SITE INVESTIGATION
FACTUAL REPORT

Report No:	263257
Client:	Crawford Claims Management
Site:	88 Savernake Road, London
Client Ref:	SU1500403-
Date of Visit:	28/05/2015

Home Emergency Response - Subsidence Investigation - Drainage Services – Crack & Level Monitoring – Property Video Surveys

Unit E2 First Floor Suite, Boundary Court
Willow Farm Business Park, Castle Donington
Leicestershire, DE74 2NN

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✉ enquiries@cet-uk.com
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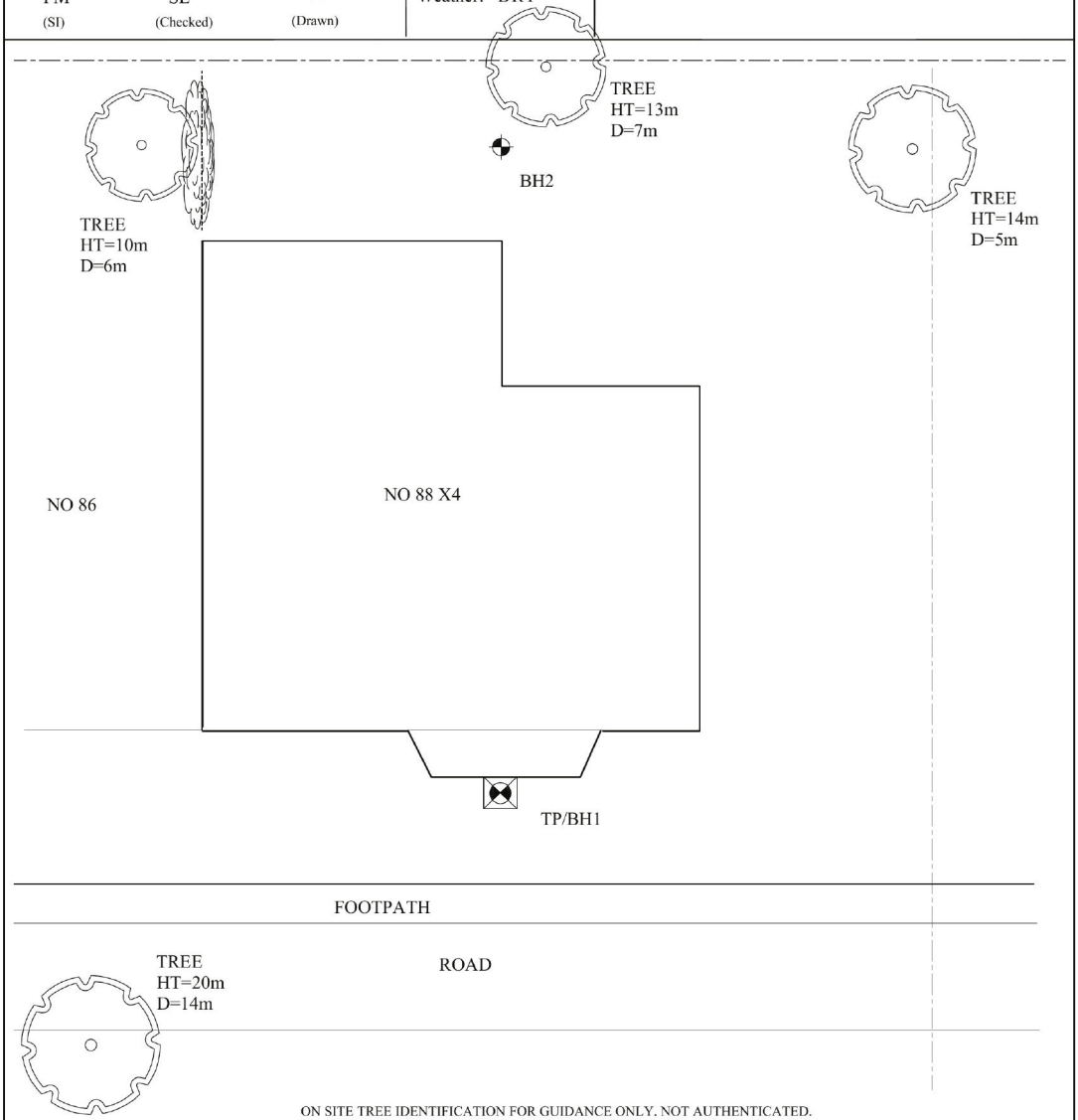
Investigation Layout Plan

Sheet: 1 of 1
Job No: 263257E
Date: 28.05.15

Site: 88 Savernake Road, London NW3
Work carried out for: Crawford Claims Management Ltd

PM (SI) | SE (Checked) | DVC (Drawn)

Weather: DRY



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

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		
Soil Vent Pipe	SVP	Trial Pit	
Waste Gulley	WG	Borehole	
Waste Pipe	WP		

Scale: N.T.S.

Trial Pit No: 1

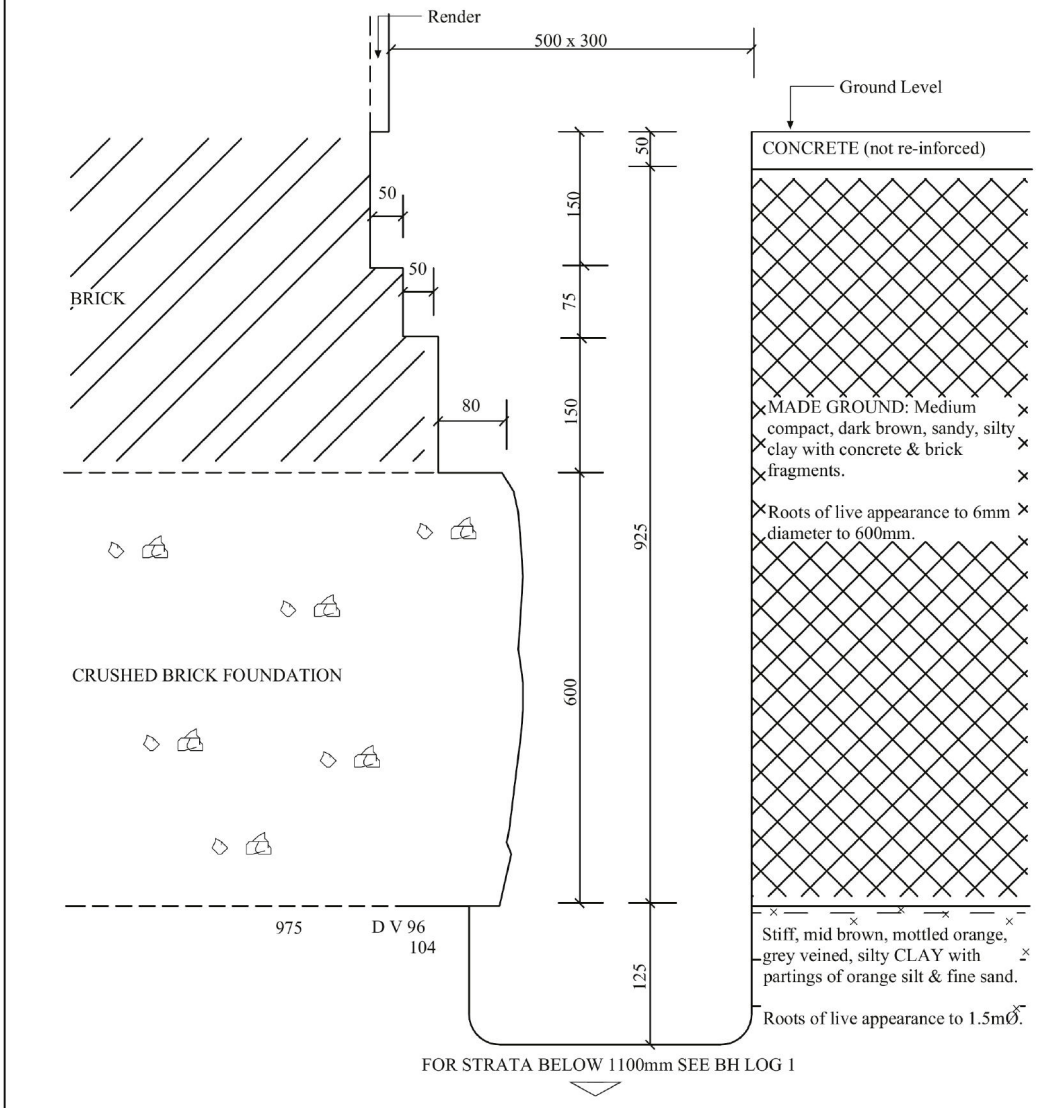
Sheet: 1 of 1
Job No: 263257E
Date: 28.05.15

Site: 88 Savernake Road, NW3

Excavation Method: Hand Tools
Weather: DRY

Drawn by: DVC
Ground Level mOD:

Work carried out for: Crawford Claims Management Ltd



Remarks: All measurements in millimetres.

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

Logged: PM | Checked: SE | Approved:

Scale: N.T.S.

Borehole No: 1		Sheet: 1 of 1 Job No: 263257E	Site: 88 Savernake Road, NW3
Boring Method: CFA		Date: 28.05.15	
Diameter: 100mm	Coordinates:	Ground Level mOD:	Work Carried out for: Crawford Claims Management Ltd

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	1.10							
1.10								No roots observed	
	Stiff, mid brown, mottled orange, grey veined, silty CLAY with partings of orange silt & fine sand.	1.90		D			1.50		
				D	V	90 94	2.00		
				D			2.50		
3.00				D	V	130+ 130+	3.00		
	Borehole ends at 3m								

Remarks:
Borehole dry and open on completion

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

Logged: PM	Checked: SE	Typed by: DVC	Scale: NTS	Weather:

Borehole No: 2

Sheet: 1 of 1

Job No: 263257E

Site: 88 Savernake Road, NW3

Boring Method: Hand Auger

Date: 28.05.15

Diameter: 65mm

Coordinates:

Ground Level mOD:

Work Carried out for: Crawford Claims Management Ltd

Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
G.L	Turf over TOPSOIL	0.10						Roots of live appearance to 2mm diameter from 0.1m to 0.6m	
0.10	MADE GROUND: Medium compact, mid brown, silty clay with ash & brick fragments.	0.50							
0.60	Mid brown/orange, grey veined, silty CLAY with partings of orange silt & fine sand.	0.90		D	V	60 60	1.00	Hair & fibrous roots of live appearance from 0.6m to 1.2m	
1.50				D	V	78 82	1.50	No roots observed below 1.2m	
	Stiff, mid brown/orange, grey veined, silty CLAY with partings of orange silt & fine sand & crystals.	1.50		D	V	104 110	2.00		
				D	V	124 124	2.50		
3.00				D	V	130+ 130+	3.00		
	Borehole ends at 3m								

Remarks: Borehole dry and open on completion

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

D Small disturbed sample
J Jar sample
B Bulk disturbed sample
V Pilcon Vane (kPa)
W Water sample
M Mackintosh Probe

Logged: PM | Checked: SE | Typed by: DVC | Scale: NTS | Weather:

Laboratory Summary Results

Our Ref : 263257

Location : 88, Savernake Road, NW3

Work carried out for: Crawford Claims Management

Date Sampled: 28/05/2015

Date Received : 29/05/2015

Date Tested : 29/05/2015

Date of Report : 05/06/2015

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]
1	U/S 0.975	D	37	<5	71	29	42	0.19	42	CV	168	169			100					
	1.5	D	34	<5							168	413								
	2.0	D	33	<5	78	27	51	0.11	51	CV	168	361			92					
	2.5	D	31	<5							168	476								
	3.0	D	31	<5	76	25	51	0.11	51	CV	168	603			> 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 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

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

UKAS TESTING

8618

Our Ref : 263257

Laboratory Testing Results

Date Sampled : 28/05/2015

Location : 88, Savernake Road, NW3

Date Received : 29/05/2015

Work carried out for: Crawford Claims Management

Date Tested : 29/05/2015

Date of Report : 05/06/2015

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	36	<5	85	30	55	0.11	55	CV	168	271			60					
	1.5	D	35	<5							168	309			80					
	2.0	D	33	<5	81	26	55	0.13	55	CV	168	427			107					
	2.5	D	33	<5							168	560			124					
	3.0	D	32	<5	76	25	51	0.14	51	CV	168	487			> 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

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

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[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 soluble magnesium testing is undertaken to prove otherwise.

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UKAS TESTING

8618

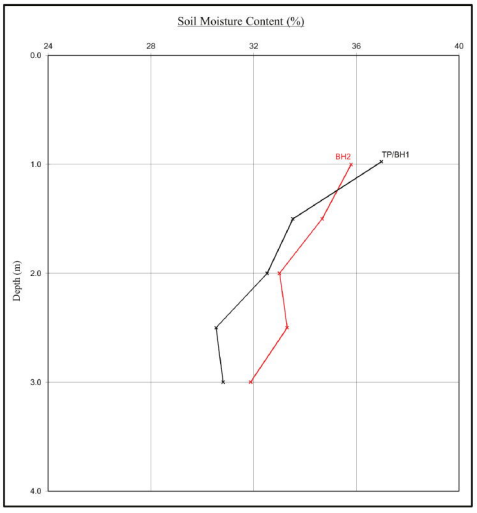
Version: 5BH V1.4 - 11/05/15

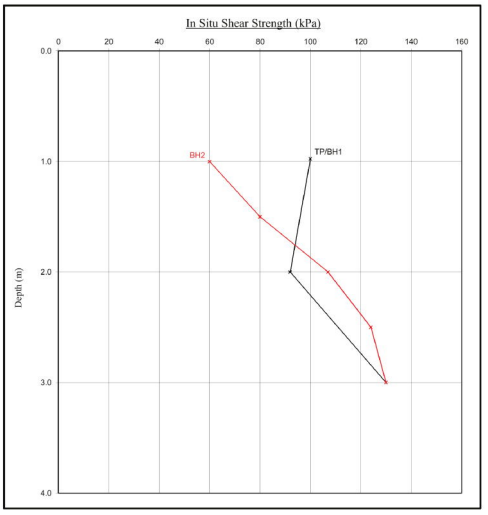
Moisture Content Profiles

Shear Strength Profiles

Our Ref : 263257
Location : 88, Savernake Road, NW3
Work carried out for: Crawford Claims Management

Date Sampled : 28/05/2015
Date Received : 29/05/2015
Date Tested : 29/05/2015
Date of Report : 05/06/2015





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.

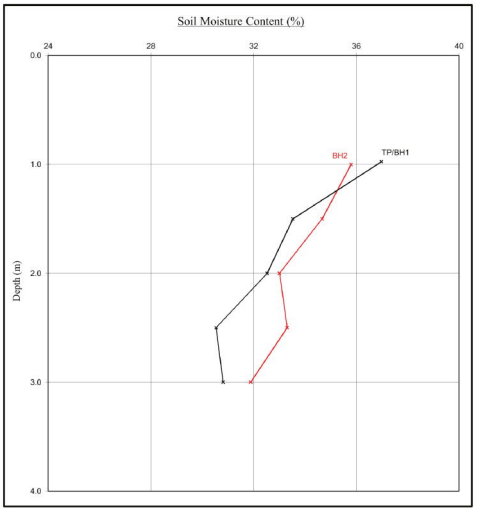
Note
1. Unless otherwise stated, values of Shear Strength were determined in situ by CET using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 130 kPa.
2. Unless specifically noted the profiles have not been related to a site datum.

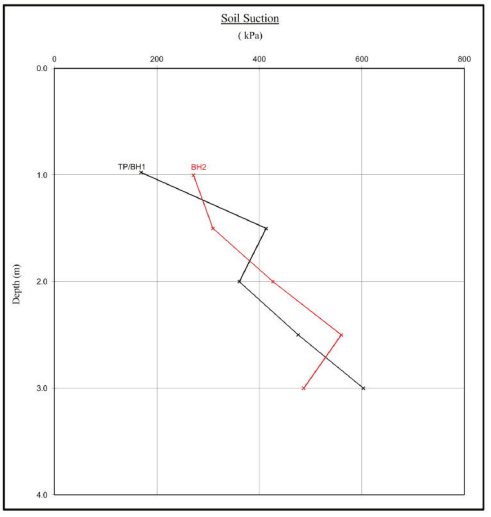
Moisture Content Profiles

Soil Suction Profiles

Our Ref : 263257
Location : 88, Savernake Road, NW3
Work carried out for: Crawford Claims Management

Date Sampled : 28/05/2015
Date Received : 29/05/2015
Date Tested : 29/05/2015
Date of Report : 05/06/2015





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: **263257** Date: **02/06/2015** Order No: **706427** EPSL Ref: **R11514**	Site: **88 Savernake Rd, NW3,** 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	Monocotyledon spp. 4 roots	Negative
TP1 (USF)	<1 mm	probably Quercus spp. or Castanea spp. *	Positive

* Very juvenile

Monocotyledon spp. include palms, grasses, bamboos and lilies.
Quercus spp. are oaks. Castanea spp. include sweet chestnut.

[redacted] [redacted]

MDM DPA

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