

Subsidence Overview Report

Date: 13th October 2023

Client: Crawfords

Client Claim Reference: SU2302421

Catalyst Claim Number: 122979

Policyholder Name & Risk Address:

Mrs Audrey Osborne
1 Kent Terrace
Church Street
Rochester
Kent
ME3 7LF

Description of Risk Address

End Terrace.

Description of Drainage System

No underground drainage within zone of influence.

Circumstances

We were asked to perform investigations in relation to reported subsidence.

Works Completed

We attended site and completed the following investigations, the locations of the trial pits / boreholes are detailed on the site plan.

- Excavated 1 no. trial pit and borehole.
- Completed Shear Vane testing.
- Completed Moisture Content and Atterberg testing.
- Tested root samples.
- Performed CCTV survey to accessible drainage.

Registered address

Catalyst Services UK Ltd,

Gatehead Business Park,

Delph New Road, Oldham. OL3 5DE

Registered in England and Wales No: 09166356

Catalyst Services UK Ltd is authorised and regulated by the Financial Conduct Authority. (942818)

Drains | Water Supply Pipe | Septic Tanks
Subsidence | Leak Detection | Home Emergency

0800 870 8080 | info@catalystservicesuk.com
www.catalystservicesuk.com

Further Action

RWP1 & 2 both discharge to surface within the zone of influence. There is insufficient space to install a soakaway. We therefore recommend the insurers diverts them, above ground, away from the zone of influence or installs a water butt.

Reserves

Total Investigation Cost: £959.00 + VAT

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Drains | Water Supply Pipe | Septic Tanks
Subsidence | Leak Detection | Home Emergency

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Factual Report



Site | 1 Kent Terrace
Church Street
Rochester
Kent
ME3 7LF
Ref: 122979
Ms Audrey Osborne

Client | Catalyst Services UK

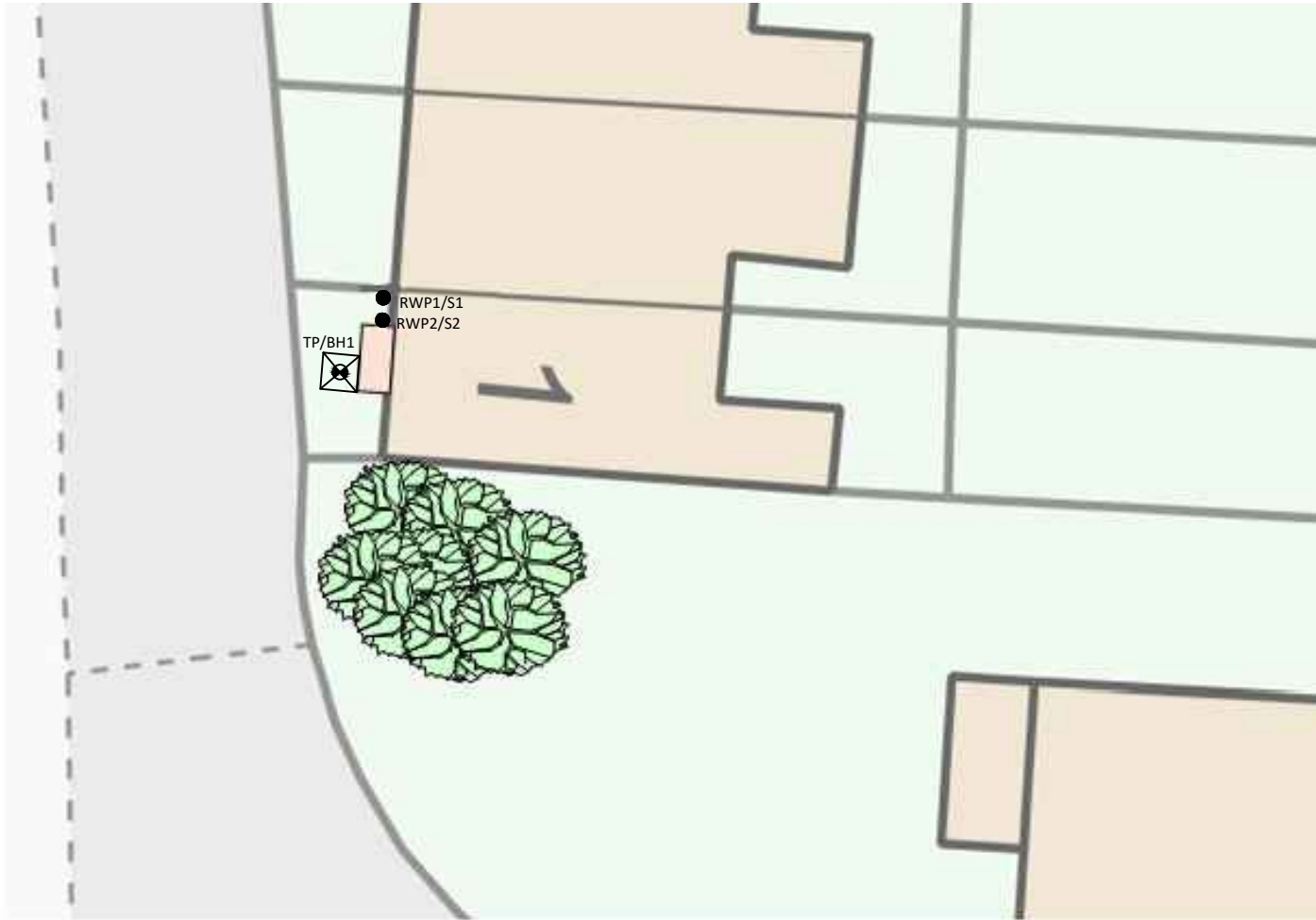
Date | 08/09/23

Our Ref | 13342

SITE INVESTIGATION AND DRAINAGE REPORT CONTENT

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

	Site:			Client:		Identification:
	1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF			Catalyst Services UK		
	Contract Number:	Date:	Logged By:	Checked by:	Drawn by:	
Sketch Site Plan	13342	08.09.23	CWE	MCE	DJE	Sheet 1 of 1
	Easting:	Northing:	Ground Level:	Plan:	Weather:	Scale:
	ND	ND	ND	ND	Clear	NTS



Remarks: On site tree identification for guidance only. Not authenticated.
All dimension in metres unless stated otherwise.

ND

No Data

NTS

Not to Scale

TP/BH

Trial Pit & Borehole

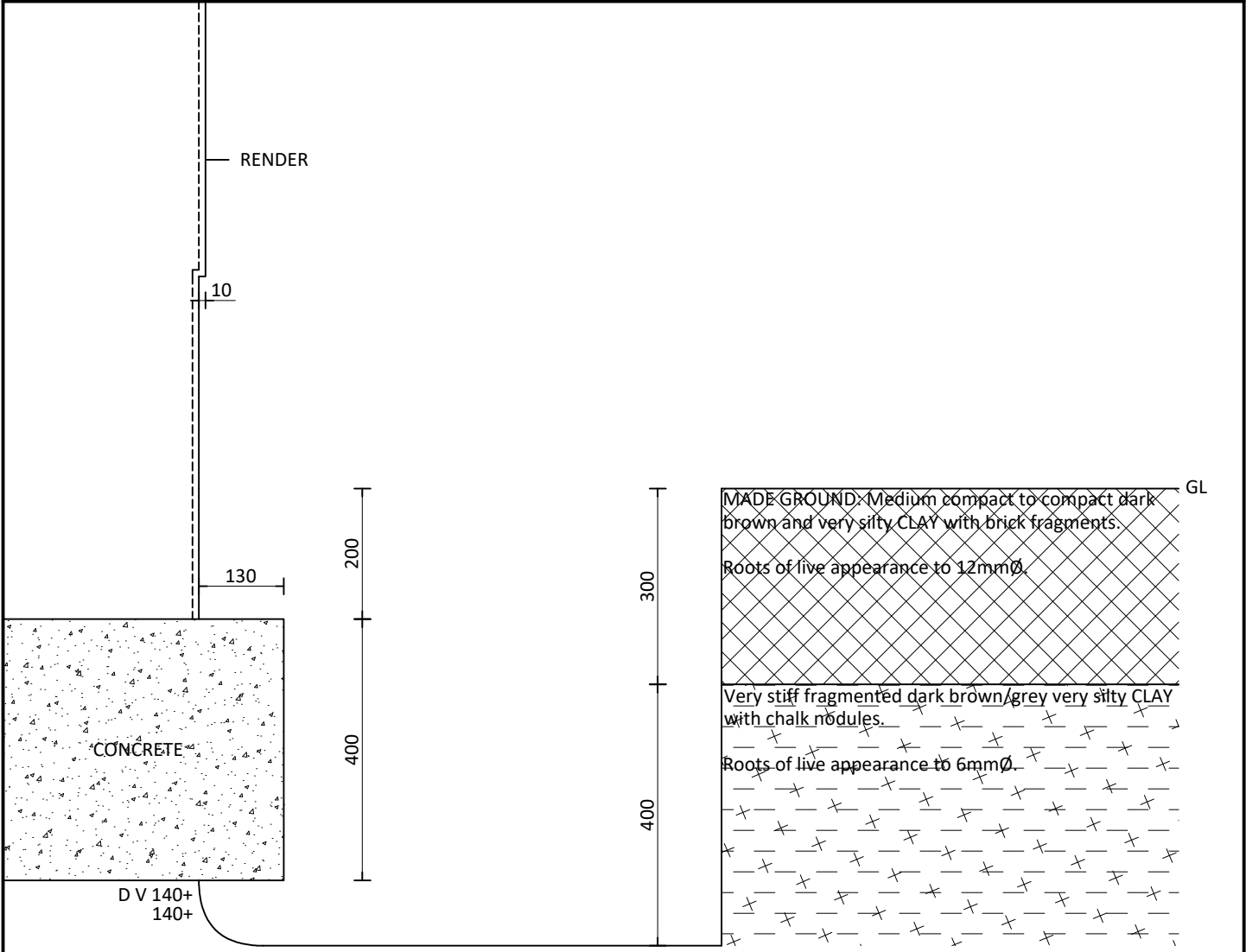
RWP

Rainwater Pipe

S

Drainage Survey Number

	Site:			Client:		Identification
	1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF			Catalyst Services UK		
	Contract Number:	Date:	Logged By:	Checked by:	Drawn by:	
	13342	08.09.23	CWE	MCE	DJE	Sheet 1 of 1
Trial Pit/Borehole Log	Easting:	Northing:	Ground Level:	Excavation Method:	Weather:	Scale:
	ND	ND	ND	Hand Tools	Clear	NTS



RENDER

10

130

200

400

300

400

CONCRETE

D V 140+ 140+

MADE GROUND: Medium compact to compact dark brown and very silty CLAY with brick fragments.
Roots of live appearance to 12mmØ.

Very stiff fragmented dark brown/grey very silty CLAY with chalk nodules.
Roots of live appearance to 6mmØ.

GL

TRIAL PIT ENDS AT 700mm
FOR STRATA BELOW 700mm SEE BOREHOLE 1 LOG

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

 Catalyst			Site:				Client:			Identification														
			1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF				Catalyst Services UK																	
			Contract Number:		Date:		Logged By:		Checked by:		Drawn by:													
			13342		08.09.23		CWE		MCE		DJE													
Borehole Log			Easting:		Northing:		Ground Level:		Plant Used:		Weather:		Scale:											
			ND		ND		ND		Hand Auger		Clear		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	D	V 140+ 140+	GL			AS TP1					Roots of live appearance to 2mmØ to 1.20m.													
			0.70																					
1.00				0.70	0.50		Very stiff dark brown/grey very silty CLAY with chalk nodules.																	
				1.20																				
						BOREHOLE ENDS AT 1.20m TOO HARD/DENSE TO HAND AUGER																		
Remarks:															Key:									
Borehole 'dry' on completion.															ND No Data					V Pilcon Vane (KPa)				
Borehole 'open' on completion.															NTS Not to Scale									
															GL Ground Level									
															D Small Disturbed Sample									

Photograph 1 - Trial Pit 1



29th September 2023

JCA Ref: 21311/TT

To whom it may concern,

Re: 1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF.

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.

We hope that this report meets your requirements.

Assuring you of our best attention at all times.

Yours sincerely,

T. Thwaites

Toby Thwaites BSc (Hons) HND (Arboriculture), MArborA.

Tree Root Identification Report

at: 1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF.

JCA Ref: 21311/TT

29th September 2023

1. Microscopic Analysis

Trial Pit/ Borehole	Sample Depth (mm)	Family	Genus	Diameter (mm)	Starch Test
TP1	U/S Foundation 700	<i>Cupressaceae</i> (x6)	-	<1 to 1.5	Positive
BH1	700 – 1200	<i>Cupressaceae</i> (x2)	-	<1	Positive

Members of the *Cupressaceae* Family include for example; Hinoki Cypress and Lawson Cypress (*Chamaecyparis spp.*), Leyland Cypress (*X Cuprocyparis leylandii*), Monterey Cypress, Italian Cypress, Mexican Cypress, Smooth Arizona Cypress and Rough-barked Arizona Cypress (*Cupressus spp.*), Junipers and Pencil Cedar (*Juniperus spp.*), Thuja (*Thuja spp.*), the generic hybrid *X Cupressocyparis*, Swamp-cypress (*Taxodium distichum*), Dawn Redwood (*Metasequoia glyptostroboides*), Coast Redwood (*Sequoia sempervirens*), Japanese Red Cedar (*Cryptomeria japonica*) and Wellingtonia (*Sequoiadendron giganteum*).

2. MICROSCOPIC ANALYSIS

- 2.1 Microscopic examination generally enables the genus of roots recovered during the ground investigation to be established. However, it rarely identifies individuals to species level.
- 2.2 Certain species, for instance Willows and Poplars, are indistinguishable by these methods and identification can only be made at family level.
- 2.3 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.
- 2.4 To establish whether the root is alive, iodine is used to test for starch, which is stored in some cells of living tree roots. Starch is broken down by micro-organisms upon the death of a root in the soil.

3. METHOD

- 3.1 Freshly collected sample material is washed to remove any soil from the root surface.
- 3.2 Root samples are then boiled in water to prepare them for sectioning.
- 3.3 Sectioning is carried out using a Reichert OME sliding microtome or a surgical blade to produce transverse and tangential longitudinal root sections of 15µm and 30µm (micrometres) in thickness.
- 3.4 The sliced root sample is then placed on a glass microscope slide and stained with Chlor-zinc-iodine (Schulze's solution).
- 3.5 The slide is then observed under a high-power microscope and compared to known root samples.

Laboratory Report



Site

1 Kent Terrace, Church Street, Rochester, Kent, ME3
7LF

Client

Catalyst Services UK

Date

21-Sep-23

Our Ref

13342

Lab Ref

13342



Content Summary

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

Lab Reference : 13342

Client Reference : 13342

For the attention of : Catalyst Services UK

This report comprises of the following : 1 Cover Page

1 Inside Cover/Contents Page

1 Pages of Results

1 Moisture/Shear Strength Chart

1 Plasticity Chart

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 Catalyst Services UK

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

BS 1377 : 1990



Date Received : 14/09/2023
Date Testing Started : 14/09/2023
Date Testing Completed : 21/09/2023

[illegible]

Notes :-

[12] BS 1377 : Part 3 : 1990, Test No 5.6

[13] $\text{SO}_3 = 1.2 \times \text{SO}_3$

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

Note that if the SO_3 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
	U/S - Underside Foundation

Comments :-

Technician :- MB

Checked & Authorised By:- Martin Edwards

Date Checked :- 22/09/2023

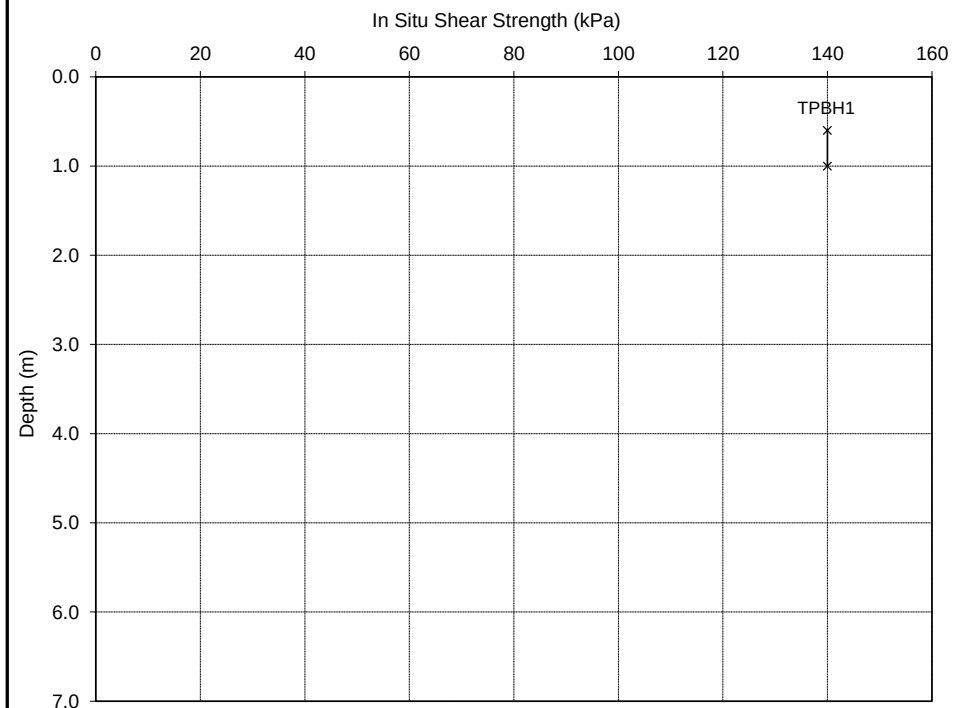
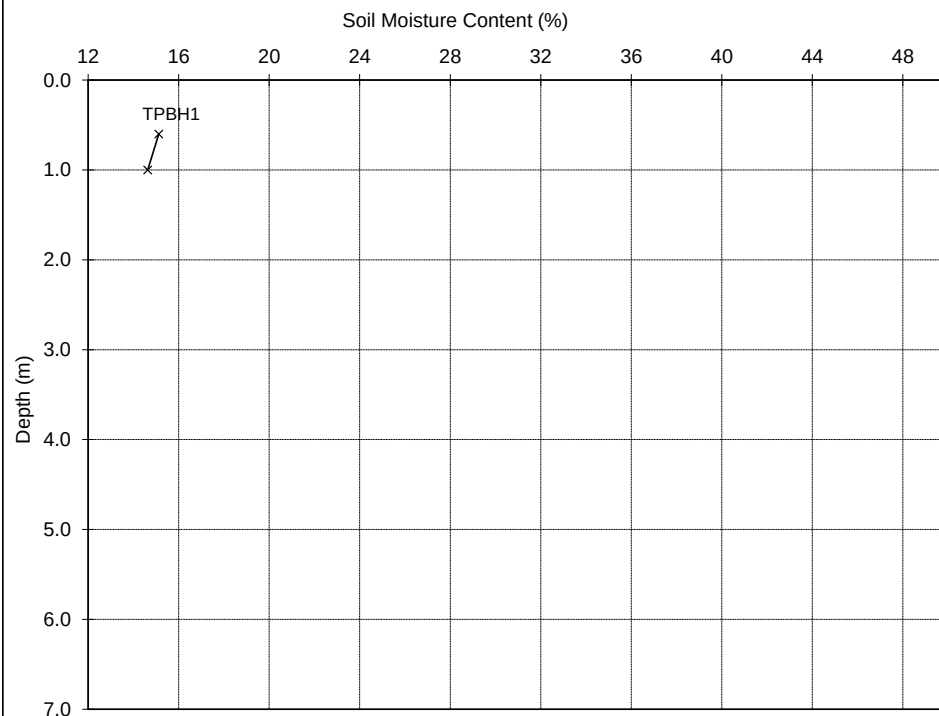
Laboratory Testing Results

Moisture Content/Shear Strength Profile



Job Number : 13342
Client : Catalyst Services UK
Client Reference : 13342
Site Name : 1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF

Date Received : 14/09/2023
Date Testing Started : 14/09/2023
Date Testing Completed : 21/09/2023



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 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

Date: 22/09/2023

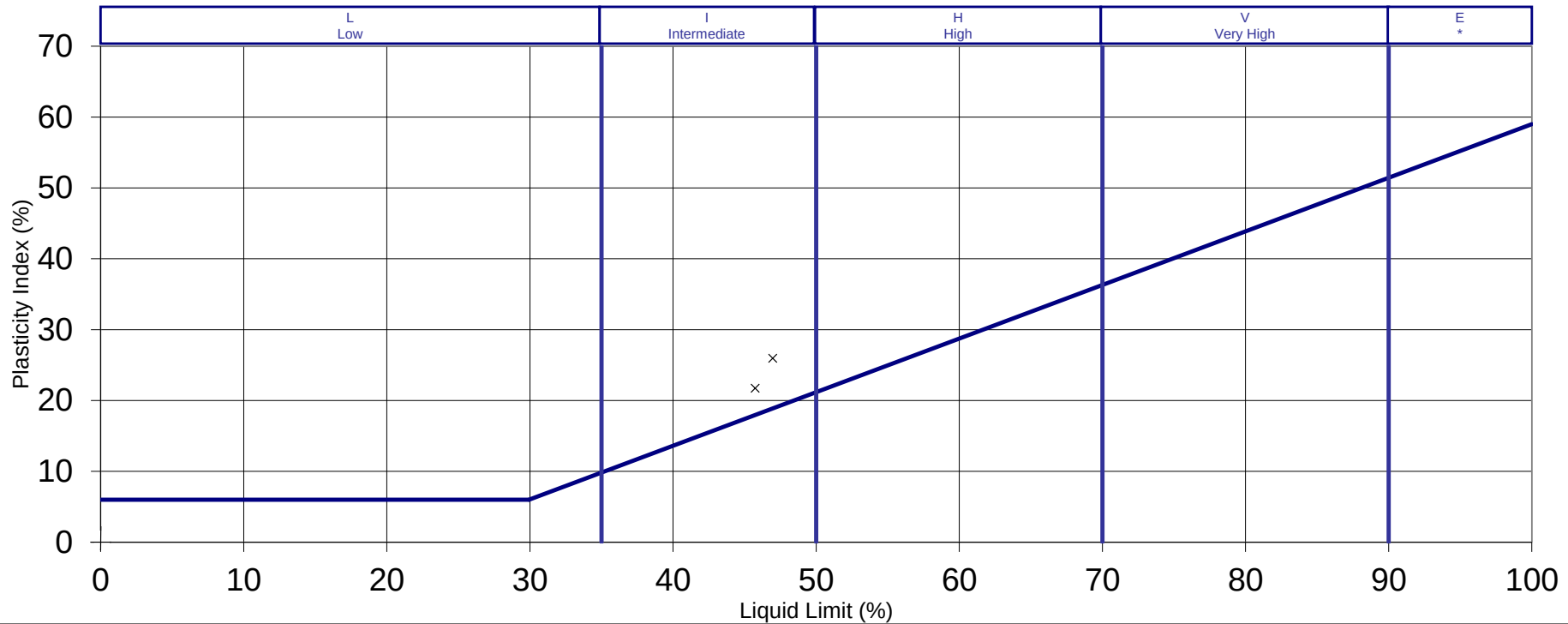
Laboratory Testing Results

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



Job Number : 13342
Client : Catalyst Services UK
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Date Received : 14/09/2023
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Date Testing Completed : 21/09/2023



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

Comments :-

Checked & Authorised By:-  Martin Edwards

Date: 22/09/2023



This report is personal to the client, confidential and non assignable. It is issued with no admission of liability to any third party.

This report shall not be reproduced, except in full, without the written approval.

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.

Drainage Report



Site	1 Kent Terrace, Church Street Rochester Kent ME3 7LF Ref: 122979 Mrs Audrey Osborne
Client	Catalyst Services UK
Date	08.09.23

REPORT CONTENTS

- 1.0** Drainage investigation summary
- 2.0** Drainage layout plan
- 3.0** CCTV survey report and recommendations
- 4.0** Detail and condition summary

1.0 DRAINAGE INVESTIGATION SUMMARY

A CCTV survey was instructed to establish the structural and operational condition of the drainage system, as part of a subsidence investigation.

The fine detail of this CCTV survey is given together with a summary of the findings and relevant recommendations where appropriate (recommendations based solely on *visual* condition of pipework). The following CCTV survey was limited to what was instructed and accessible on site.

SUMMARY OF CCTV SURVEY

CCTV Survey No:	Section of drainage	Duty	Pipe diameter (mm)	Material	Invert depth (m)	Structural Condition Grade	Serviceable? Y/N	Repair Item Y/N
1	RWP1 U S U1	Surface	ND	ND	ND	TBC	N	Y
2	RWP2 D S U2	Surface	ND	ND	ND	TBC	N	Y

A	Structurally sound with no leakage evident. Slight cracks/defects permitted.
B	Cracks and/or fractures observed but pipe provides sufficient arching support. Some leakage may be evident.
C	Structurally unsound with insufficient arching support. Total collapse/blockage likely in the future.

A drain is considered to be serviceable if it is functioning correctly (i.e. carrying away wastewater) at the time of the site inspection and it is judged that it will continue to function correctly for the foreseeable future.

	<i>Abandoned</i>		<i>High Priority</i>		<i>Medium Priority</i>		<i>Low Priority</i>
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2.0 DRAINAGE LAYOUT PLAN

	Site:		Client:		Identification:	
	1 Kent Terrace, Church Street, Rochester, Kent, ME3 7LF		Catalyst Services UK		SP	
	Contract Number:	Date:	Logged By:	Checked by:		Drawn by:
	13342	08.09.23	CWE	MCE	DJE	Sheet 1 of 1
Sketch Site Plan	Easting:	Northing:	Ground Level:	Plan:	Weather:	Scale:
	ND	ND	ND	ND	Clear	NTS



Remarks: On site tree identification for guidance only. Not authenticated. All dimension in metres unless stated otherwise.	Key: ND No Data NTS Not to Scale TP/SH Total PIP & Borehole RWP Rainwater Pipe S Downpipe   
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3.0 CCTV SURVEY REPORT AND RECOMMENDATIONS

SURVEY 1:	RWP1 DOWNSTREAM U1: SURFACE		
Meterage	Observations and comments		
	Survey abandoned (access)		
Invert Depth:	NA	Structural condition and serviceability:	TBC

SURVEY 2:	RWP2 DOWNSTREAM U2: SURFACE		
Meterage	Observations and comments		
	Survey abandoned (access)		
Invert Depth:	NA	Structural condition and serviceability:	TBC

4.0 DETAIL AND CONDITION SUMMARY

Key: m Metres, NA Not Applicable, ND No Data, RWP Rainwater pipe



RWP1

Invert depth: NA

Construction: ND



RWP2

Invert depth: NA

Construction: ND

End of Survey

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.