SITE INVESTIGATION
FACTUAL REPORT

Report No:	287927
Client:	Crawford Claims Management
Site:	33 Gloucester Crescent, London
Client Ref:	SU1502007-
Date of Visit:	07/01/2016

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Investigation Layout Plan

Sheet: 2 of 2

Job No: 287927

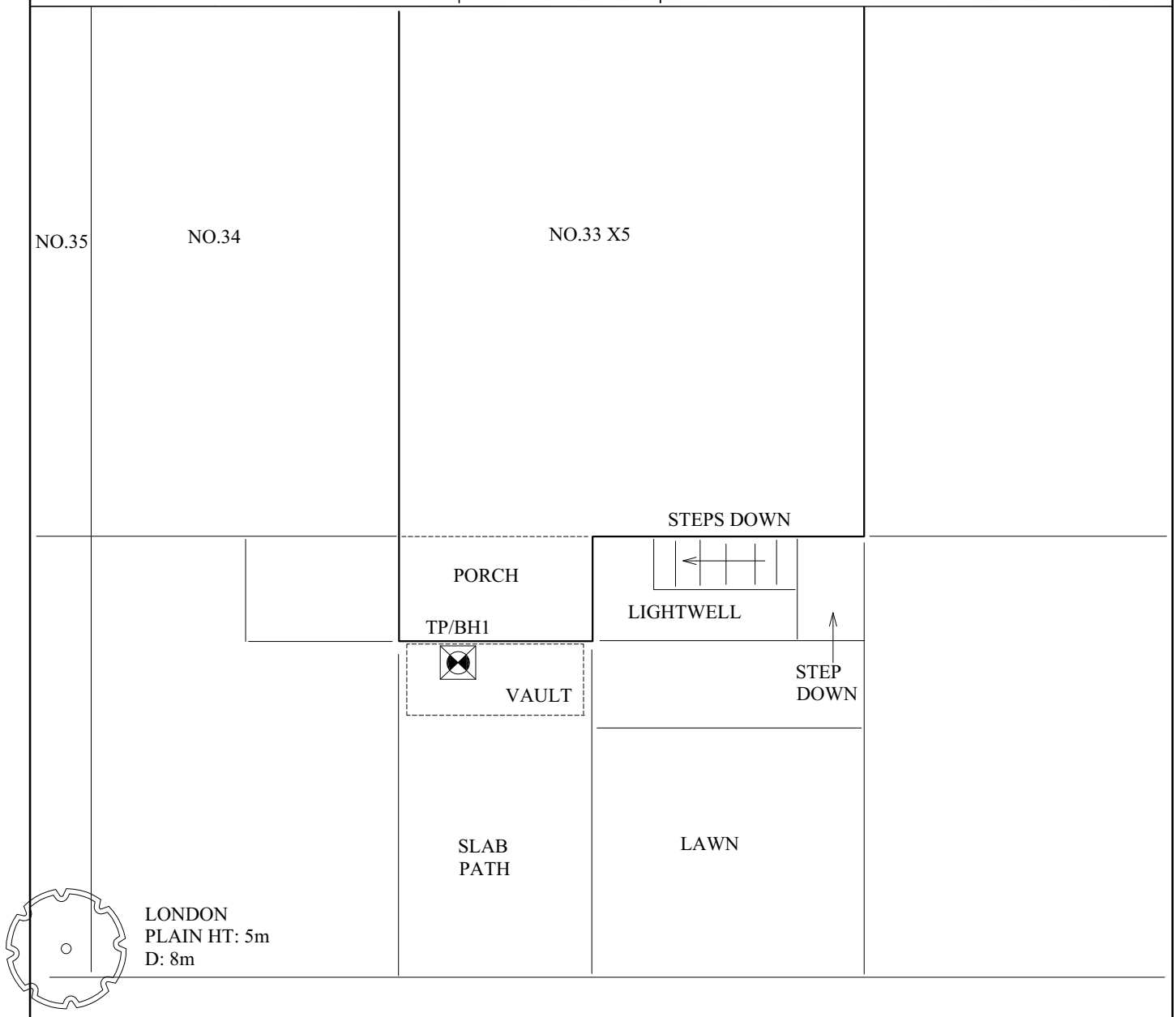
Date: 07/01/2016

Site: 33 Gloucester Crescent, NW1

Work carried out for: Crawford Claims MGMT SUS

DB (SI) | SA (Checked) | AR (Drawn)

Weather: N/A



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

Investigation Layout Plan

Sheet: 1 of 2

Job No: 287927

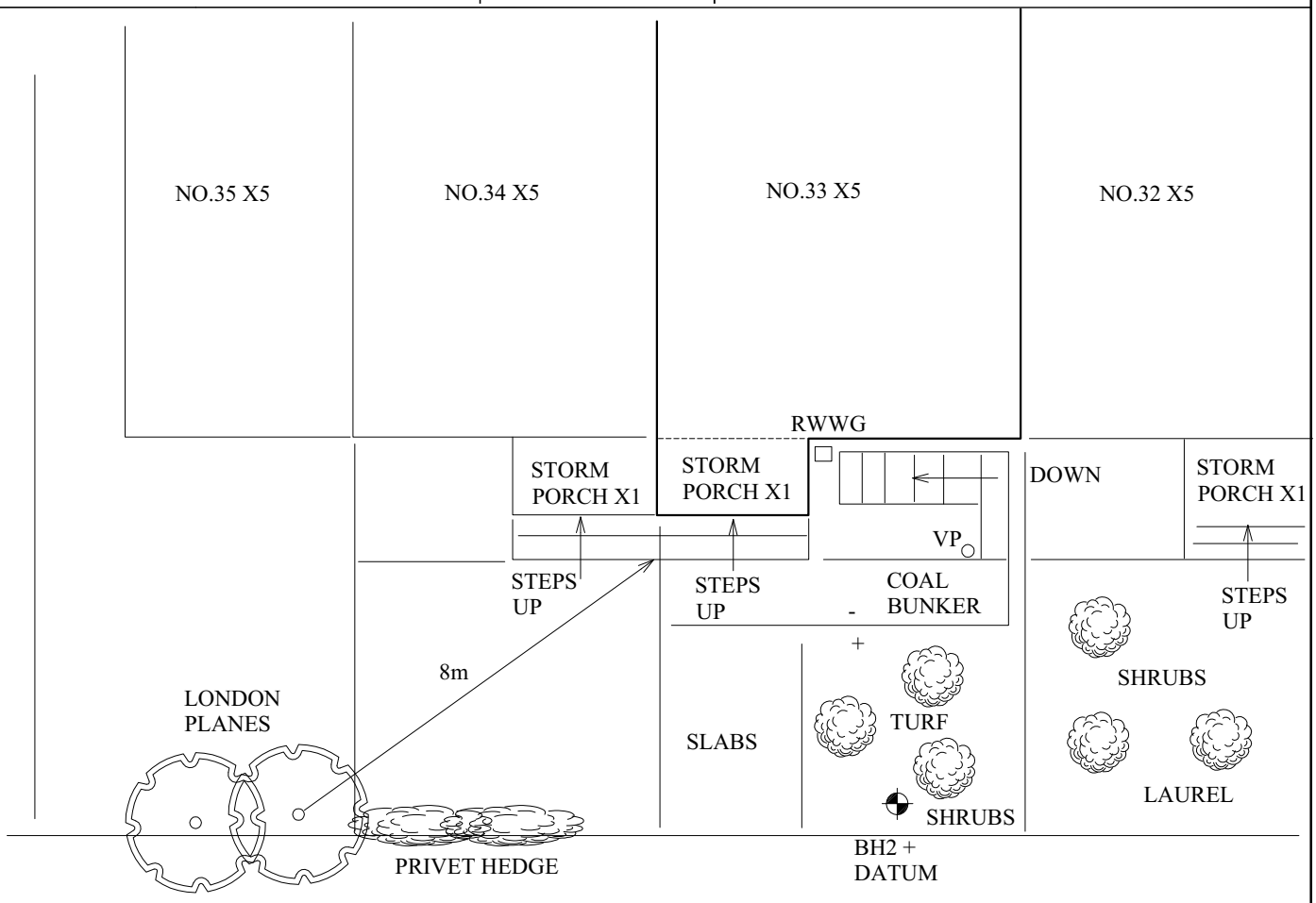
Date: 09/12/2015

Site: 33 Gloucester Crescent, NW1

Work carried out for: Crawford Claims MGMT SUS

MH (SI) PS (Checked) AR (Drawn)

Weather: Dry



Remarks:

Scale: N.T.S.

Key:

Combined Gulley	RWWG	Surface Water Drain	– – →– – –
Manhole	MH	Foul Water Drain	——→——
Rain Water Pipe	RWP	Tree / Bush (approx. ht in m)	
Rain Water Gulley	RWG	Trial Pit	
Soil Vent Pipe	SVP	Borehole	
Waste Gulley	WG	O/D - Open Discharge	
Waste Pipe	WP		

Trial Pit No: 1

Sheet: 1 of 1

Job No: 287927

Date: 07/01/2016

Site: 33 Gloucester Crescent, NW1

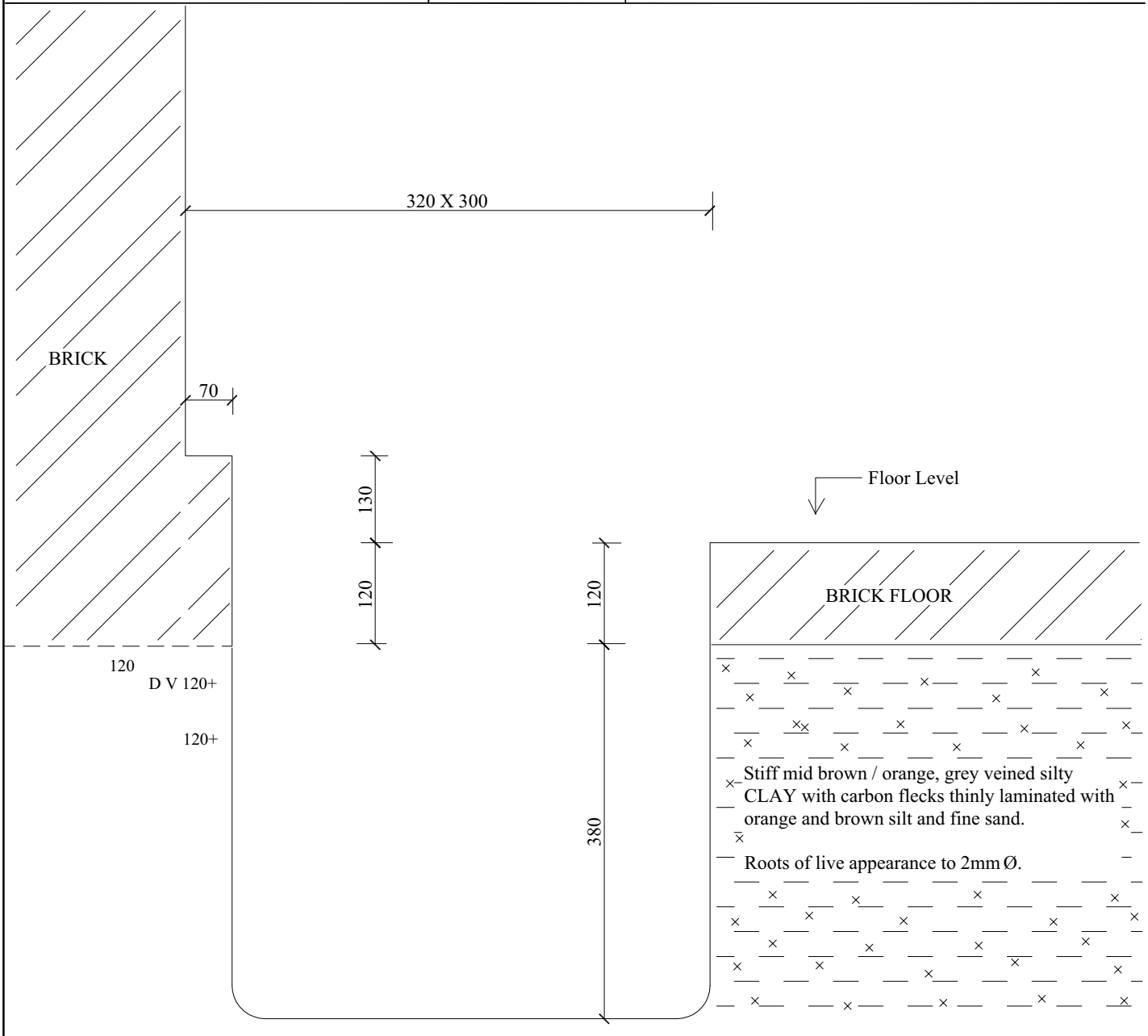
Work carried out for: Crawford Claims MGMT SUS

Excavation Method: Hand tools

Drawn by: AR

Ground Level mOD:

Weather: N/A



FOR STRATA BELOW 500mm SEE BH LOG 1

Remarks: All measurements in millimetres.

Key:

D	Small disturbed sample	J	Jar sample
B	Bulk disturbed sample	V	Pilcon Vane (kPa)
W	Water sample	M	Mackintosh probe
TDTD	Too dense to drive		

Logged: DB | Checked: SA | Approved:

Scale: N.T.S.

Borehole No: 1

Sheet: 1 of 1

Job No: 287927

Site: 33, Gloucester Crescent, NW1

Boring Method: Hand Auger

Date: 07/01/2016

Diameter: 75mm

Coordinates:

Ground Level mOD:

Work Carried out for: Crawford Claims MGMT SUS

Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
	As trial pit 1	0.50							
0.50				D	V	120+	0.50	Roots of live appearance to 1mm diameter to 1.2m	
						120+			
	Stiff, mid brown / orange, grey veined silty CLAY with carbon flecks and thinly laminated with orange and brown silt and fine sand	1.00		D	V	120+	1.00		
						120+		No roots observed below 1.2m	
1.50				D	V	120+	1.50		
						120+			
	Stiff, mid brown / orange, grey veined silty CLAY with crystals and carbon flecks and thinly laminated with orange and brown silt and fine sand	1.50		D	V	120+	2.00		
						120+			
				D	V	120+	2.50		
						120+			
3.00				D	V	120+	3.00		
						120+			
	Borehole ends at 3.0m								

Remarks

Borehole dry and open on completion

Key: T.D.T.D. Too Dense to Drive

D Small disturbed sample

B Bulk disturbed sample

W Water sample

J Jar sample

V Pilcon Vane (kPa)

M Mackintosh Probe

Logged: DB

Checked: SA

Drawn: Jo F

Scale: NTS

Weather: N/A

Borehole No: 2 & Datum	Sheet: 1 of 1	Site: 33, Gloucester Crescent, London
Boring Method: CFA	Job No: 287927	
Diameter: 100mm Coordinates:	Date: 09/12/2015	Work Carried out for: Crawford Claims MGMT SUS
	Ground Level mOD:	

Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
GL	Turf over MADE GROUND: medium compact, dark brown, sandy, very silty clay / clayey silt with occasional gravel and brick, concrete and clinker fragments	0.50						Roots of live appearance to 2mm diameter to 1.5m	
0.50	MADE GROUND: medium compact, mid to dark brown, sandy, very silty clay with occasional gravel and brick, concrete and clinker fragments	0.30							
0.80	MADE GROUND: medium compact to compact, mid brown silty clay with occasional gravel and brick, concrete and clinker fragments	1.90		D	M	50(45) 50(35)	1.00		
				D			1.50	Roots of live appearance to 1mm diameter to 2.6m	
				D	M	50(25) 50(40)	2.00		
2.70				D			2.50	No roots observed below 2.6m	
	Stiff, mid brown, stained, grey veined silty CLAY with partings of orange and brown silt and fine sand	0.80		D	V	130+ 130+	3.00		
3.50	Mid brown, grey veined silty CLAY with partings of orange and brown silt and fine sand	3.50							
7.00	Mid brown silty CLAY with partings of orange and brown silt and fine sand	1.00							
8.00	Borehole ends at 8.0m								

Remarks:
Borehole dry and open on completion
Datum installed at 8.0m. No soil samples taken or insitu strength tests carried out below 3.0m

Key: T.D.T.D. Too Dense to Drive
D Small disturbed sample
B Bulk disturbed sample
W Water sample
J Jar sample
V Pilcon Vane (kPa)
M Mackintosh Probe

Logged: MH	Checked: SA	Drawn: Jo F	Scale: NTS	Weather: Dry

Laboratory Summary Results

Our Ref : 287927

Date Sampled: 9/12/15 ‹

Location : 33, Gloucester Crescent, London, NW1

Date Received : 10/12/15

Work carried out for: Crawford Claims Management

Date Tested : 14/12/15

Date of Report : 21/12/15

Sample Ref TP/BH No	Sample Ref 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]*
1	U/S 0.12	D	30	<5	81	26	55	0.07	55	CV	168	432			> 120				
	0.5	D	28	<5							168	561			> 120				
	1.0	D	27	<5							168	661			> 120				
	1.5	D	29	<5	78	25	53	0.08	53	CV	168	466			> 120				
	2.0	D	32	<5							168	486			> 120				
	2.5	D	33	<5							168	519			> 120				
	3.0	D	32	<5	54	24	30	0.26	30	CH	168	549			> 120				

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 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] $SO_4 = 1.2 \times SO_3$

[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 soluable 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

Version: 5BH V1.4 - 11/05/15

Our Ref : 287927

Laboratory Testing Results

Date Sampled : 9/12/15

Location : 33, Gloucester Crescent, London, NW1

Work carried out for: Crawford Claims Management

Date Received : 10/12/15

Date Tested : 14/12/15

Date of Report : 21/12/15

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]*
BH2	0.5	D	21	26	45	18	27	0.11	20	CI	Not suitable for suction testing - Made Ground								
	1.0	D	22	12							Not suitable for suction testing - Made Ground								
	1.5	D	26	<5	74	22	52	0.07	52	CV	Not suitable for suction testing - Made Ground								
	2.0	D	24	10							Not suitable for suction testing - Made Ground								
	2.5	D	25	7							Not suitable for suction testing - Made Ground								
	3.0	D	32	<5	81	23	58	0.16	58	CV	168	260			> 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 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] $SO_4 = 1.2 \times SO_3$

[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 soluable magnesium testing is undertaken to prove otherwise.

* These tests are not UKAS accredited

Full reports can be provided upon request

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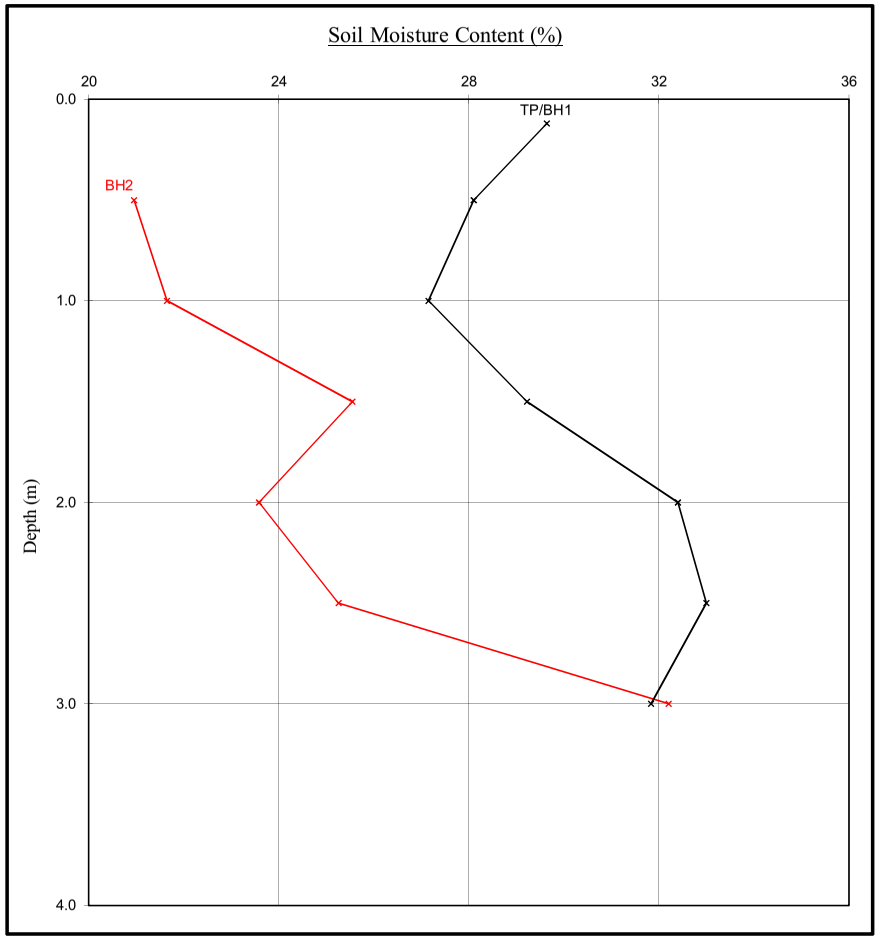
ENP	Essentially Non-Plastic by inspection
U/S	Underside of Foundation

Version: 5BH V1.4 - 11/05/15

Moisture Content Profiles

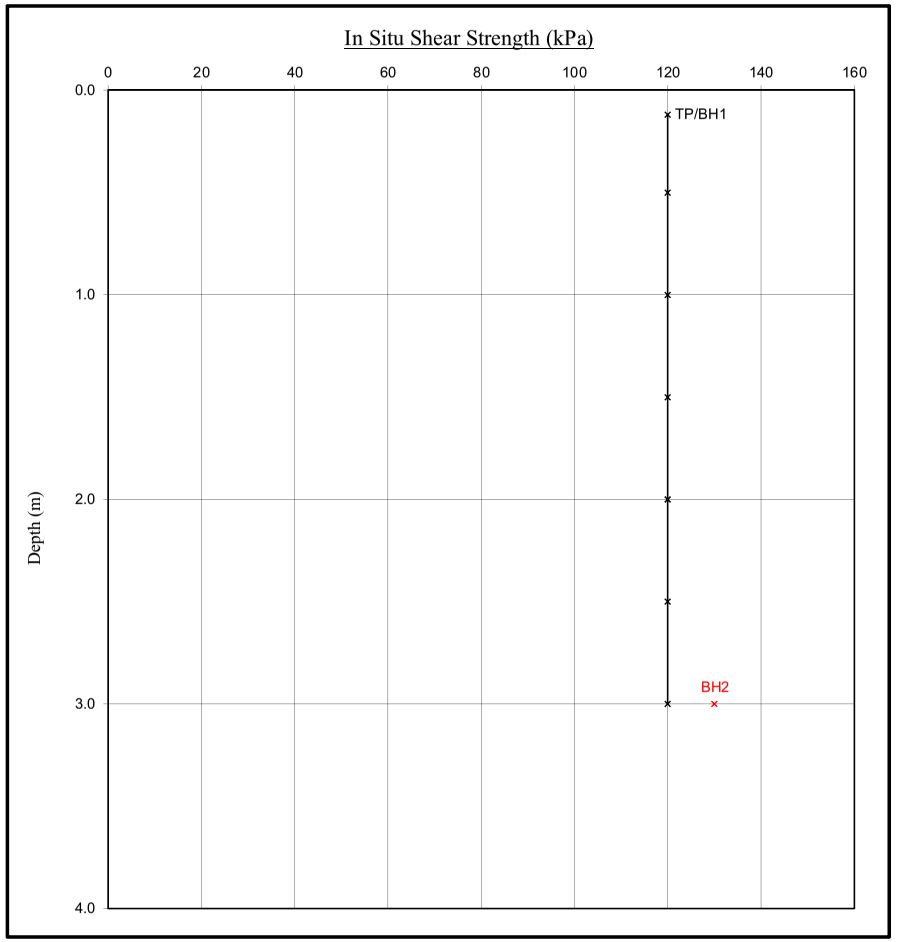
Our Ref : 287927
Location : 33, Gloucester Crescent, London, NW1
Work carried out for: Crawford Claims Management



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 : 9/12/15 & 7/1/16
Date Received : 10/12/15&8/1/16
Date Tested : 14/12/15&8/1/16
Date of Report : 21/12/15&15/1/16



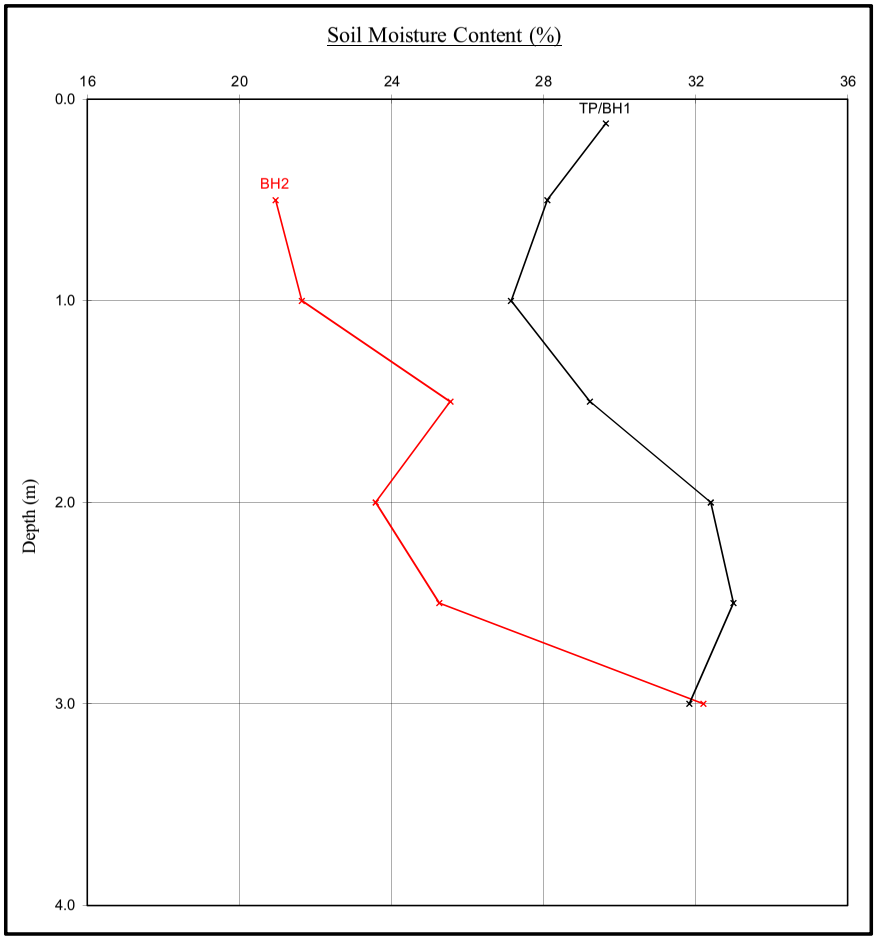
Note
1. Unless otherwise stated, values of Shear Strength were determined in situ by CET using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 120 kPa in TP/BH1 & 130 kPa in BH2.
2. Unless specifically noted the profiles have not been related to a site datum.

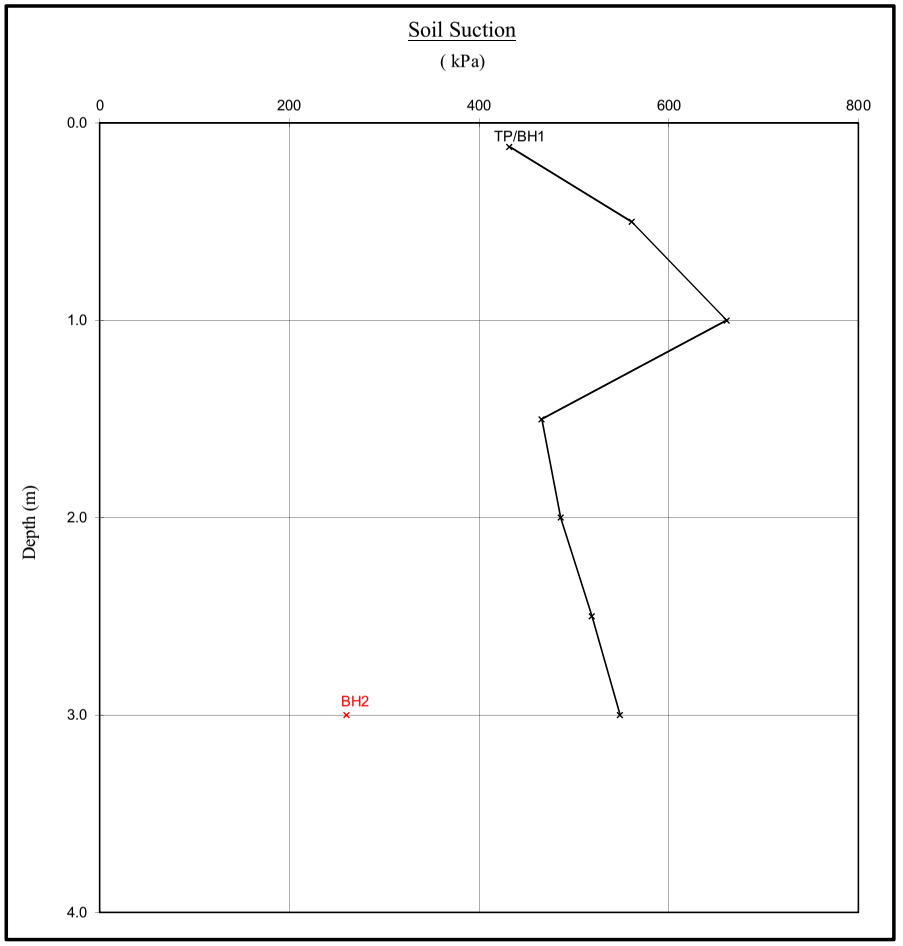
Moisture Content Profiles

Soil Suction Profiles

Our Ref : 287927
Location : 33, Gloucester Crescent, London, NW1
Work carried out for: Crawford Claims Management

Date Sampled : 9/12/15 & 7/1/16
Date Received : 10/12/15&8/1/16
Date Tested : 14/12/15&8/1/16
Date of Report : 21/12/15&15/1/16





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.

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: **287927** Date: **11/01/2016** Order No: **779117** EPSL Ref: **R13270**	Site: **33 Gloucester Crescent,** 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**
TP1 (USF)	1.5 mm	Platanus spp. 5 roots	Positive
BH1 (0.5-1.2m)	1 mm	Platanus spp. 4 roots	Positive
BH2 (0- 1.5m)	2 mm	Platanus spp. 4 roots	Positive

Platanus spp. include London plane and Oriental plane.

MDM

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