

Site Investigation Report

Auger Ref:

144332.1.USI



Job Information

Client	Crawford & Co
Client ref	SU2205572
Visit date	22/02/2023
Report date	11/04/2023

Job Summary

- ✓ CCTV survey undertaken. [Read more.](#)
- ! Drainage repairs required. [Read more.](#)
- ✓ 2 trial holes undertaken. [Read more.](#)
- ! Trial Hole depth not reached. [Read more.](#)
- ! Requested root samples not taken. [Read more.](#)



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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

Within TH1 we revealed the footing but we were unable to reach the required depth in TH1 because we encountered mass gravel which our engineer could not auger through at 1.5m. The Trial Hole was excavated in the proposed location. We took soil samples but we were unable to collect root samples from TH1 because no roots were present during the trial hole, hence no samples were retrieved. These measurements are shown in Trial Hole Log 1 below.

Within TH2 we revealed the footing but we were unable to reach the required depth in TH2 because we encountered mass gravel which our engineer could not auger through at 1.4m. The Trial Hole was excavated in the proposed location. We took soil and root samples. These measurements are shown in Trial Hole Log 2 below.

A remote bore hole was carried out near by where a depth of 1.3m was reached.

Visual Inspection

We carried out a water mains listening test whilst on site which revealed that there was no evidence of a leak on the incoming water supply serving the property.

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 SVP

Our survey of line 1 revealed an open joint at 0.7m

Line 2 - 4

Our survey of line 2 - 4 revealed no significant defects to the pipework could be allowing an escape of water.

The above mentioned defects to the below ground drainage system have been caused by ground movement.

Recommendations

Refer Back to Client

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

There is a cracked above ground pipe that is expelling into the WG. This is leading to an escape of water down the side of the property wall. We would recommend that a plumber is appointed to resolve this issue. These works will need to be carried out on a private basis

Line 1

Sonde, excavate and replace 1m of 150mm pipework approximately 1m upstream of MH1 at a depth no greater than 1.0m through concrete.

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.

The relining of a severe joint displacement is normally unadvised due to the potential for complications in the future.

Photographs

Trial Hole 1

Fig 1.1: Trial Hole 1 Location



Fig 1.2: Trial Hole 1 Footing



Fig 1.3: TH1



Trial Hole 2

Fig 2.1: Trial Hole 2 Location

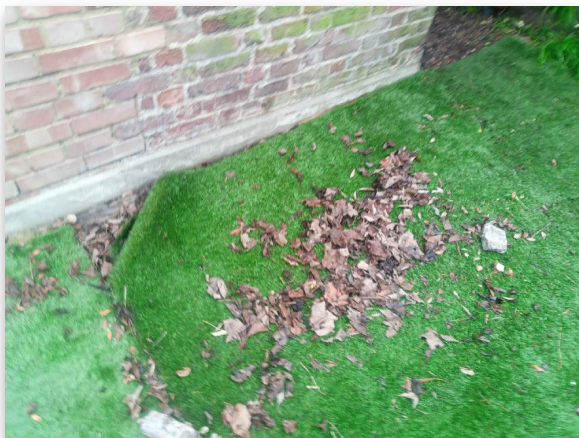


Fig 2.2: Trial Hole 2 Footing

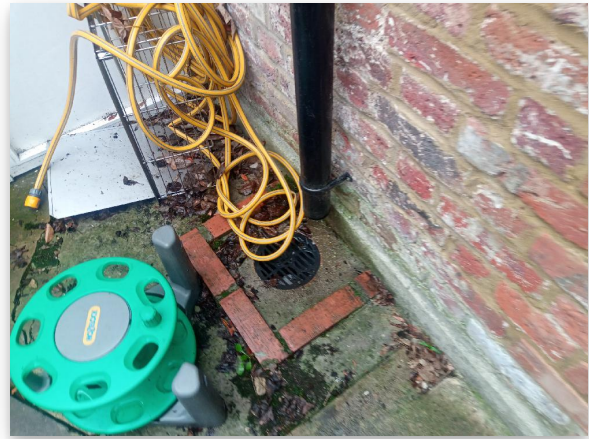


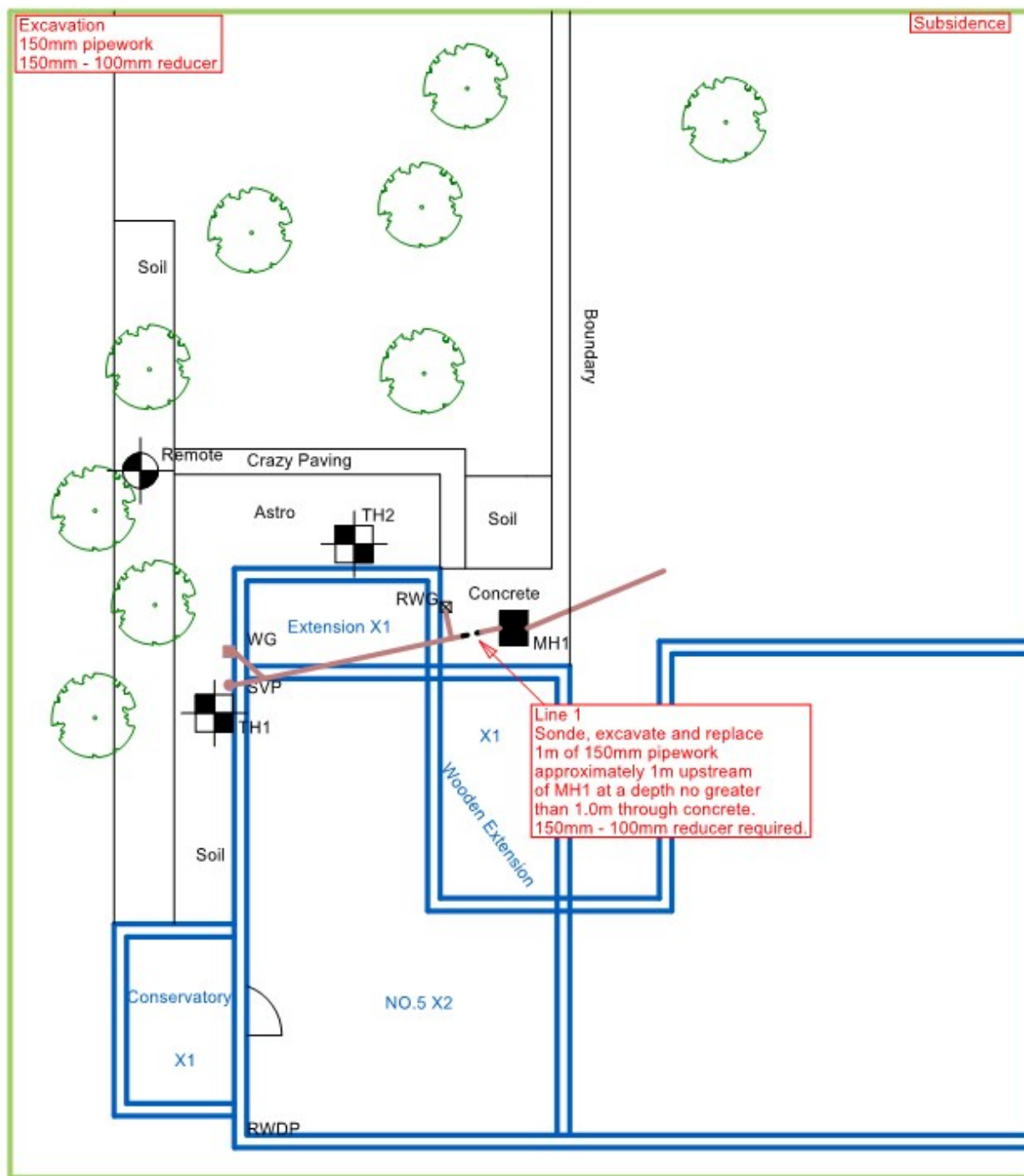
Site Photos

Fig 4.1: WG1



Fig 4.2: RWG

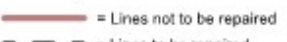
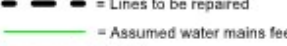
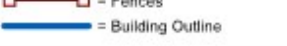




FRONT OF PROPERTY

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

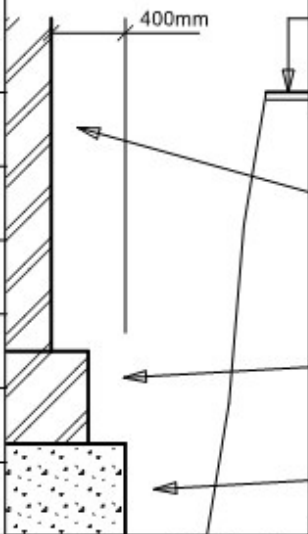
	= Manhole (MH)		= Blockage / Collapse		= Lines not to be repaired		= Trial hole		= Shrubs / Bush
	= Inspection Chamber (IC)		= Soil Vent Pipe (SVP) / WC		= Lines to be repaired		= Borehole		= Hedge
	= Inspection Point (IP)		= Combined Waste Gully (CWG) / Foul Waste Gully (FWG)		= Assumed water mains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



Trial Hole Log No.1

Location: Rear left side of house

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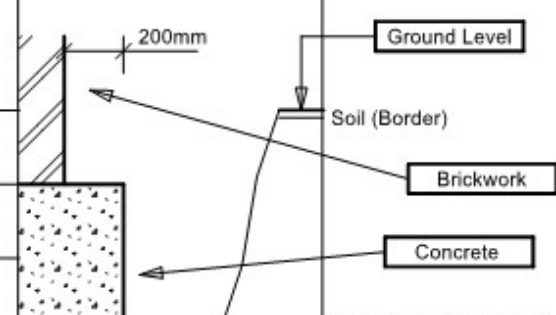
Depth (m)	Symbolic Log	Strata Description	Insitu Tests		Soil Sample	Root Sample
			SV(19)			
0.0		Ground Level Soil (Border) Brickwork Brickwork Concrete Moist stiff Brown fine to medium gravelly silty CLAY				
0.5			62kpa		Soil @ 0.6m	
1.0			84kpa		Soil @ 1.1m	
1.5		TRIAL HOLE TERMINATED				



Trial Hole Log No.2

Location: Rear middle of extension

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Depth (m)	Symbolic Log	Strata Description	Insitu Tests		Soil Sample	Root Sample
			SV(19)			
0.0		Ground Level Soil (Border) Brickwork Concrete Moist stiff Brown fine to medium gravelly silty CLAY	58kpa		Soil @ 0.3m	Root @ 0.3m
0.5			68kpa		Soil @ 0.8m	
1.0			70kpa		Soil @ 1.3m	
1.5		TRIAL HOLE TERMINATED				

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

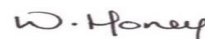
Policy Holder	
GSTL Job Reference	64854
SI Date	22/02/2023
Issue Date	22/02/2023
Report Date	09/03/2023
Auger Reference	144332.1.3.RSS
Insurance Company	Axa Commerical
LA Claim Reference	SU2205572
LA Co. Reference	Crawford & Co

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

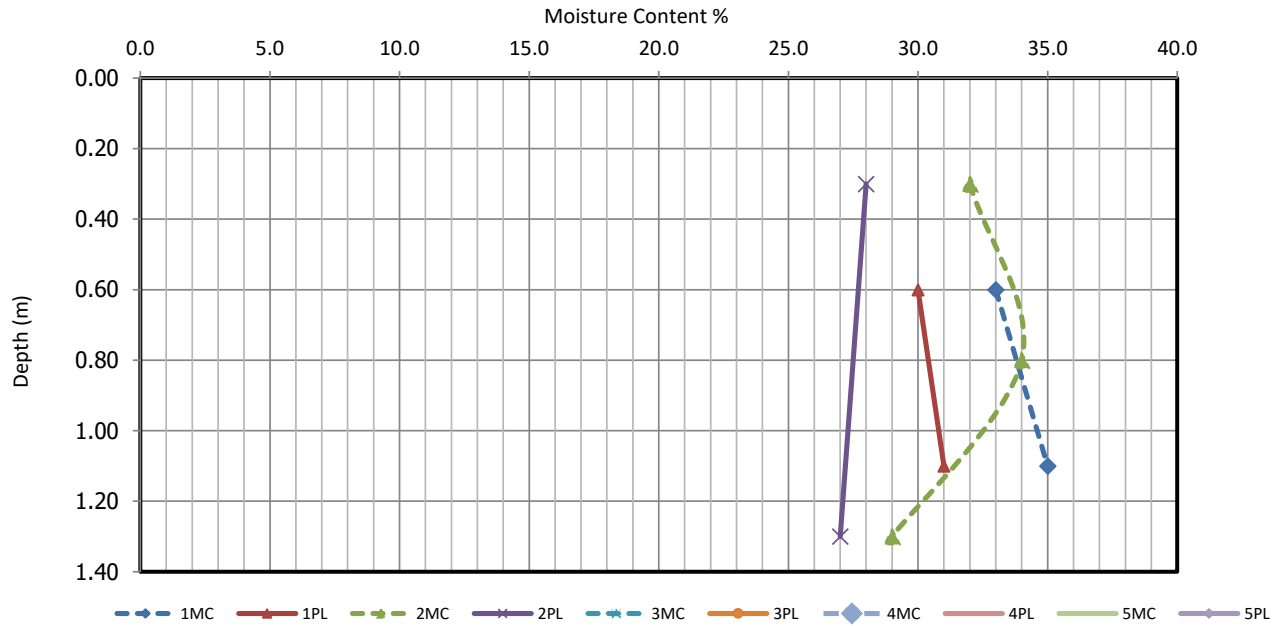
09/03/2023

Wayne Honey

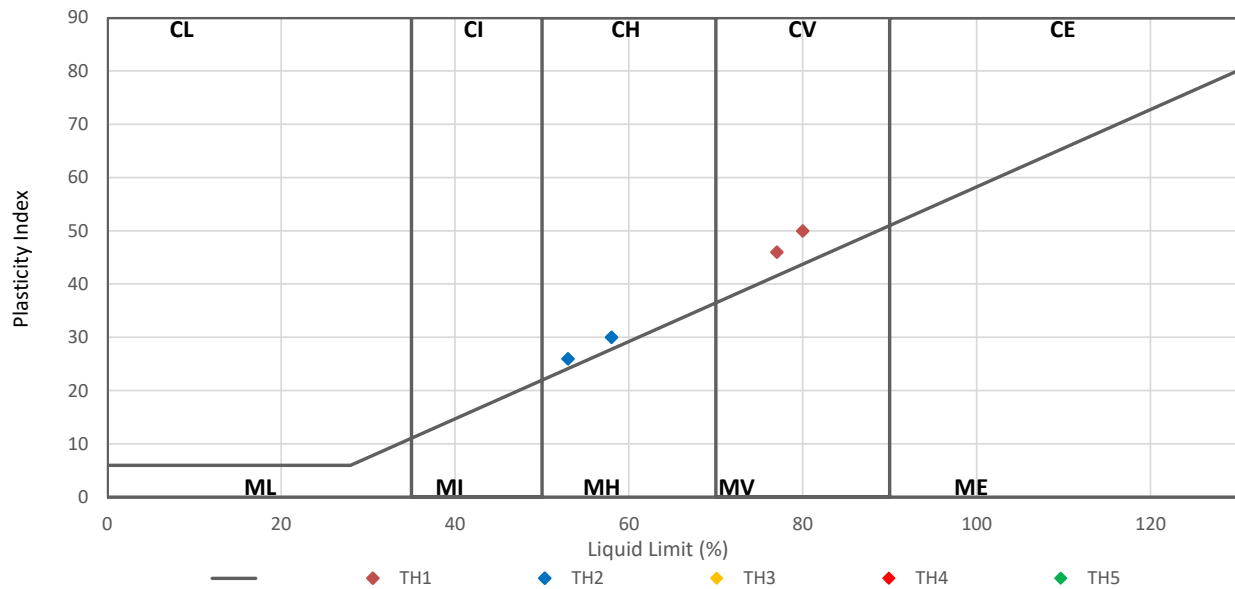




Test Operator
Jason Smith



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



Root identification
Vegetation surveys
Tree/Building investigations
Plant taxonomy

Richardson's Botanical Identifications

Auger Solutions

Auger House

Cross Lane

WALLASEY

Wirral CH45 8RH

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

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Your ref: **144332-1-2**

Our ref: **86/0912**

06/04/2023

Dear Sirs

Root ID

The samples you sent in relation to the above on 22/02/2023 have been examined. Their structures were referable as follows:

TH2, 0.3m		
4 no.	Examined root: PRUNUS (Cherries, Plums and Damsons, Almonds, Peaches and Apricots, Blackthorn/Sloe, as well as the shrubby Cherry-laurel and Portugal-laurel).	Dead*.

Click here for more information: [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.

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