Geotechnical Survey Report

FSI Ref:	[redacted]
Issue Date:	February 2019
Risk Address:	31 Inglewood Road London NW6 1QT
Engineer:	Matt Deller
Company:	CRAWFORDS
Claim Ref:	[redacted]

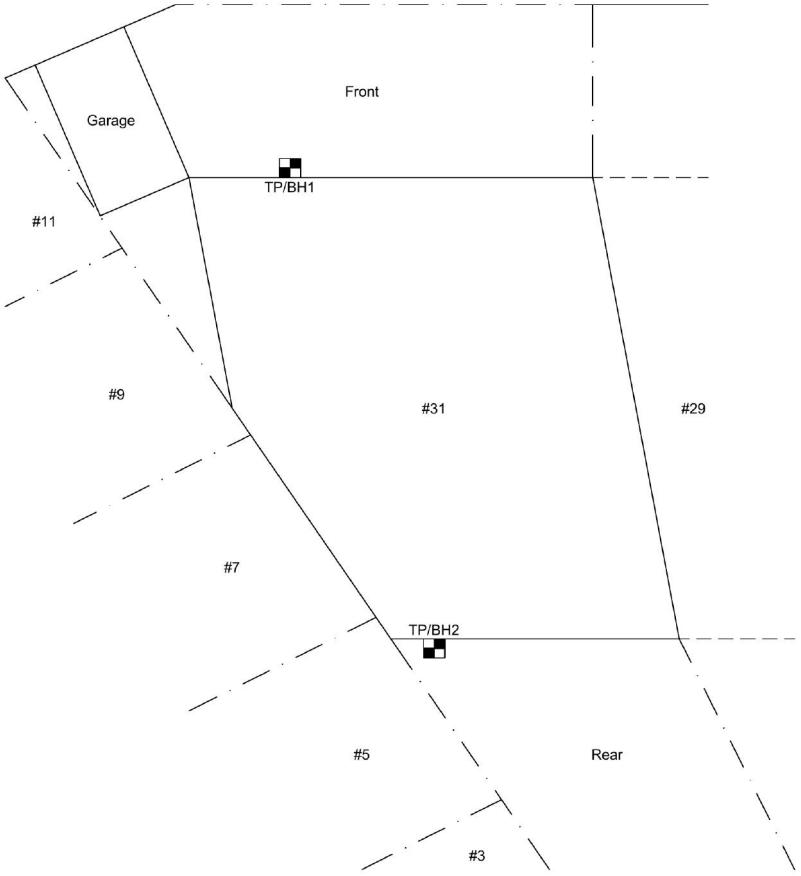
Managing Director:	Martin Rush MSc FGS
Finance Director:	Louise Ayres BSc (Hons)
Geotechnical Compliance & Logistics Supervisor:	Perry Martin MCIHT
Laboratory Supervisor:	Jade McLellan
Assistant Geologists:	George Baron BSc (Hons) FGS Scott Parker BSc (Hons) FGS

FASTRACK [redacted]

Appendix No: 1
FSI Ref: [redacted]

SITE PLAN

Property Address: 31 Inglewood Road, London NW6 1QT
Client Claim Ref: [redacted] **Survey date:** 22/12/2018 **Operative:** SE1



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

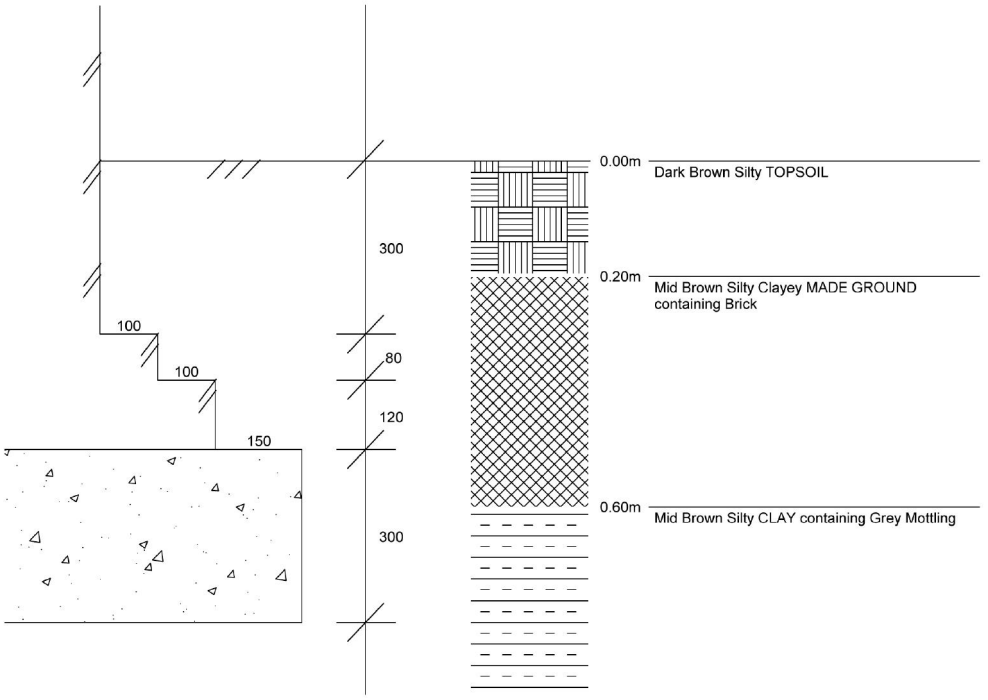
FASTRACK

[redacted]

Appendix No: 2
FSI Ref: [redacted]

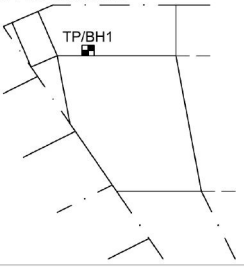
TRIAL PIT 1

Property Address: 31 Inglewood Road, London NW6 1QT
Client Claim Ref: [redacted] **Survey date:**22/12/2018 **Operative:** SE1



D1 @ F.L. (0.80m)
V = 72-74kPa
Founding strata: Mid Brown Silty CLAY containing Grey Mottling

Trial Pit Location:



Drawn by: GB

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: 22/12/2018	Hole Type BH
Location:	31 Inglewood Road, London NW6 1QT		Scale 1:20
Client:	Crawford		Logged By SE1

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
						Dark Brown Silty TOPSOIL	
				0.20		Mid Brown Silty Clayey MADE GROUND containing Brick	
						Foundation Top - 0.30m, Brick and Concrete construct. Two Brick step-outs both projecting 100mm; 80mm & 120mm thick respectively onto Concrete projecting a further 150mm, 300mm thick.	
				0.60		Mid Brown Silty CLAY containing Grey Mottling	
	0.80	D	V (kPa) = 72 V (kPa) = 74			*Foundation Level - 0.80m* *Roots noted at 0.80m, Hairlike-3mm in diameter*	1
	1.50	D	V (kPa) = 90 V (kPa) = 92				
				1.70		Mid Brown Silty CLAY containing Grey Mottling and Claystone fragments	
	2.00	D	V (kPa) = 110 V (kPa) = 112				2
	2.50	D	V (kPa) = 116 V (kPa) = 120			*Gypsum noted from 2.80m*	
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m	3
							4

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

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

AGS

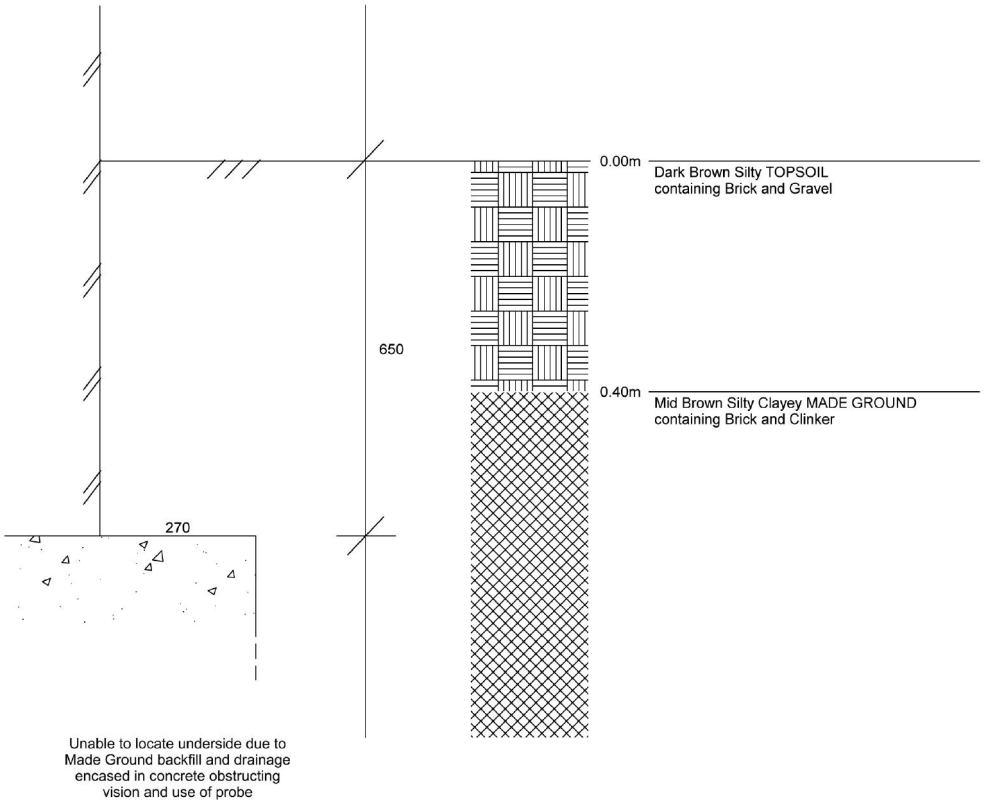
FASTRACK

[redacted]

Appendix No: 2
FSI Ref: [redacted]

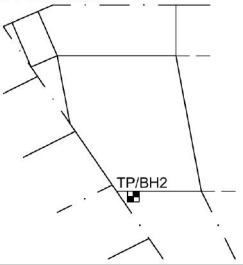
TRIAL PIT 2

Property Address: 31 Inglewood Road, London NW6 1QT
Client Claim Ref: [redacted] **Survey date:**22/12/2018 **Operative:** SE1



Unable to locate underside due to Made Ground backfill and drainage encased in concrete obstructing vision and use of probe

Trial Pit Location:



Drawn by: GB

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.
BH2
Sheet 1 of 1

Project Name: [redacted]	Project No. [redacted]	Site Date: 22/12/2018	Hole Type BH
Location:	31 Inglewood Road, London NW6 1QT		Scale 1:15
Client:	Crawford		Logged By SE1

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
						Dark Brown Silty TOPSOIL containing Brick and Gravel	
				0.40		Mid Brown Silty Clayey MADE GROUND containing Brick and Clinker	
	1.00	D	MP = 17/75mm MP = 17/75mm MP = 19/75mm MP = 20/75mm			*Roots noted at 1.00m, Hairlike-2mm in diameter*	1
				1.20		Dark Brown Silty Clayey MADE GROUND containing Brick/Hardcore Backfill and Clinker	
	1.50	D	MP = 24/75mm MP = 25/75mm MP = 25/75mm MP = 27/75mm			*Roots noted at 1.50m, 1-8mm in diameter*	
				1.80		Mid Brown Silty CLAY	
	2.00	D	V (kPa) = 140			*Roots noted at 2.00m, Hairlike-1mm in diameter*	2
						Grey Mottling noted from 2.40m	
	2.50	D	V (kPa) = 140	2.50		End of Borehole at 2.500m	
							3

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

Remarks: Borehole closed at 2.50m due to Made Ground backfill.
Borehole noted to be dry on completion.

AGS

FASTRACK [redacted]

Appendix No: 3
FSI Ref: [redacted]

LABORATORY RESULTS

Property Address: 31 Inglewood Road, London, NW6 1QT
Client Claim Ref: [redacted] **Client:** Crawford

SAMPLE DETAILS		ANALYSIS REQUESTED			
Investigation date:	**22/12/2018**	Moisture Content	☑	PSD	☐
Sample details:	**Bags as received**	Liquid Limit	☑	Soil Suction	☐
Samples received:	**03/01/2019**	Plastic Limit	☑	Shear Strength	☐
Schedule recieved:	**03/01/2019**	Plasticity Index	☑	Contamination	☐
Samples tested:	**03/01/2019 - 06/02/2019**	Root ID	☑	Root/Tree DNA	☐
Results reported:	**06/02/2019**	Other (please state)			☐

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]

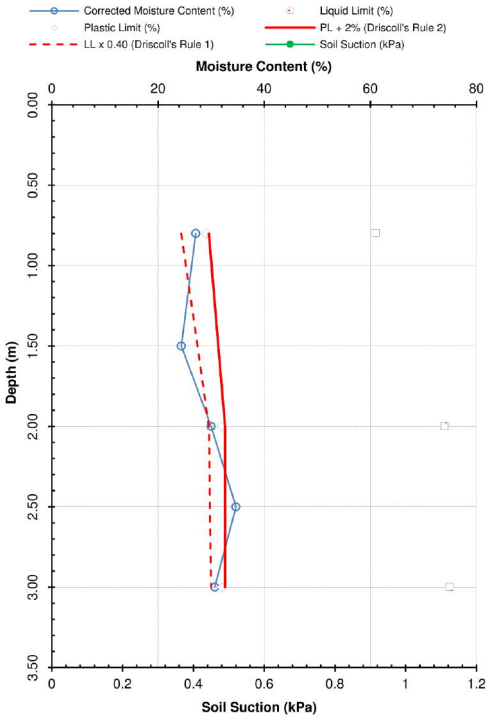
Appendix No: 3
FSI Ref: [redacted]

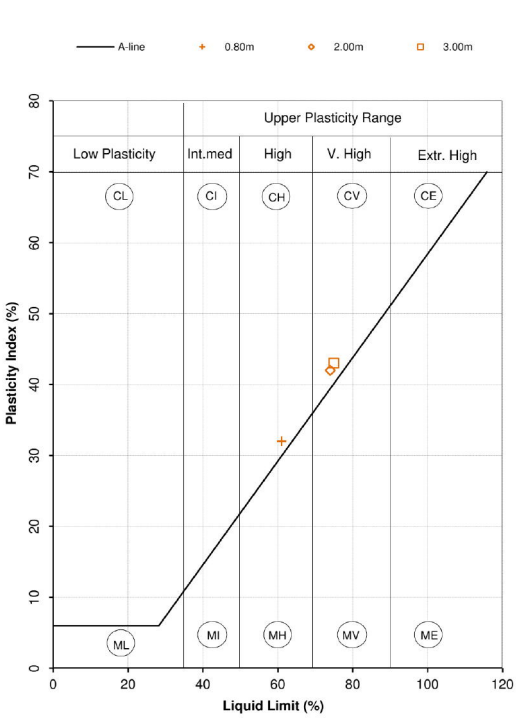
LABORATORY RESULTS

Property Address: 31 Inglewood Road, London, NW6 1QT
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
0.80	27.1	27.1	61	29	32	CH	0		Natural	Brown silty CLAY.
1.50	24.4	24.4					0		Natural	Brown silty CLAY.
2.00	30	30	74	32	42	CV	0		Natural	Brown silty CLAY containing gypsum.
2.50	34.7	34.7					0		Natural	Brown silty CLAY containing gypsum.
3.00	30.7	30.7	75	32	43	CV	0		Natural	Brown silty CLAY containing gypsum.





Comments: Due to the presence of gypsum, samples were placed in an oven at 75ºc.

Issued by:
- ☐ Jade McLellan (Laboratory Manager)
- ☑ L Appleby-Bowers (Laboratory Technician)

Signed: L Appleby-Bowers

FASTRACK [redacted]

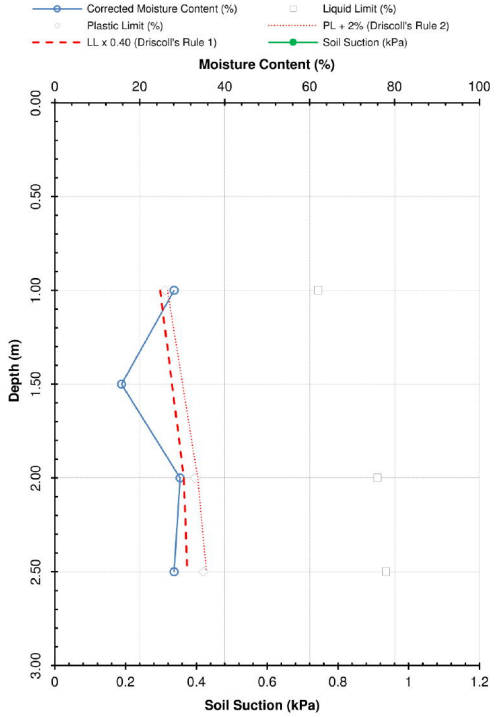
Appendix No: 3
FSI Ref: [redacted]

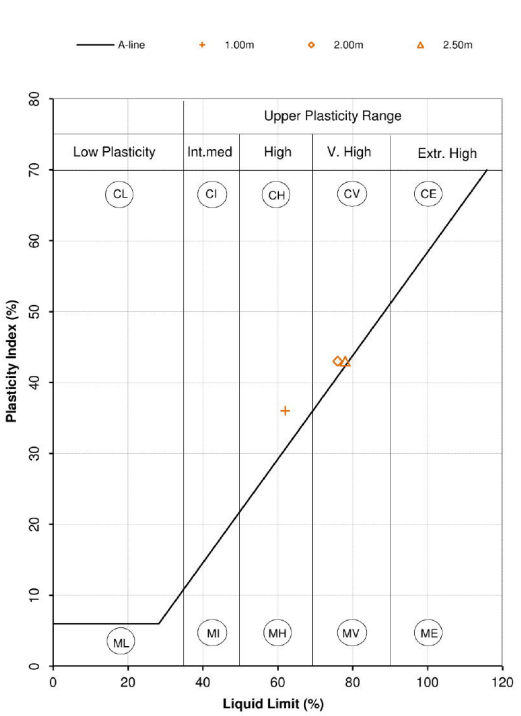
LABORATORY RESULTS

Property Address: 31 Inglewood Road, London, NW6 1QT
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
1.00	22.3	28.09	62	26	36	CH	20.6		Natural	Dark brown sandy, clayey MADEGROUND containing brick and gravel.
1.50	15.7	15.7					0		Natural	Dark brown sandy, clayey MADEGROUND containing brick.
2.00	29.5	29.5	76	33	43	CV	0		Natural	Brown sandy CLAY
2.50	28.1	28.1	78	35	43	CV	0		Natural	Brown sandy CLAY





Comments: Due to the presence of gypsum, samples were placed in an oven at 75ºc.

Issued by:

- ☐ Jade McLellan (Laboratory Manager)
- ☑ L Appleby-Bowers (Laboratory Technician)

Signed: L Appleby-Bowers

EPSL
Independent Scientific Analysis

European Plant Science Laboratory

Fastrack Site Investigations Ltd
Unit 9 Tyndales Farm
Southend Road
Woodham Mortimer
Essex
CM9 6TQ

Intec
[redacted]

ROOT IDENTIFICATION

312 Inglewood Road, London, NW6 1QT

Client Reference: [redacted]
Report Date: 11 January 2019
Our Ref: R27475

Sub Sample	Species Identified		Root Diameter	Starch
BH1:				
FL	Pomoideae gp.		1.5 mm	Abundant
FL	too decayed for identification		3 mm	Absent
BH2:				
1m	Cupressaceae spp.	1	1.5 mm	Abundant
1.5m	Cupressaceae spp.	2	7 mm	Abundant
2m	Cupressaceae spp.	3	1 mm	Abundant

Comments:

1 - Plus 1 other also identified as Cupressaceae spp. Fragments of bark and wood.
2 - Plus 2 others also identified as Cupressaceae spp.
3 - Plus 2 others also identified as Cupressaceae spp.

Pomoideae gp include apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam.
Cupressaceae spp. include Lawson cypress, western red cedar, Monterey cypress, Leyland cypress and junipers.

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.