Geotechnical Survey Report

[redacted]

Issue Date: February 2023

Risk Address: 138 Haverstock Hill
London
NW3 2AY

Engineer: Bret Champion

Company: Pyle Consulting

[redacted]

Managing Director:	Martin Rush MSc FGS
Finance Director:	Louise Banks BSc (Hons)
Geotechnical Compliance & Logistics Supervisor:	Perry Martin MCIHT
Laboratory Manager:	Jade McLellan
Senior Geologist:	Scott Parker BSc (Hons) FGS
Assistant Geologist:	Sarah Brand
Geotechnical Assistant:	Bradley Webb

FASTRACK

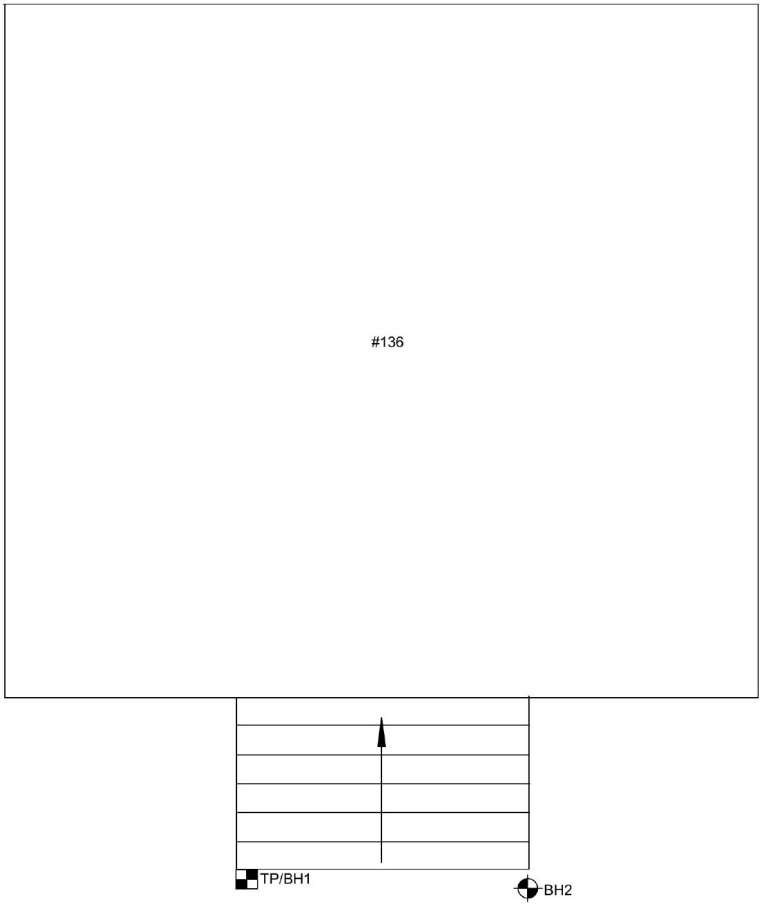
[redacted]

Appendix No: 1

[redacted]

SITE PLAN

Property Address: 138 Haverstock Hill, London, NW3 2AY
Client Claim Ref: [redacted] **Survey date:** 14/02/2023 **Operative:** SE2



Scale:	Drawn by:	Key:
NTS	BW	Trial Pit, Borehole, Manholes, Rain Water Pipe, Soil & Vent Pipe, Surface Water Gully, Foul Water Gully, Shrub, Tree (Conifer), Tree (Deciduous)

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Appendix No: 2

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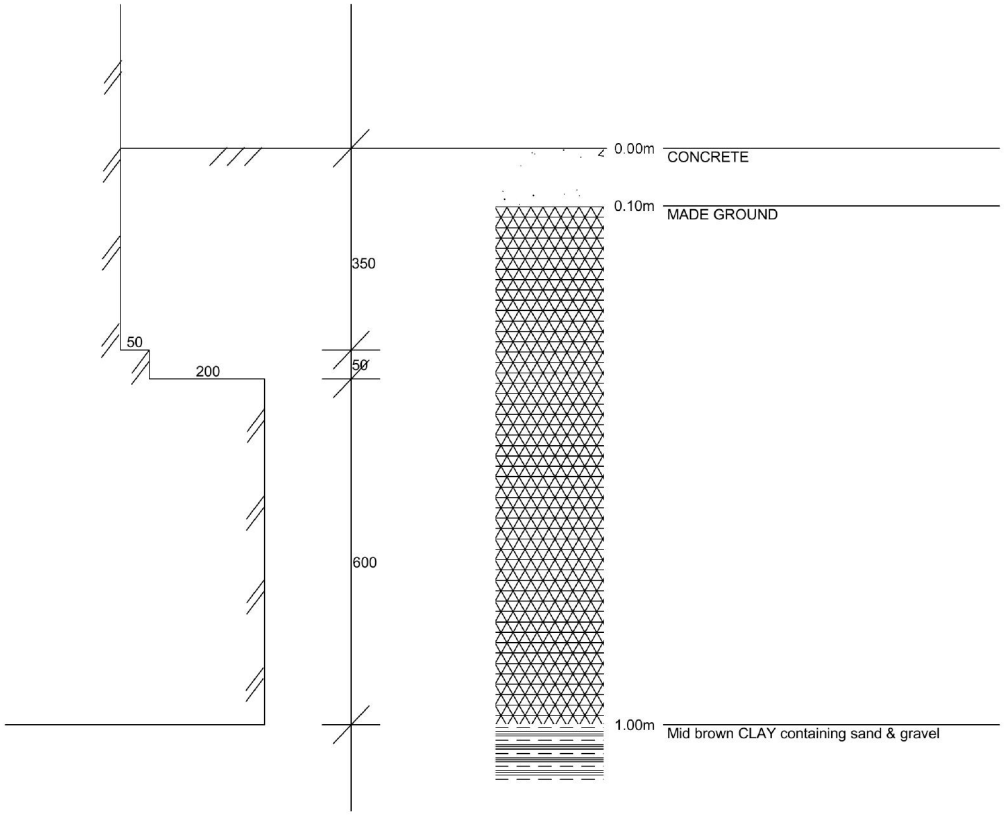
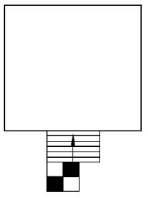
TRIAL PIT 1

Property Address: 138 Haverstock Hill, London, NW3 2AY
Client Claim Ref: [redacted] **Survey date:** 14/02/2023 **Operative:** SE2



D1 @ F.L. (1.00m)
V = 78-83kPa
Founding strata: Mid brown CLAY containing sand & gravel

Trial Pit Location:



Drawn by: BW

Scale: 1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh proble blow counts, V= shear vane reading (kPa)

FASTRACK [redacted]

Borehole Log

Borehole No. **BH1** Sheet 1 of 1

Project Name: [redacted]	Project No. [redacted]	Site Date: 14/02/2023	Hole Type BH
Location:	138 Haverstock Hill, London, NW3 2AY		Scale 1:17
Client:	Pyle Consulting		Logged By SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.10		CONCRETE	
						Clayey MADE GROUND	
						Foundation top-0.35m (brick construct projecting 50mm and 200mm with thicknesses of 50mm and 600mm respectively)	
	1.00	D	V (kPa) = 78 V (kPa) = 83	1.00		Mid brown CLAY containing sand & gravel *Foundation level-1.00m*	1
	1.50	D	V (kPa) = 85 V (kPa) = 90			*1-3mm roots noted at 1.50m*	
	2.00	D	V (kPa) = 93 V (kPa) = 98			*CLAY noted to contain only sand below 2.00m*	2
	2.50	D	V (kPa) = 102 V (kPa) = 107			*CLAY noted to contain sand & gravels and grey mottles by 2.50m*	
	3.00	D	V (kPa) = 100 V (kPa) = 105	3.00		End of Borehole at 3.000m	3

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test

Remarks: Borehole closed at 3.00m on completion.
Borehole noted to be dry on completion.

AGS

FASTRACK [redacted]

Borehole Log

Borehole No. **BH2**

Sheet 1 of 1

Project Name: [redacted]	Project No. [redacted]	Site Date: 14/02/2023	Hole Type BH
Location:	138 Haverstock Hill, London, NW3 2AY		Scale 1:17
Client:	Pyle Consulting		Logged By SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
						TOPSOIL	
	0.50	D	V (kPa) = 67 V (kPa) = 72			*TOPSOIL noted to contain clay and sand by 0.50m*	
	1.00	D	V (kPa) = 80 V (kPa) = 85	1.00		Mid brown CLAY containing sand & gravel *Roots noted at 1.00m*	1
	1.50	D	V (kPa) = 86 V (kPa) = 91			*Roots noted at 1.50m*	
	2.00	D	V (kPa) = 92 V (kPa) = 97			*CLAY noted to contain sand & gravel and grey mottles by 2.00m*	2
	2.50	D	V (kPa) = 100 V (kPa) = 95				
	3.00	D	V (kPa) = 104 V (kPa) = 109	3.00		End of Borehole at 3.000m	3

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test

Remarks: Borehole closed at 3.00m on completion.
Borehole noted to be dry at completion.

AGS

FASTRACK [redacted]

Appendix No: 3

[redacted]

LABORATORY RESULTS

Property Address: 138 Haverstock Hill, Camden, London, NW3 2AY

Client Claim Ref: [redacted] **Client:** Pyle Consulting

SAMPLE DETAILS	
Investigation date:	**14/02/2023**
Sample details:	**Bags as received**
Samples received:	**15/02/2023**
Schedule recieved:	**15/02/2023**
Samples tested:	**20/02/2023-23/02/2023**
Results reported:	**23/02/2023**

ANALYSIS REQUESTED			
Moisture Content	☑	PSD	☐
Liquid Limit	☑	Soil Suction	☑
Plastic Limit	☑	Shear Strength	☐
Plasticity Index	☑	Contamination	☐
Root ID	☑	Root/Tree DNA	☐
		Roots obtained	

TEST DETAILS

General

Sample descriptions were written in accordance with BS 5930:1999.

Samples were prepared in accordance with BS 1377: Part 1: 1990, section 7

Samples from this contract will be retained for 1 calender month following the issue of this report unless otherwise notified

Written approval is required from Fastrack Site Investigations Limited to reproduce report in full. The results shown within this report only relate to the samples tested

Moisture Content

Samples were tested in accordance with BS 1377: Part 2: 1990, section 3.2 (Oven drying method)

In accordance with Note 1 to paragraph 3.2.4 of BS 1377 Part 2 1990; these moisture contents have been corrected to give the equivalent moisture content of the fraction passing the 425µm sieve, to enable comparison with the liquid & plastic limits. (If condition of test is 'natural' the retained percentage is an estimated value, if condition is 'washed' the percentage is a measured value).

Samples are dried at 105-110°C unless otherwise stated.

Atterberg Limits

Samples were tested in accordance with BS 1377: Part 2: 1990, section 4.3 (4 drop LL), 4.4 (1 drop LL), 5.3 (PL) and 5.4 (PI)
Test results on samples with a sand content, may show less accurate results. If condition of test is 'washed' results relate to the fraction passing the 425µm sieve only.

* *Driscoll's rules deem the soil to be desicated where the moisture content is less than the value calculated using driscoll's rule 1 and/or 2*

Particle Size Distribution

Samples were tested in accordance with BS 1377: Part 2: 1990 section 9.2 (Wet sieving method)

Undrained Shear Stength

Samples were prepared in accordance with BS 1377: Part 7: 1990 section 8.3 and testing in accordance with BS 1377: Part 7: 1990: section 8.4 (undrained shear strength in triaxial compression without measurement of pore pressure (UU))

Soil Suction

Samples were prepared and tested based on the BRE digest No:IP4/93 (Corrected). 'A method of determining the state of desiccation in clay soils.' (Filter paper method).

Test results on samples with a sand or silt content, may show less accurate results. Deviation to standard procedure - Polythene bags are not used from weighing filter papers.

FASTRACK [redacted]

Appendix No: 3

[redacted]

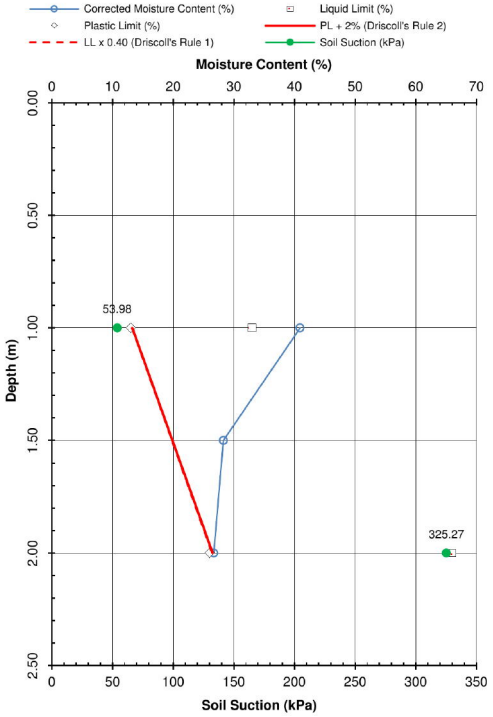
LABORATORY RESULTS

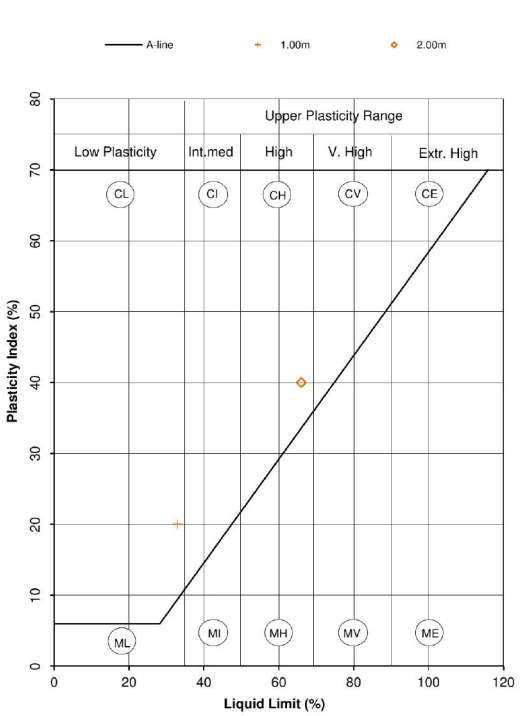
Property Address: 138 Haverstock Hill, Camden, London, NW3 2AY

Client Claim Ref: [redacted]

BOREHOLE 1

Depth (m)	MC (%)	Corr. MC (%)	LL (%)	PL	PI (%)	Class	% Retained (425µm)	Soil Suction (kPa)	Condition of test	Soil Description
1.00	27.8	40.92	33	13	20	CL	32.07	53.98	Natural	Brown clayey, sandy, silty MADE GROUND containing brick and gravel
1.50	28.3	28.3					0		Natural	Brown silty CLAY
2.00	26.7	26.7	66	26	40	CH	0	325.27	Natural	Brown silty CLAY





Comments:

Issued by:

- ☐ Jade McLellan (Laboratory Manager)
- ☑ Isabella Acerbis(Laboratory Supervisor)
- ☐ Ted Smith (Laboratory Technician)
- ☐

FASTRACK [redacted]

Appendix No: 3

[redacted]

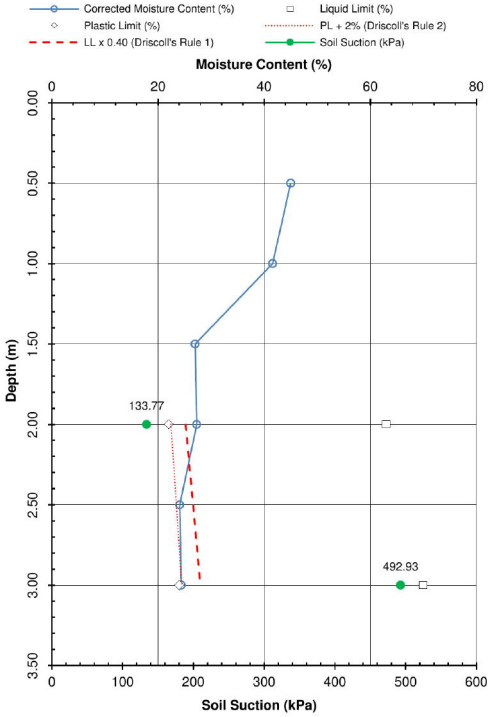
LABORATORY RESULTS

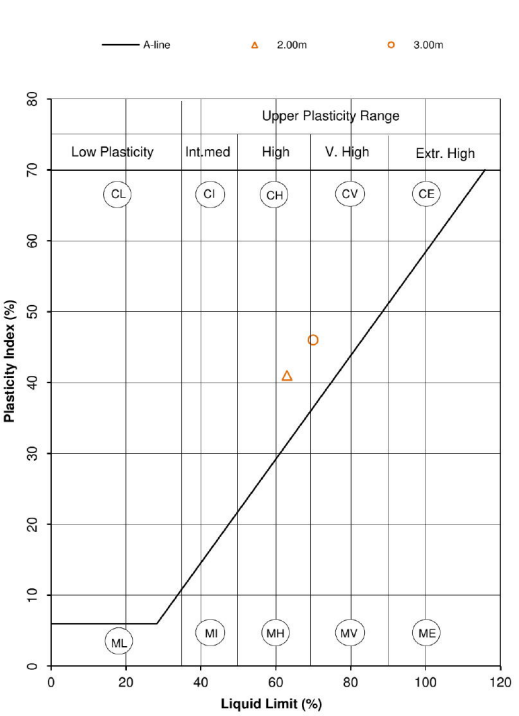
Property Address: 138 Haverstock Hill, Camden, London, NW3 2AY

Client Claim Ref: [redacted]

BOREHOLE 2

Depth (m)	MC (%)	Corr. MC (%)	LL (%)	PL	PI (%)	Class	% Retained (425µm)	Soil Suction (kPa)	Condition of test	Soil Description
0.50	18	45					60		Natural	Brown clayey, sandy, silty MADE GROUND containing brick
1.00	20.8	41.6					50		Natural	Brown clayey, sandy, silty MADE GROUND containing brick
1.50	27	27					0		Natural	Brown silty CLAY
2.00	27.3	27.3	63	22	41	CH	0	133.77	Natural	Brown silty CLAY
2.50	24.1	24.1					0		Natural	Brown silty CLAY
3.00	24.4	24.4	70	24	46	CH/V	0	492.93	Natural	Brown silty CLAY





Comments: BH2 @ 2.00, 3.00m - Unable to perform atterberg limits and soil suctions due to incohesive soil

Issued by:

- ☐ Jade McLellan (Laboratory Manager)
- ☑ Isabella Acerbis(Laboratory Supervisor)
- ☐ Ted Smith (Laboratory Technician)
- ☐

EPSL
Independent Scientific Analysis

European Plant Science Laboratory

Fastrack Site Investigations Ltd
[redacted]

Intec
[redacted]

ROOT IDENTIFICATION

138 Haverstock Hill,

Client Reference: [redacted]
Report Date: 23 February 2023
Our Ref: [redacted]

Sub Sample	Species Identified	Root Diameter	Starch
BH1:			
1.5m	*Pittosporum* spp.	3 mm	Moderate
BH2:			
1m	*Pittosporum* spp.	1.5 mm	Abundant
1.5m	Leguminosae spp.	1 mm	Abundant

Comments:

Pittosporum spp. are evergreen shrubs and small trees.
Leguminosae spp. include laburnum, *Robinia* (false acacia or locust), broom, the pagoda tree and the climber wisteria.

Signed: M D Mitchell

Unless we are otherwise instructed in writing, the above sample material will normally be disposed of 6 years after the date of this report.

[redacted]