

## Site Investigation Report

WHC reference [REDACTED]

### Job information

Client: Crawford & Company

Client reference: [REDACTED]

Visit date: 24<sup>th</sup> October 2023

Report date: 30<sup>th</sup> November 2023

## Job Summary



Address: 49 & 49a Gloucester Crescent, London, NW1 7EG

### Services Utilised:



Trial Hole  
Actioned: Yes  
Number: 1



Drainage repairs  
Actioned: No



Borehole  
Actioned: Yes  
Number: 1



Root samples taken  
Actioned: Yes



Dynamic or Mackintosh probe  
Actioned: No  
Number: 0



Soil samples taken  
Actioned: Yes



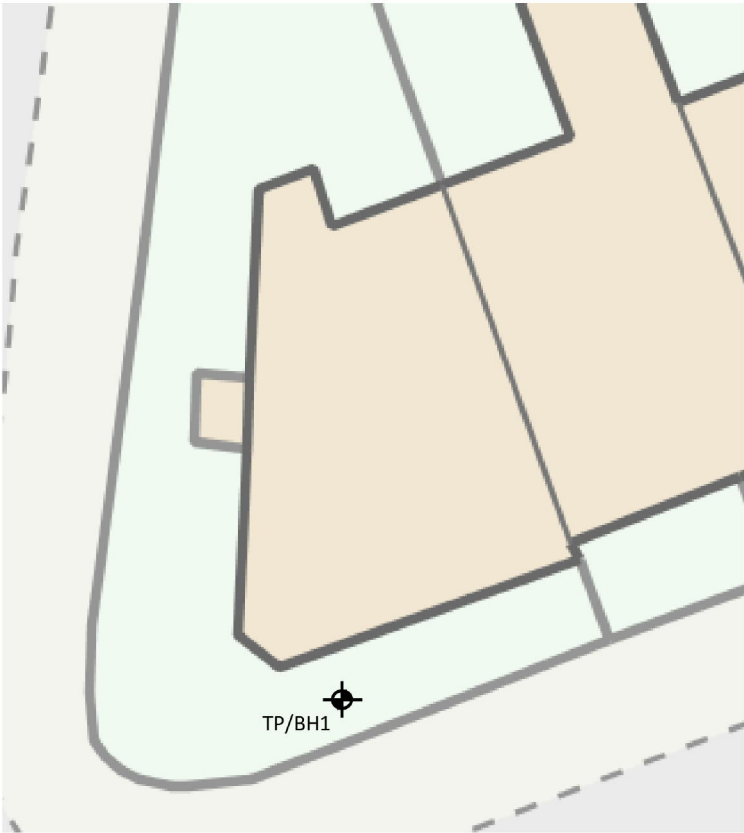
CCTV survey  
Actioned: Yes


















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Plans

Site Plan:



Key

	Datum Point		Combined Drains		Foul Pipe
	Dynamic Probe		Foul Drains		Storm Pipe
	Trial Pit		Storm Drains		Foul Gully
	Borehole		Unsurveyed Drains		Storm Gully
	Trial pit/BH		Property Boundary		Area of Damage

## Job Information

### Job Overview:

#### Brief

William Hunt Consulting were commissioned by Crawford & Company to undertake a site investigation within the area of concern, located at the front elevation of the property. Site Investigations to consist of 1No. Borehole together with 1No. Trial Pit alongside Moisture contents and Atterberg limit laboratory testing, Root identification and a CCTV Drainage Layout.

### Findings:

#### Borehole Findings

Borehole Findings can be found in Appendix A, where in borehole 1, Concrete was found present from ground level to 0.15m below ground level, followed by Soft to Firm Clay to a depth of 0.31mbgl. Firm dark brown Clay was then recorded to a depth of 1.31mbgl, becoming light brown at 0.81m. Below this, light brown/grey firm Clay was then encountered to a depth of 1.81m below ground level, followed by stiff to very stiff light brown Clay to 2.31mbgl. Very stiff dark brown Clay was found to be present to a depth of 3.31m below ground level, at which point the borehole was terminated. Borehole did not encounter groundwater.

#### Root Identification

Root Identification Results can be found in Appendix B, where in borehole 1, multiple TILIA (Lime) roots were found at depths 0.65m – 0.80m and 1.00m – 1.20m. Further roots were found at 0.65m – 0.80m and 1.00m – 1.20m, being identified as either the subfamily POMOIDEAE or PRUNUS.

#### Trial Pit Records

Trial Pit Details can be found in Appendix C where in trial pit 1, no foundation or projection were found to be present, with the retaining wall extending 0.31m below ground level.

#### Soil Sample Testing

Laboratory Testing Results can be found in Appendix D.

#### CCTV Drainage Layout

CCTV Drainage Layout can be found in Appendix E.

## Photographs

Images:

**Photo 1 – Area of Works**



**Photo 2 – Trial Pit 1**



**Photo 3 – Trial Pit 1**



**Photo 4 – BH1 Cores (0.00m – 1.50m)**

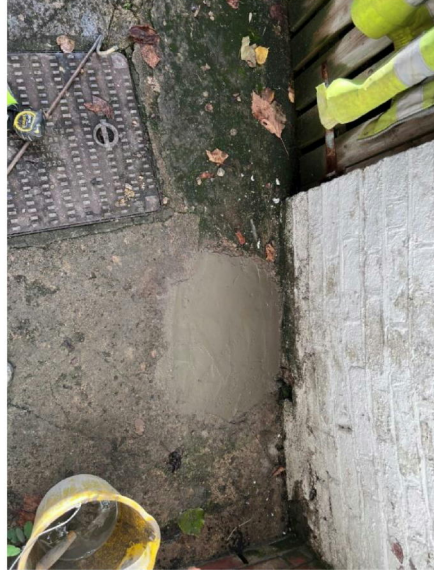




**Photo 5 – BH1 Cores (1.50m – 3.00m)**



**Photo 6 – TP/BH1 Reinstatement**



**Photo 7 – Manhole 1**



## Appendices

### Appendix A – Borehole Logs

WILLIAM HUNT CONSULTING		Hand Auger Log									
Project Name: 49 & 49a Gloucester Crescent				Client: Crawford & Company				Date: 24/10/2023			
Location: 49 & 49a Gloucester Crescent, London, NW1 7EG				Contractor: WHC				Drilling Equipment: Hand Auger			
				Crew Name: ABW & JK							
Borehole Number BH1		Hole Type HA				Logged By ABW		Scale 1:18		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description				
		Depth (m)	Type	Results							
							Concrete				
					0.15		Clay				
					0.31		Very firm dark brown Clay				
		0.50	D				Becoming light brown				
					1.00			1			
		1.00	D								
					1.31		Light brown/grey firm Clay				
		1.50	D								
					1.81		Very stiff light brown Clay				
		2.00	D					2			
					2.31		Very stiff dark brown Clay				
		2.50	D								
					3.00			3			
		3.00	D								
					3.31		End of Borehole at 3.310m				
Hole Diameter		Casing Diameter		Chiselling		Inclination and Orientation					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base		
Remarks											
Borehole terminated at 3.31m. Borehole did not encounter groundwater, with roots being found at 0.65m-0.80m and 1.00m-1.20m											

## Appendix B – Root Identification Results

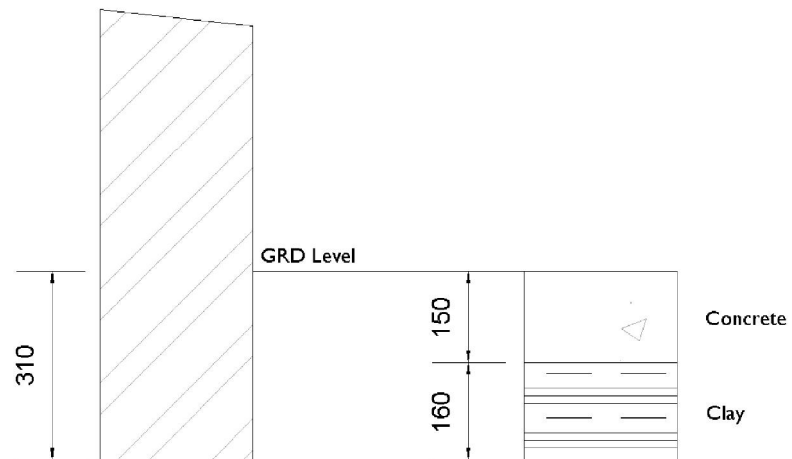
### 49 & 49A Gloucester Crescent NW1 7EG

The samples you sent in relation to the above on 27/10/2023 have been examined. Their structures were referable as follows:



<b>BH1, 650-800mm</b>	
2 no.	Examined root: TILIA (Lime). A POOR sample.
2 no.	Examined root: could be the family Rosaceae, EITHER the subfamily POMOIDEAE (a group of closely related trees: Malus (Apple), Pyrus (Pear), Crataegus (Hawthorn), Sorbus (Rowan, Whitebeam, Service tree), Mespilus (Medlar), and some shrubs (Pyracantha (Firethorn), Chaenomeles (Japonica), Cydonia (Quince), Amelanchier, Cotoneaster)) OR [the related] PRUNUS (Cherries, Plums and Damsons, Almonds, Peaches and Apricots, Blackthorn/Sloe, as well as the shrubby Cherry-laurel and Portugal-laurel). A POOR sample, with NO BARK.
4 no.	All pieces of BARK only - not enough material for identification.
4 no.	Unfortunately all with insufficient cells for identification.
<b>BH1, 1000-1200mm</b>	
3 no.	Examined root: another POOR sample, without any BARK. Referable to TILIA (Lime).
3 no.	Examined root: again POOR in condition, and with NO BARK. Could be family Rosaceae, EITHER the subfamily POMOIDEAE - or - PRUNUS (see lists above).




## Trial Pit I




## Appendix D – Laboratory Testing Results

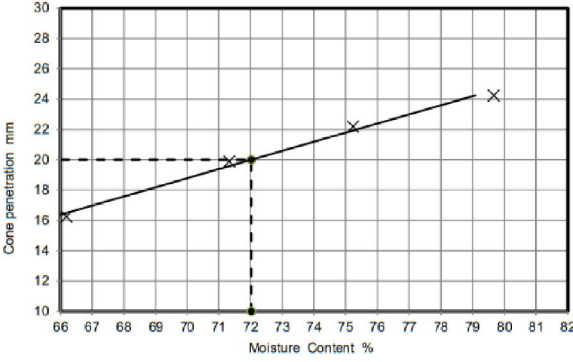
 <b>Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results</b>											
		Project Name					Programme				
		49 & 49a Gloucester Crescent, London NW1 7EG					Samples received 06/11/2023				
		Client					Schedule received 06/11/2023				
		William Hunt Consulting					Project started 07/11/2023				
					Testing Started 18/11/2023						
Hole No.	Sample				Soil Description	NMC %	Passing 425µm %	LL %	PL %	PI %	Remarks
	Ref	Top m	Base m	Type							
BH1	-	0.00	0.50	D	Brown silty CLAY with rare fine gravel	31					
BH1	-	0.50	1.00	D	Orangish brown slightly mottled dark grey slightly gravelly silty CLAY (gravel is fm and sub-angular to rounded)	35	96	72	35	37	
BH1	-	1.00	1.50	D	Brownish grey mottled grey silty CLAY	35					
BH1	-	1.50	2.00	D	Light orangish brown slightly mottled grey silty CLAY	33	100	75	30	45	
BH1	-	2.00	2.50	D	Brownish grey mottled grey silty CLAY with occasional pockets of brown silt / fine sand	28					
BH1	-	2.50	3.00	D	Orangish brown slightly mottled grey silty CLAY with scattered of selenite crystals	32	100	68	29	39	

	<b>Test Methods: BS1377: Part 2: 1990:</b> Natural Moisture Content : clause 3.2 Atterberg Limits: clause 4.3, 4.4 and 5.0 <i>These results only apply to the items tested</i>	<b>Checked and Approved</b>  Initials J.P  Date: 21/11/2023
	NOTE: The report shall not be reproduced except in full without authority of the laboratory	
	2519	

MSF-S-R1

 <b>LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX</b>		Job No.			
		Borehole/Pit No.	BH1		
Site Name	49 & 49a Gloucester Crescent, London NW1 7EG		Sample No.	-	
Project No.		Client	William Hunt Consulting	Depth Top	0.50 m
Soil Description	Orangish brown slightly mottled dark grey slightly gravelly silty CLAY (gravel is fm and sub-angular to rounded)		Depth Base	1.00 m	
			Sample Type	D	
			Samples received	06/11/2023	
			Schedules received	06/11/2023	
			Project Started	07/11/2023	
		Date Tested	18/11/2023		

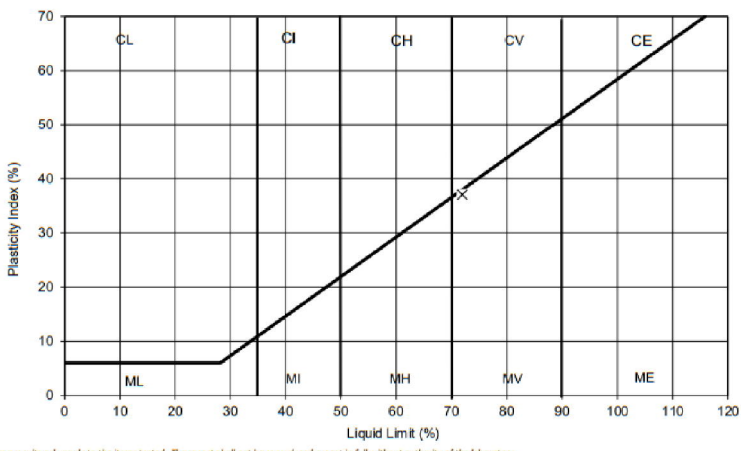


NATURAL MOISTURE CONTENT	35	%
% PASSING 425µm SIEVE	96	%
LIQUID LIMIT	72	%
PLASTIC LIMIT	35	%
PLASTICITY INDEX	37	%


**Remarks**


  

**PLASTICITY INDEX**

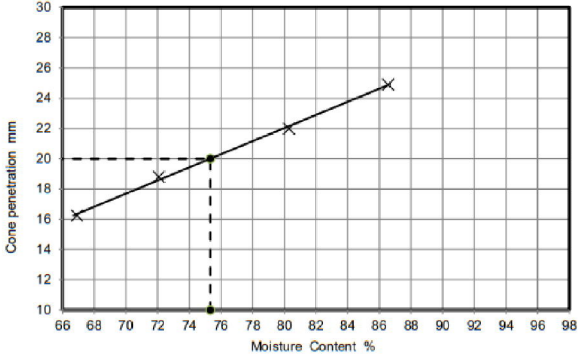


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 <b>UKAS</b> TESTING	<b>TEST METHOD</b> BS1377: Part 2 :Clause 4.3 : 1990 Determination of the liquid limit by the cone penetrometer method BS1377: Part 2 :Clause 5.0 : 1990 Determination of the plastic limit and plasticity index BS1377: Part 2 :Clause 3.2 : 1990 Determination of the moisture content by the oven drying	<b>Checked and Approved</b> Initials: J.P Date: 21/11/2023	
	2519		MSF-5 R2

 <b>LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX</b>		Job No.	
Site Name		Borehole/Pit No.	
49 & 49a Gloucester Crescent, London NW1 7EG		BH1	
Project No.		Sample No.	
Client		-	
William Hunt Consulting		Depth Top	
		1.50 m	
		Depth Base	
		2.00 m	
		Sample Type	
		D	
Soil Description		Samples received	
		06/11/2023	
		Schedules received	
		06/11/2023	
		Project Started	
		07/11/2023	
		Date Tested	
		18/11/2023	

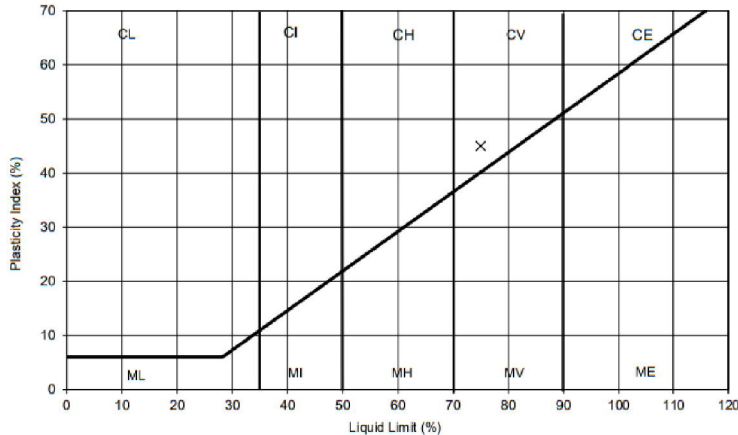


NATURAL MOISTURE CONTENT	33	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	75	%
PLASTIC LIMIT	30	%
PLASTICITY INDEX	45	%

Remarks

**PLASTICITY INDEX**



These results only apply to the items tested. The report shall not be reproduced except in full without authority of the laboratory.

TEST METHOD		Checked and Approved
BS1377: Part 2 :Clause 4.3 : 1990 Determination of the liquid limit by the cone penetrometer method		Initials: J.P Date: 21/11/2023
BS1377: Part 2 :Clause 5.0 : 1990: Determination of the plastic limit and plasticity index		
BS1377: Part 2 :Clause 3.2 : 1990:Determination of the moisture content by the oven drying		
T:		
T:		
2519	A	MSF-5-R2

	<b>LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX</b>		Job No.		
			Borehole/Pit No.	BH1	
Site Name	49 & 49a Gloucester Crescent, London NW1 7EG		Sample No.	-	
Project No.		Client	William Hunt Consulting	Depth Top	2.50 m
Soil Description	Orangish brown slightly mottled grey silty CLAY with scattered of selenite crystals		Depth Base	3.00 m	
			Sample Type	D	
			Samples received	06/11/2023	
			Schedules received	06/11/2023	
			Project Started	07/11/2023	
			Date Tested	18/11/2023	

Moisture Content %

NATURAL MOISTURE CONTENT	32	%
% PASSING 425µm SIEVE	100	%
LIQUID LIMIT	68	%
PLASTIC LIMIT	29	%
PLASTICITY INDEX	39	%

Remarks



  

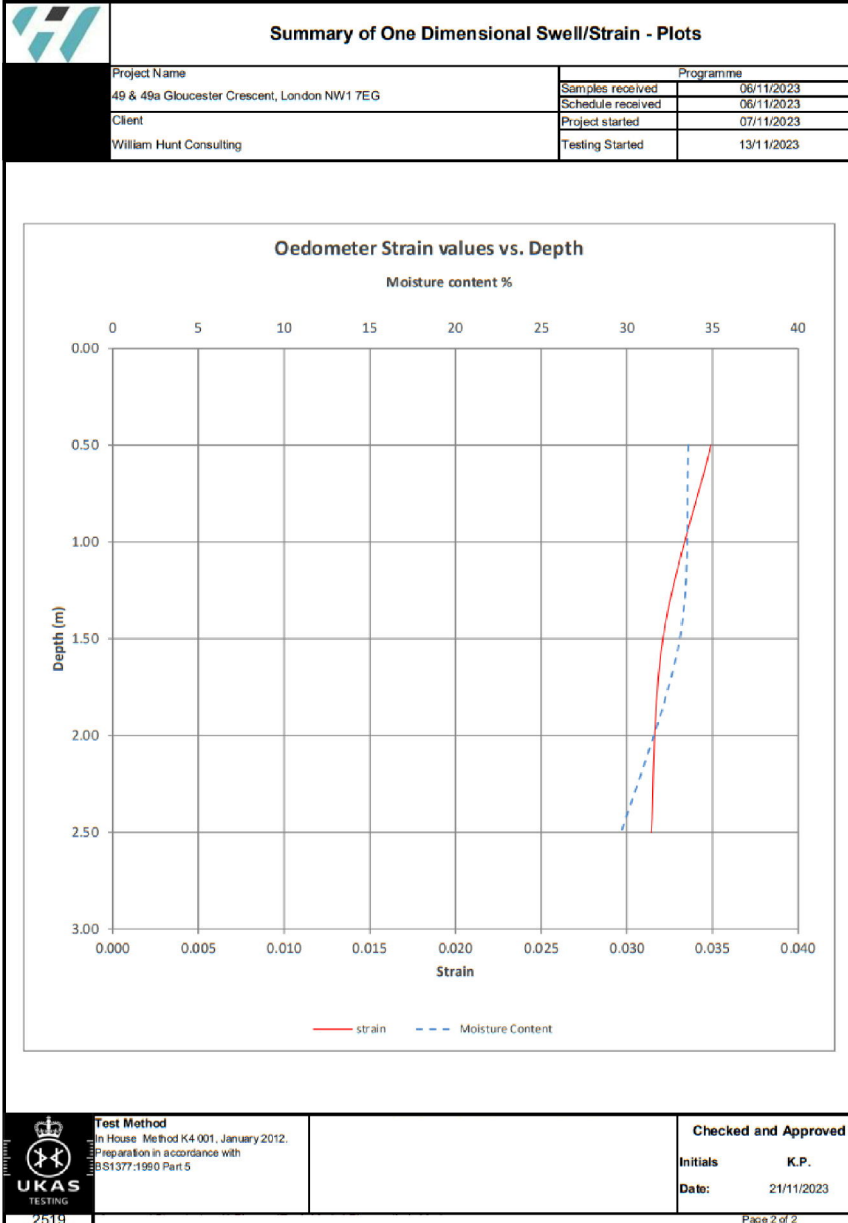
**PLASTICITY INDEX**

Liquid Limit (%)

These results only apply to the items tested. The report shall not be reproduced except in full without authority of the laboratory



		Summary of One-Dimensional Swell/Strain Tests								
		Project Name						Programme		
		49 & 49a Gloucester Crescent, London NW1 7EG						Samples received	06/11/2023	
		Client						Schedule received	06/11/2023	
		William Hunt Consulting						Project started	07/11/2023	
						Testing Started	13/11/2023			
<b>Notes:</b> Heave potential (Dd) expressed in mm and corrected by 0.1 mm to take account of disturbance during sample preparation Dd is calculated based on the difference in depth between samples. A shrinkage factor of 0.5 has been assumed										
Hole No.	Sample			Soil Description	Strain %	Corrected Dd mm	Moisture Content %	Bulk Density Mg/m <sup>3</sup>	Dry Density Mg/m <sup>3</sup>	Remarks
	Ref	Depth	Type							
BH1	-	0.50	D	Orangish brown slightly mottled dark grey slightly gravelly silty CLAY (gravel is fm and sub-angular to rounded)	0.035	8.63	34	1.94	1.45	
BH1	-	1.50	D	Light orangish brown slightly mottled grey silty CLAY	0.032	15.95	33	1.96	1.47	
BH1	-	2.50	D	Orangish brown slightly mottled grey silty CLAY with scattered of selenite crystals	0.031	15.62	30	2.16	1.66	
Predicted total free surface heave over depth of exploratory position <b>40.20</b> mm										
		<b>Test Method</b> In House Method K4 001, January 2012. Preparation in accordance with BS1377-1990 Part 5. These results only apply to the items tested. The report shall not be reproduced except in full without authority of the laboratory.						<b>Checked and Approved</b> Initials: K.P. Date: 21/11/2023		
Page 1 of 2										



## Appendix E – CCTV Drainage Layout





## Contact us

Need further information?

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