SITE INVESTIGATION
FACTUAL REPORT

Report No:	[redacted]
Client:	Crawford Claims Management
Site:	151 Gloucester Avenue, London
Client Ref:	[redacted]
Date of Visit:	18/11/2019

[redacted]

Investigation Layout Plan

Sheet: 1 of 1

Job No: [redacted]

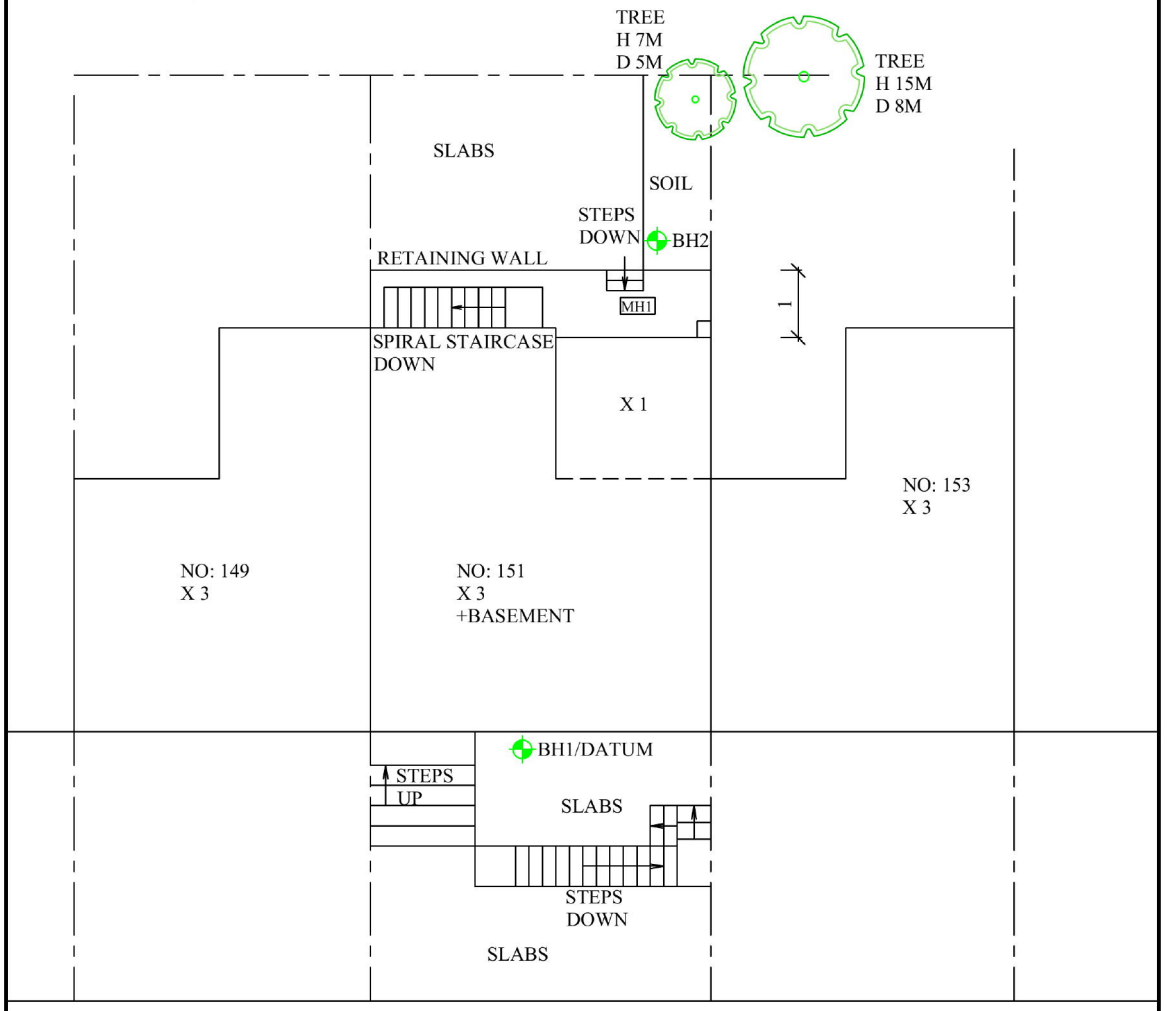
Date: 18/11/2019

Site: 151 Gloucester Ave NW1

Work carried out for: Crawford Claims Management

Weather: DRY

(SI) SA (Checked) CFT (Drawn)



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Scale: N.T.S.

Key:

Combined Gulley	RWWG
Manhole	MH
Rain Water Pipe	RWP
Rain Water Gulley	RWG
Soil Vent Pipe	SVP
Waste Gulley	WG
Waste Pipe	WP

Surface Water Drain

Foul Water Drain

Tree / Bush (approx. ht in m)

Trial Pit

Borehole

O/D - Open Discharge

Borehole	1 +Datum		Sheet:	1 of 2	Site:	151 Gloucester Avenue
			Job No:	[redacted]		
			Date:	18/11/2019		
Boring Method:	Hand Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	75	Weather:	Dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
0.00	Slab over CONCRETE	0.20				
0.20	MADEGROUND medium compact brown silty sandy clay with gravel and brick rubble	0.70				
0.90	Firm brown, grey veined silty CLAY with partings of orange silt and fine sand	0.50		1.00	DV	64
						58
1.40	Firm wet brown silty CLAY	1.80		1.50	DV	54
						52
				2.00	DV	50
						56
				2.50	DV	58
						64
				3.00	DV	68
						70
3.20	Stiff brown grey veined silty CLAY with partings of orange silt and fine sand	1.80		3.50	DV	114
						120
				4.00	DV	130+
						130+
				4.50	DV	130+
						130+

Remarks:

Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots		
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)		

TDTD - Too Dense To Drive

Logged:	KP	SA	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Borehole	1+DATUM		Sheet:	2 of 2	Site:	151 Gloucester Avenue
			Job No:	[redacted]		
			Date:	18/11/2019		
Boring Method:	Hand Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	75	Weather:	Dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
5.00	Stiff brown, grey veined silty CLAY with partings of orange silt and fine sand	0.60		5.00	DV	130+
						130+
5.60	End of BH					

Remarks:
BH ends at 5.6m. BH dry and open on completion,no roots observed below 1.2m. Datum installed at 5.6m.
No soil samples or insitu strength tests carried out below 5.0m.

Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	1.20	1
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)		
TDTD - Too Dense To Drive			

Logged:	KP	SA	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Borehole	2		Sheet:	1 of 1	Site:	151 Gloucester Avenue
			Job No:	[redacted]		
			Date:	18/11/2019		
Boring Method:	Hand Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	75	Weather:	Dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
0.00	MADEGROUND medium compact brown gravelly silty clay with brick fragments	1.30				
				1.00	DM	12
						14
						13
1.30	Stiff brown grey veined silty CLAY with partings of orange silt and fine sand	2.80				12
				1.50	DV	76
						80
				2.00	DV	128
						130+
				2.50	DV	130+
						130+
				3.00	DV	130+
						130+
				3.50	DV	130+
						130+
				4.00	DV	130+
4.10	Stiff brown,grey veined silty CLAY with partings of orange silt and fine sand and	0.10				130+
4.20	claystone nodules	0.80				
	Stiff brown,grey veined silty CLAY with partings of orange silt and fine sand					
				4.50	DV	130+
						130+
				5.00	DV	130+
5.00	End of BH					130+

Remarks:
BH ends at 5.0m. BH dry and open on completion,no observed below 3.1m.

Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	3.10	1
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)		

TDTD - Too Dense To Drive

Logged:	KP	SA	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Laboratory Summary Results

Our Ref : [redacted]

Location : 151 Gloucester Avenue, London, NW1

Client: Crawford Claims Management

Address: [redacted]

Date Sampled: 18/11/2019

Date Received : 19/11/2019

Date Tested : 19/11/2019

Date of Report : 27/11/2019

Sample Ref TP/BH No	Depth (m)	Type	Moisture Content (%) [1]	Soil Fraction > 0.425mm (%) [2]	Liquid Limit (%) [3]	Plastic Limit (%) [4]	Plasticity Index (%) [5]	Liquidity * Index [5]	Modified * Plasticity Index (%) [6]	Soil * Class [7]	Filter Paper Contact Time (h)	Soil Sample Suction (kPa) [8]	Oedometer Strain [9]	Estimated Heave Potential (Dd) (mm) [10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content (%) [12]	pH * Value [13]	Sulphate Content * (g / l) SO_3 [14]	Sulphate Content * (g / l) SO_4 [15]	* Class [16]
BH1	1.0	D	38	<5	78	27	51	0.22	51	CV	168	69.8			61					
	1.5	D	50	<5							Unsuitable for suction testing - Too Soft				53					
	2.0	D	54	<5							Unsuitable for suction testing - Too Soft				53					
	2.5	D	57	<5	72	28	44	0.67	44	CV	Unsuitable for suction testing - Too Soft				61					
	3.0	D	42	<5							Unsuitable for suction testing - Too Soft				69					
	4.0	D	34	<5							168	336			> 130					
	5.0	D	32	<5	78	31	47	0.03	47	CV	168	323			> 130					

Test Methods / Notes

[1] BS 1377 : Part 2 : 1990, Test No 3.2

[2] Estimated if <5%, otherwise measured

[3] BS 1377 : Part 2 : 1990, Test No 4.4

[4] BS 1377 : Part 2 : 1990, Test No 5.3

[5] BS 1377 : Part 2 : 1990, Test No 5.4

[6] BRE Digest 240 : 1993

[7] BS 5930 : 2018 : Figure 8 - Plasticity Chart for the classification of fine soils

[8] In-house method S5a adapted from BRE IP 4/93

[9] In-house Test Procedure S17a: One Dimensional Swell/Strain Test

[10] Estimated Heave Potential (Dd)

[11] Values of shear strength were determined in situ by CET using a Pilcon hand vane or Geonor vane (GV).

[12] BS 1377 : Part 3 : 1990, Test No 4

[13] BS 1377 : Part 2 : 1990, Test No 9

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

[15] $SO_3 = 1.2 \times SO_4$

[16] BRE Special Digest One (Concrete in Aggressive Ground) August 2005 Note that if the SO4 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.

* These tests are not UKAS accredited

Full reports can be provided upon request.

Key

D	Disturbed sample (small)
B	Disturbed sample (bulk)
U	Undisturbed sample
W	Groundwater sample
ENP	Essentially Non-Plastic by inspection
US	Underside of Foundation

UKAS TESTING

Test results reported relate only to the items tested.

[redacted]

Our Ref : [redacted]

Laboratory Testing Results

Date Sampled : 18/11/2019

Location : 151 Gloucester Avenue, London, NW1

Date Received : 19/11/2019

Client: Crawford Claims Management

Date Tested : 19/11/2019

Address: [redacted]

Date of Report : 27/11/2019

Sample Ref. TP/BH No.	Depth (m)	Type	Moisture Content (%) [1]	Soil Fraction > 0.425mm (%) [2]	Liquid Limit (%) [3]	Plastic Limit (%) [4]	Plasticity Index (%) [5]	Liquidity * Index [5]	Modified * Plasticity Index (%) [6]	Soil * Class [7]	Filter Paper Contact Time (h)	Soil Sample Suction (kPa) [8]	Oedometer Strain [9]	Estimated Heave Potential (Dd) (mm)[10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content (%)[12]	pH * Value [13]	Sulphate Content * (g/l) SO_3 [14]	Sulphate Content * (g/l) SO_4 [15]	* Class [16]
BH2	1.0	D	32	10	68	26	42	0.14	38	CH	Unsuitable for suction testing - Made Ground									
	1.5	D	31	<5							168	181			78					
	2.0	D	27	<5							168	403			129					
	2.5	D	28	<5	76	26	50	0.03	50	CV	168	574			> 130					
	3.0	D	30	<5							168	442			> 130					
	4.0	D	32	<5							168	325			> 130					
	5.0	D	34	<5	80	31	49	0.05	49	CV	168	370			> 130					

Test Methods / Notes

[1] BS 1377 : Part 2 : 1990, Test No 3.2

[2] Estimated if <5%, otherwise measured

[3] BS 1377 : Part 2 : 1990, Test No 4.4

[4] BS 1377 : Part 2 : 1990, Test No 5.3

[5] BS 1377 : Part 2 : 1990, Test No 5.4

[6] BRE Digest 240 : 1993.

[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils

[8] In-house method S9a adapted from BRE IP 4/93

[9] In-house Test Procedure SI 7a: One Dimensional Swell/Strain Test

[10] Estimated Heave Potential (Dd)

[11] Values of shear strength were determined in situ by CET using a Pilcon hand vane or Geonor vane (GV).

[12] BS 1377 : Part 3 : 1990, Test No 4

[13] BS 1377 : Part 2 : 1990, Test No 9

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

[15] $SO_3 = 1.2 \times SO_4$

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

Note that if the SO4 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.

* These tests are not UKAS accredited

Full reports can be provided upon request

Key

D	Disturbed sample (small)
B	Disturbed sample (bulk)
U	Undisturbed sample
W	Groundwater sample
ENP	Essentially Non-Plastic by inspection
U/S	Underside of Foundation

UKAS TESTING

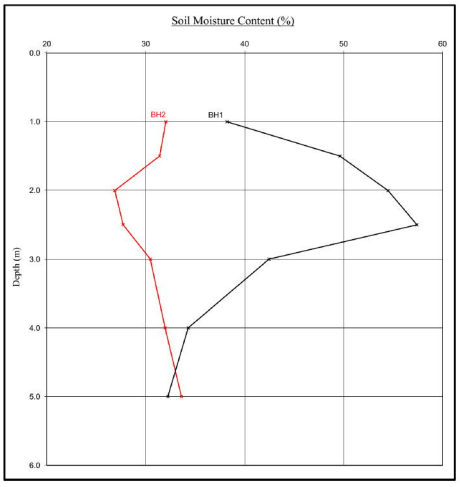
Test results reported relate only to the items tested.

[redacted]

Version: 5BH V1.5 - 26.06.18

Moisture Content Profiles

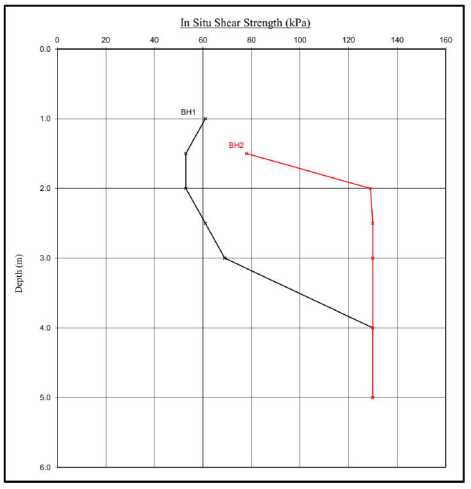
Our Ref : [redacted]
Location : 151 Gloucester Avenue, London, NW1
Work carried out for: Crawford Claims Management



Notes
1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
2. Unless specifically noted the profiles have not been related to a site datum.

Shear Strength Profiles

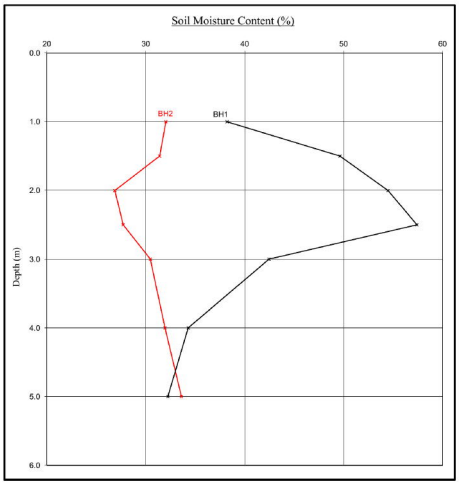
Date Sampled : 18/11/2019
Date Received : 19/11/2019
Date Tested : 19/11/2019
Date of Report : 27/11/2019



Note
1. Unless otherwise stated, values of Shear Strength were determined in situ by CET using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 130 kPa.
2. Unless specifically noted the profiles have not been related to a site datum.

Moisture Content Profiles

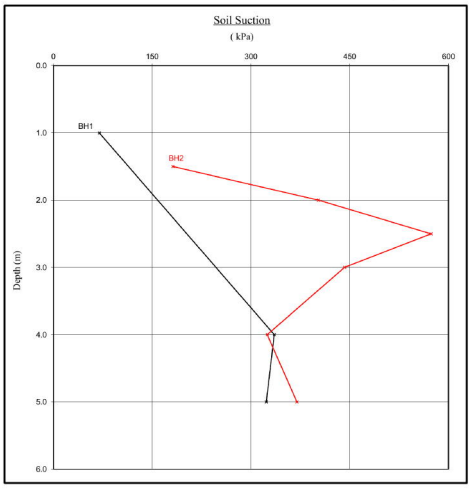
Our Ref : [redacted]
Location : 151 Gloucester Avenue, London, NW1
Work carried out for: Crawford Claims Management



Notes
1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
2. Unless specifically noted the profiles have not been related to a site datum.

Soil Suction Profiles

Date Sampled : 18/11/2019
Date Received : 19/11/2019
Date Tested : 19/11/2019
Date of Report : 27/11/2019



Note
When shown, the theoretical equilibrium suction profiles are based on conventional assumptions associated with London Clay (and similarly overconsolidated clays) at shallow depths. Note that the sample disturbance component is dependant on the method of sampling and any subsequent recompaction. The above plots show this to be 100kPa which is the value suggested by the BRE on the basis of their limited number of tests on recompacted samples. This may or may not be appropriate in this instance and judgement should be exercised.

EPSL ***European Plant Science Laboratory***	Sheet: 1 of 1 Job No: [redacted] Date: **21/11/2019** Order No: [redacted] EPSL Ref: [redacted]	Site: **151 Gloucester Avenue,** Work carried out for: **Crawford Claims MGMT SUS**

Certificate of Analysis

The following work was commissioned by CET on behalf of their client. Root samples were obtained in sealed packets from the above site with no reference given as to the types of tree or shrub from which they may have originated.
The results were as follows -

Trial pit/ Borehole number	**Root diameter (mm)**	**Tree, shrub or climber from which root originates**	**Result of starch test**
BH1 (to 1.6m)	<1 mm	Platanus spp. 2 roots	Positive
BH2 (to 3.1m)	1 mm	Monocotyledon spp. 2 roots	Positive
BH2 (to 3.1m)	1.5 mm	Platanus spp. 2 roots	Positive

Platanus spp. include London plane and Oriental plane.
Monocotyledon spp. include palms, grasses, bamboos and lilies.

[redacted]
MDM

[redacted]

Head of Laboratory Services : M D Mitchell B.Sc. (Hons), M.Phil.
Plant Anatomist : Dr G S Turner B.Sc. (Hons), M.Sc., Ph.D
Plant Anatomist : Dr R J Shaw B.Sc. (Hons), Ph.D
Consultant: Dr M P Denne B.Sc. (Hons), M.Sc., Ph.D

[redacted]