 7BB
[redacted]

Auger Solutions
Auger House
Cross Lane
WALLASEY
Wirral CH45 8RH

17/02/2023

Dear Sirs

Root ID

The samples you sent in relation to the above on 18/01/2023 have been examined. Their structures were referable as follows:

TH/BH1, 1.5m		
1 no.	Examined root: could well be ACER (Maples, Sycamores). Less than 0.15mm in diameter.	Alive, recently*.
1 no.	Examined root: an herbaceous (non-woody) plant. Slightly tentative.	Alive, recently*.
1 no.	Examined root: too DECAYED for identification.	
1 no.	Microscopic examination showed insufficient cells for recognition.	
TH/BH2, 1.6m		
3 no.	Examined root: as above, similar in many ways to ACER (Maples, Sycamores).	Alive, recently*.

Click here for more information: ACER

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

Yours faithfully

[redacted]

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.

* * Try out our web site on www.botanical.net * *

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

Report commissioned by auger

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Geotechnical Testing Analysis Report**	auger environmental + claims mgmt + subsidence + drainage +
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 laborotory on behalf of Auger.**	**Auger House, Cross Lane, Wallasey, Wirral, CH45 8RH**

Summary Of Claim Details

Policy Holder	
GSTL Job Reference	[redacted]
SI Date	18/01/2023
Issue Date	18/01/2023
Report Date	06/02/2023
Auger Reference	[redacted]
Insurance Company	Arch Insurance
LA Claim Reference	[redacted]
LA Co. Reference	Crawford & Co

Checked and approved	06/02/2023	Wayne Honey	[redacted]

UKAS TESTING
2788

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX
(BS 1377:1990 - Part 2 : 4.4 & 5.3)
DESCRIPTIONS

auger
environmental
claims mgmt
subsidence
drainage

GSTL Contract Number	[redacted]	
Report Date	06/02/2023	
Auger Reference	[redacted]	

TH Trial Hole	Sample Type	Depth (m)	Sample Description
TH1	D	1.50	Brown fine to medium 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
TH2	D	1.60	Brown fine to medium gravelly silty CLAY
TH2	D	2.10	Brown fine to medium gravelly silty CLAY
TH2	D	2.60	Brown fine to medium gravelly silty CLAY

Test Operator
Jason Smith

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX
(BS 1377:1990 - Part 2 : 4.4 & 5.3)

auger
environmental + claims mgmt + subsidence + drainage +

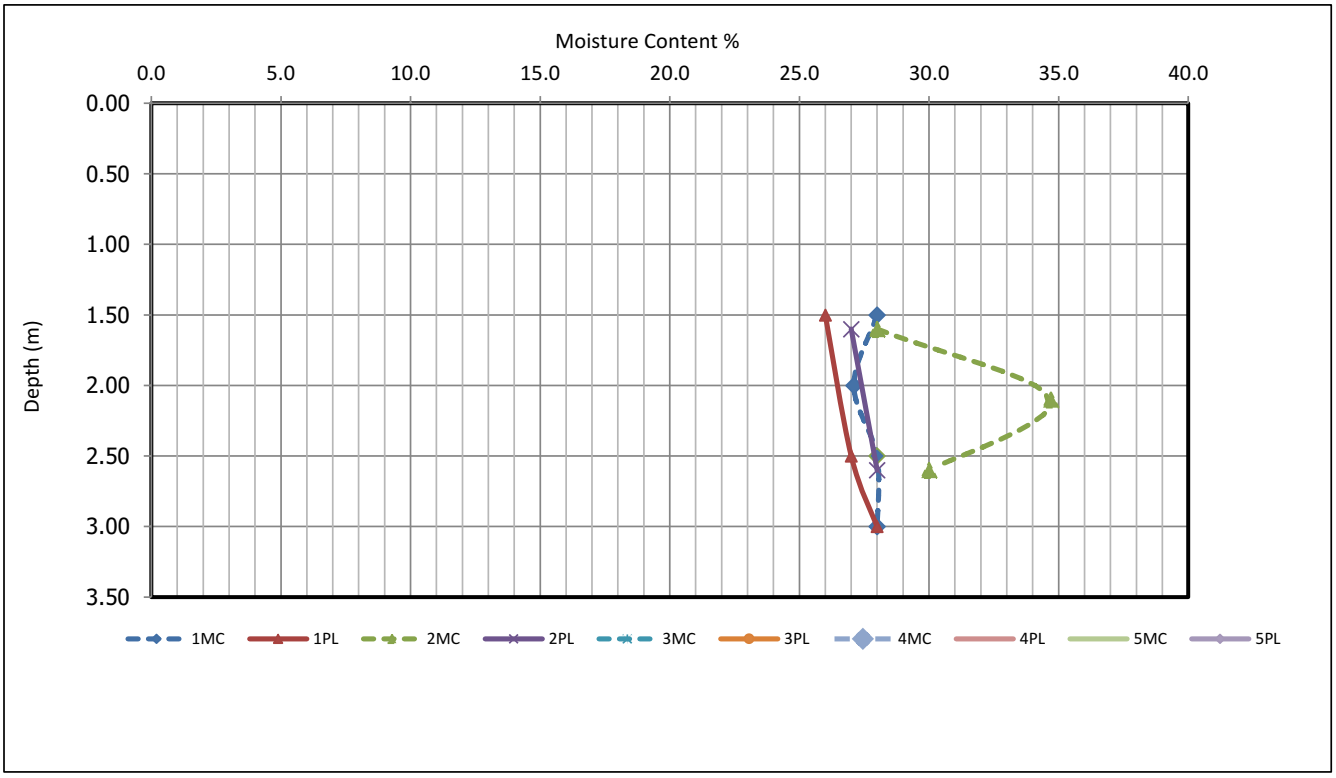
GSTL Contract Number	[redacted]	
Report Date	**06/02/2023**	
Auger Reference	[redacted]	
Remarks	NP - (Non-Plastic), # - (Liquid Limit and Plastic Limit Wet Sieved)	

TH Trial Hole	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing .425mm %	NHBC Chapter 4.2	Remarks
TH1	D	1.50	28	71	26	45	93	HIGH VCP	CV Very High Plasticity
TH1	D	2.00	27						
TH1	D	2.50	28	71	27	44	93	HIGH VCP	CV Very High Plasticity
TH1	D	3.00	28	74	28	46	95	HIGH VCP	CV Very High Plasticity
TH2	D	1.60	28	61	27	34	94	MEDIUM VCP	CH High Plasticity
TH2	D	2.10	35						
TH2	D	2.60	30	72	28	44	94	HIGH VCP	CV Very High Plasticity

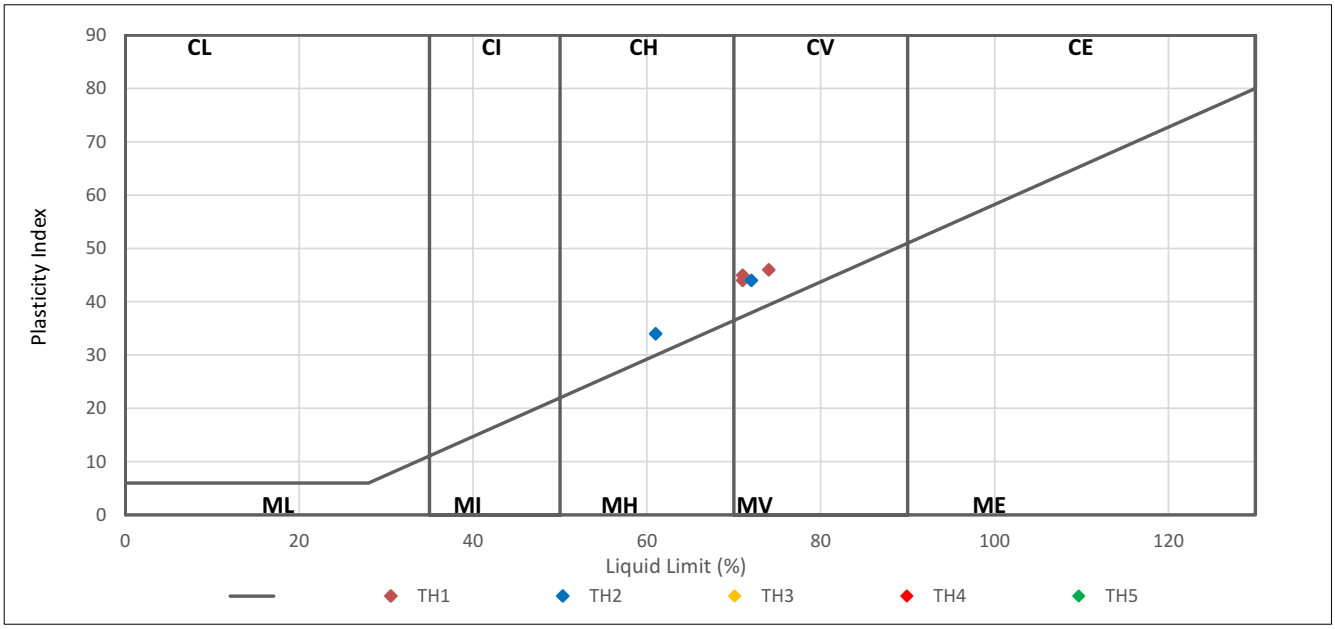
Modified Plasticity Index (PI) <10	: Non Classified
Modified PI = 10 to <20	: Low volume change potential (LOW VCP)
Modified PI = 20 to <40	: Medium volume change potential (Med VCP)
Modified PI = 40 or greater	: High volume change potential (HIGH VCP)

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"

Test Operator
Jason Smith



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