

SITE INVESTIGATION FACTUAL REPORT

Report No: [REDACTED]
Client: Cunningham Lindsey - Maidstone
Site: 15 Fairhazel Gardens, London
Client Ref: 7758982-15 [REDACTED]
Date of Visit: 11/11/2014



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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CET is the trading name of CET Structures Ltd
Registered in England No. 02527130

Investigation Layout Plan

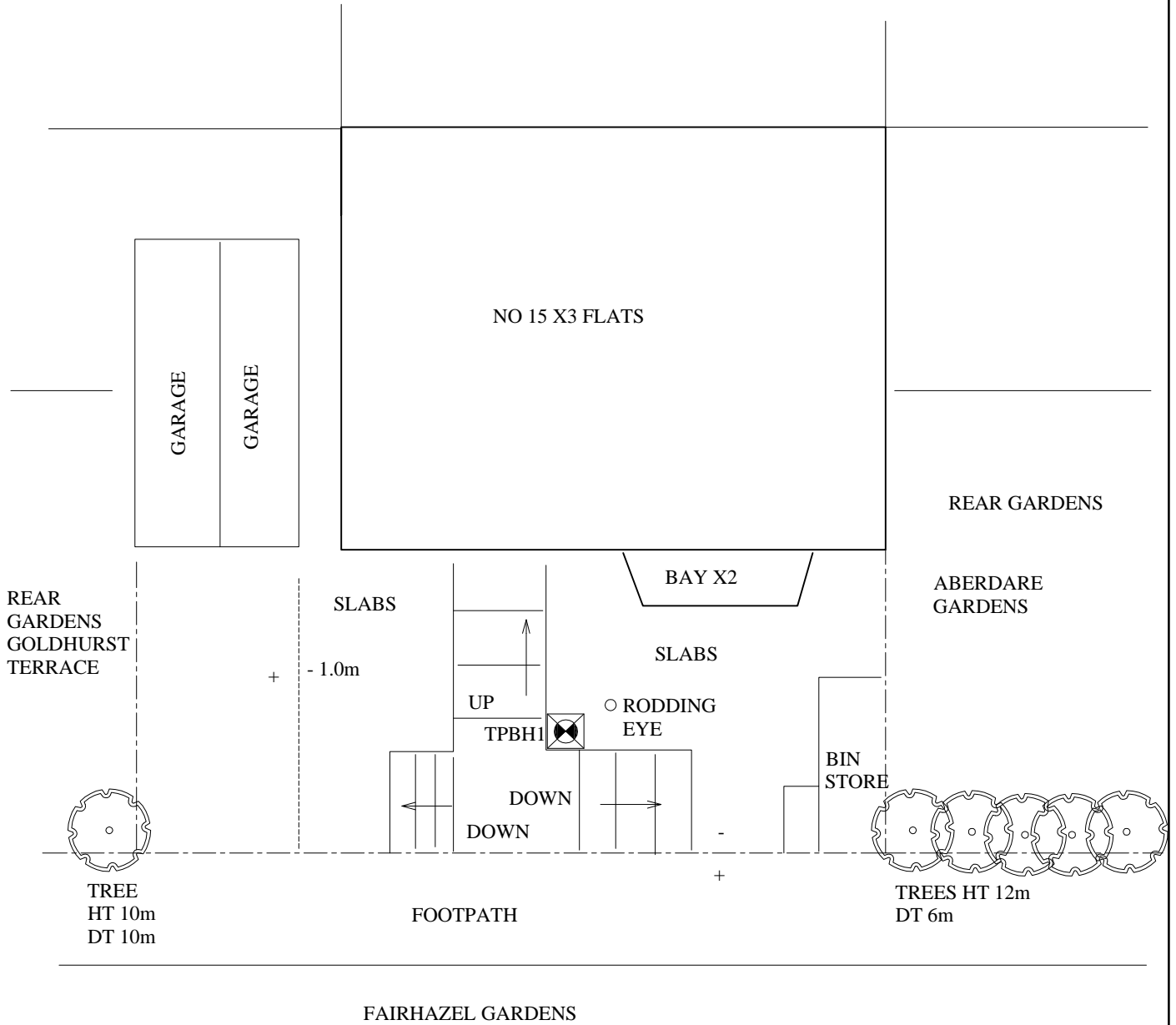
Sheet: 1 of 1
Job No: 220468E
Date: 11/11/14

Site: 15, Fairhazel Gardens, NW6

MH (SI) SE (Checked) Jo F (Drawn)

Weather: Dry

Work carried out for: Cunningham Lindsey



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Key:

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

Surface Water Drain

Foul Water Drain

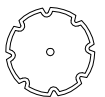
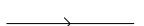
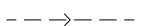
Tree / Bush

(approx. ht in m)

Trial Pit

Borehole

O/D - Open Discharge



Scale: N.T.S.

Trial Pit No: 1

Sheet: 1 of 1
 Job No: 220468E
 Date: 11/1/14

Site: 15, Fairhazel Gardens, NW6

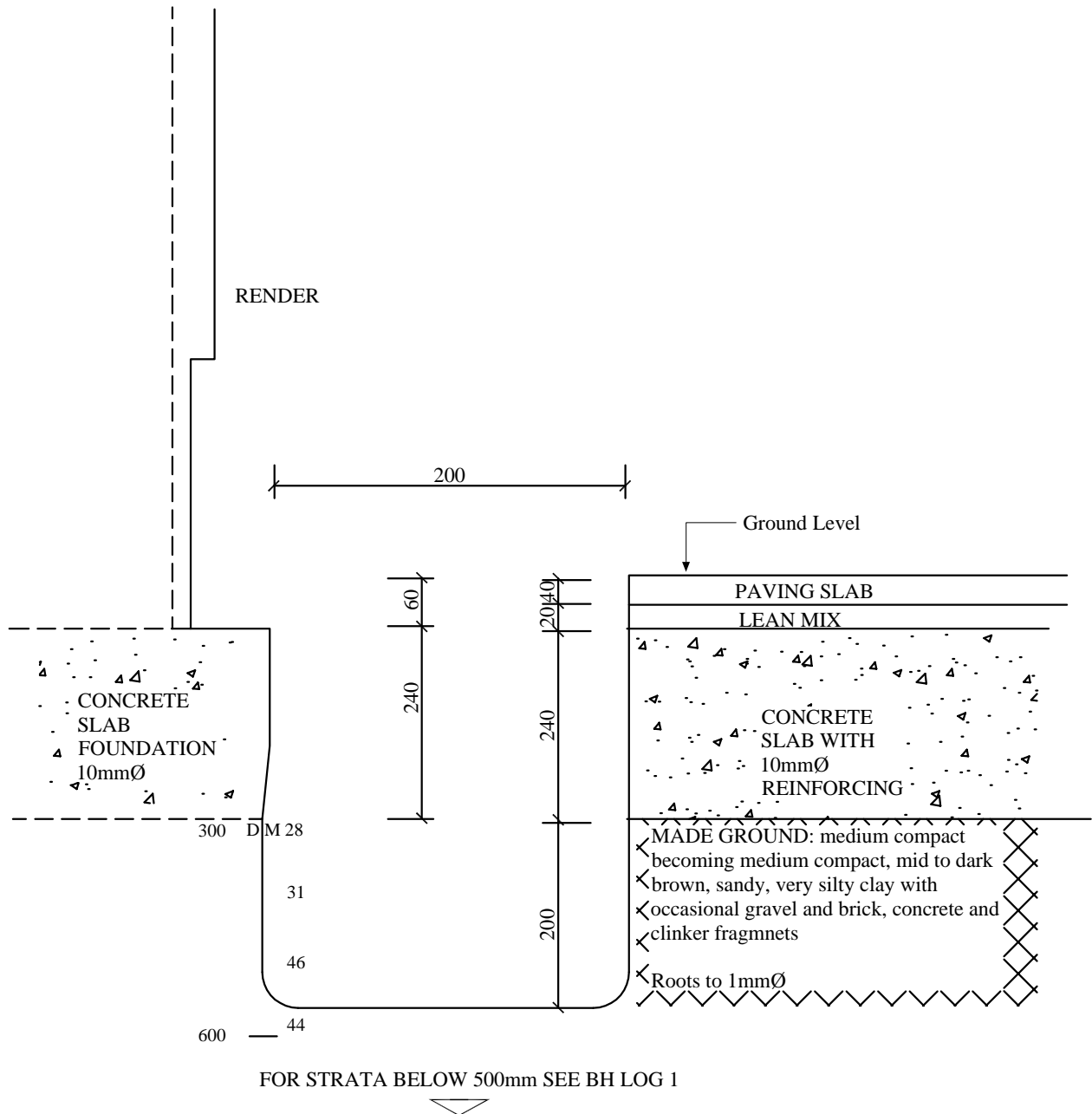
Excavation Method: 200mm core drill

Drawn by: Jo F

Work carried out for: Cunningham Lindsey

Weather: Dry

Ground Level mOD:



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: MH

Checked By: SE

Approved:

Scale: N.T.S.

Borehole No: 1		Sheet: 1 of 1			Site: 15, Fairhazel Gardens, NW6				
Boring Method: CFA		Job No: 220468E			Date: 11/11/2014				
Diameter: 100mm		Coordinates:			Ground Level mOD:		Work Carried out for: Cunningham Lindsey		
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Result	Depth (m)	Field Records/Comments	Depth to water (m)
0.50	As trial pit 1	0.50							
0.80	MADE GROUND: medium compact to compact, mid to dark brown, sandy, very silty clay with occasional gravel and brick, concrete and clinker fragments	0.30						Roots to 1mm diameter to 1.7m	
1.60	Very stiff, mid brown / orange, grey veined silty CLAY with partings of orange and brown silt and fine sand with occasional gravel	0.80	___x ___ ___ x___	D	V	140+ 140+	1.00 1.50		
2.00	Very stiff, mid brown, grey veined silty CLAY with partings of orange and brown silt and fine sand with occasional claystone nodules	0.40	___x ___ ___ ___	D	V	140+ 140+		Dead and decomposing root fragments to 5.0m	
5.00	Very stiff as above with occasional crystals	3.00	___x ___ ___ ___ x___ ___ ___ ___ x.____ ___ ___ ___ ___ ___ x.____ ___ ___ ___ x.____	D	V	140+ 140+	2.50 3.00 3.50 4.00 4.50		
	Borehole ends at 5.0m				D	V 140+ 140+	5.00		
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: MH	Checked: SE	Approved:			Scale: NTS	Weather: Dry			

Our Ref : 220468

Laboratory Testing Results

Date Sampled: 11/11/2014

Location : 15, Fairhazel Gardens, NW6

Date Received : 12/11/2014

Work carried out for: Cunningham Lindsey - Maidstone

Date Tested : 12/11/2014

Date of Report : 21/11/2014

Sample Ref		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) [8]	Soil Sample Suction (kPa)	In situ Shear Vane Strength (kPa) [9]	Organic Content (%) [10]	pH Value [11]	Sulphate Content (g/l)		Class [14]
TP/BH No	Depth (m)															SO ₃ [12]	SO ₄ [13]	
1	0.30(U/S)	D	29	<5	63	22	41	0.16	41	CH								
	1.0	D	21	<5	57	19	38	0.07	38	CH	168	494	> 140					
	1.5	D	23	16	74	23	51	-0.01	43	CV	168	503						
	2.0	D	26	<5									> 140					
	2.5	D	29	<5	75	24	50	0.09	50	CV	168	579						
	3.0	D	31	<5									> 140					
	3.5	D	34	<5	79	27	52	0.13	52	CV	168	428						
	4.0	D	32	<5									> 140					
	4.5	D	32	<5								168	463					
	5.0	D	31	<5								168	532	> 140				

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] Values of shear strength were determined in situ by CET using

a Pilcon hand vane or Geonor vane (GV).

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

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

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

[13] SO₄ = 1.2 x SO₃

[14] 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

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

Our Ref : 220468

Moisture Content and Suction Profiles

Date Sampled : 11/11/2014

Location : 15, Fairhazel Gardens, NW6

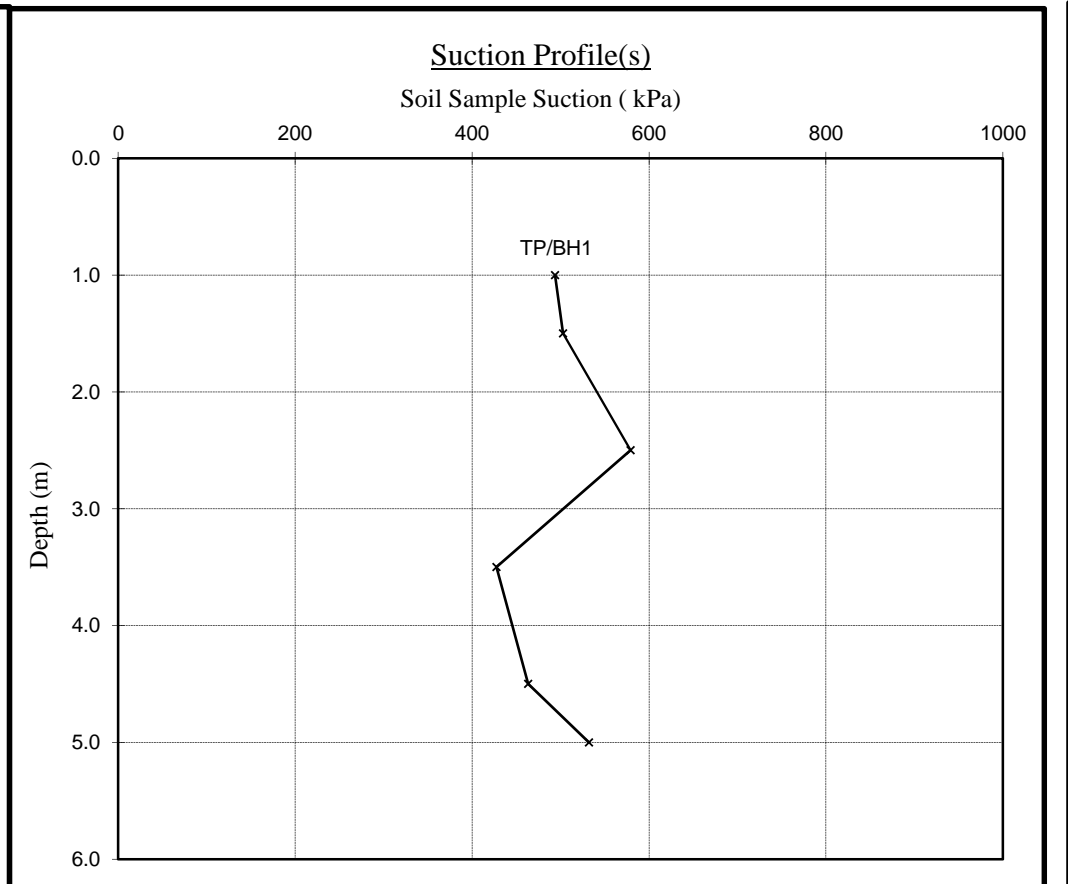
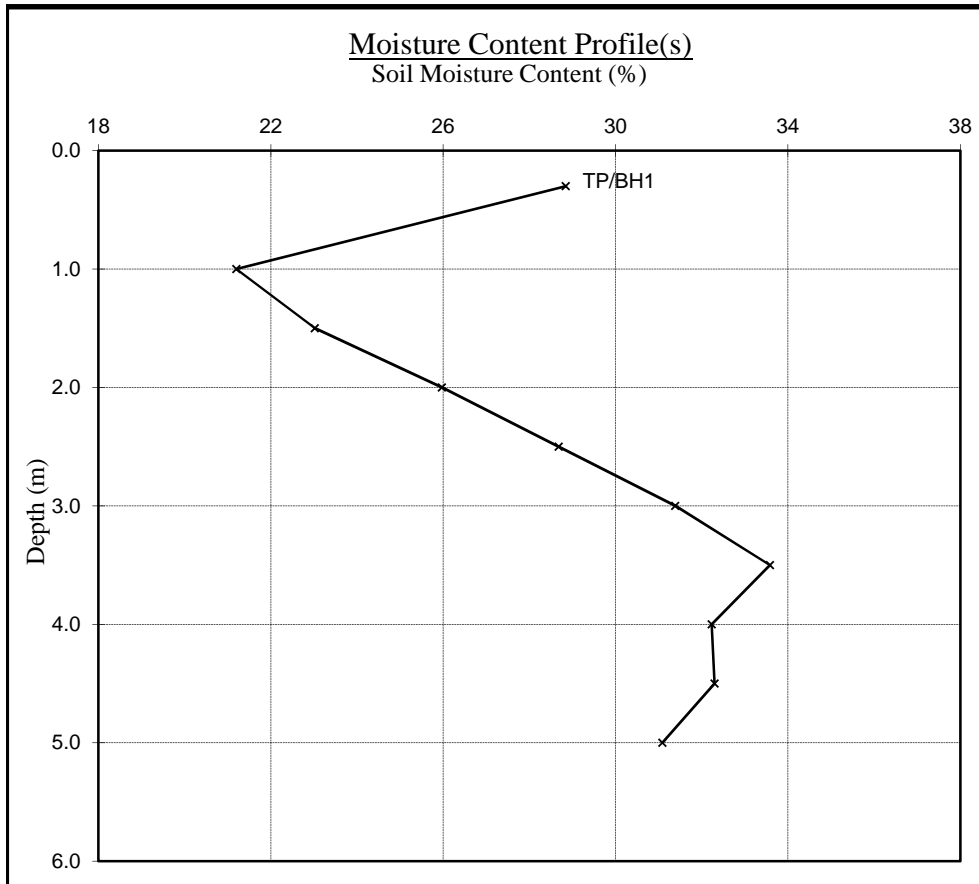
Date Received : 12/11/2014

Work carried out for: Cunningham Lindsey - Maidstone

Note : Unless specifically noted the profiles have not been related to a site datum.

Date Tested : 12/11/2014

Date of Report : 21/11/2014



Notes

1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clays) at shallow depths.

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.

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Moisture Content and Shear Strength Profiles

Date Sampled : 11/11/2014

Location : 15, Fairhazel Gardens, NW6

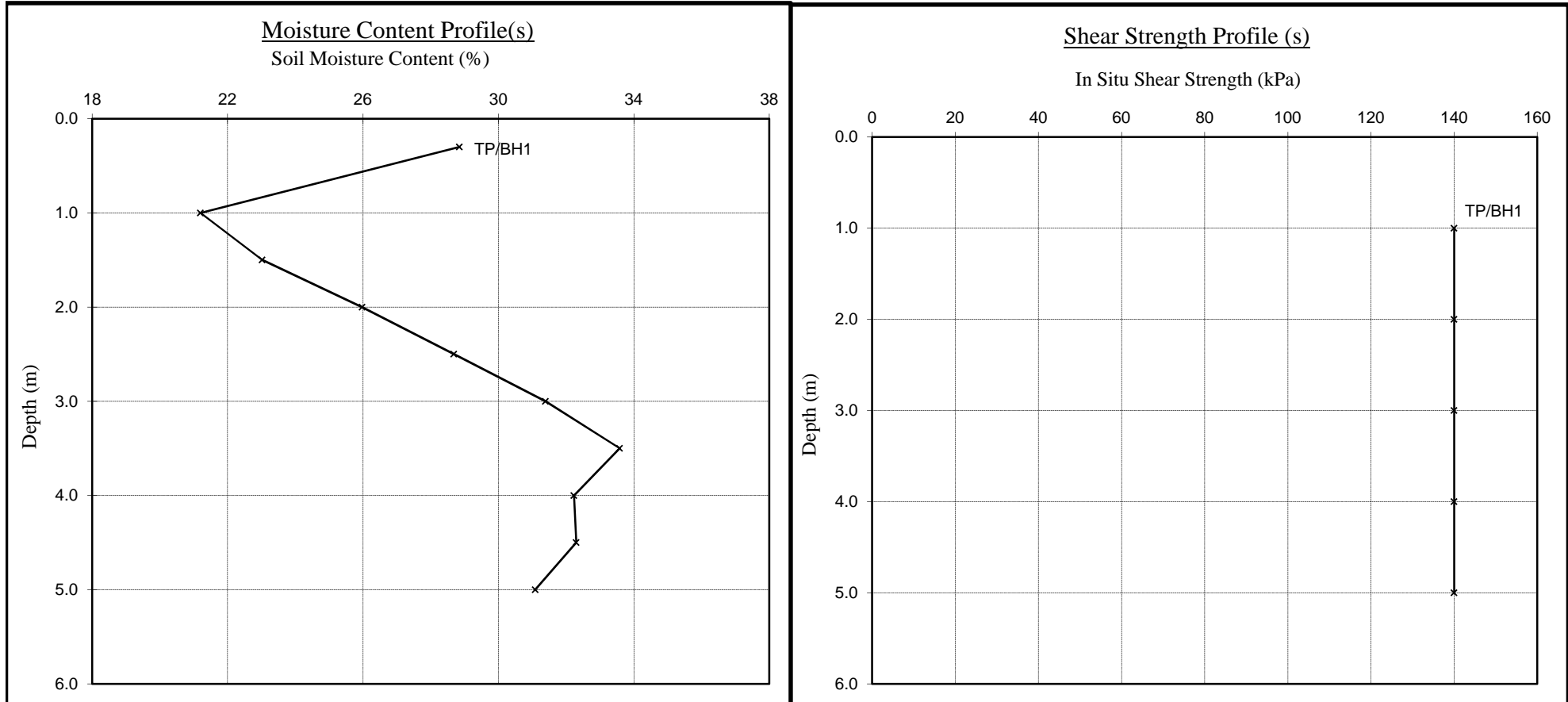
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Date Tested : 12/11/2014

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Notes

1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clays) at shallow depths.

Note

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 140 kPa.

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Moisture Content and Suction Profiles

Date Sampled : 11/11/2014

Location : 15, Fairhazel Gardens, NW6

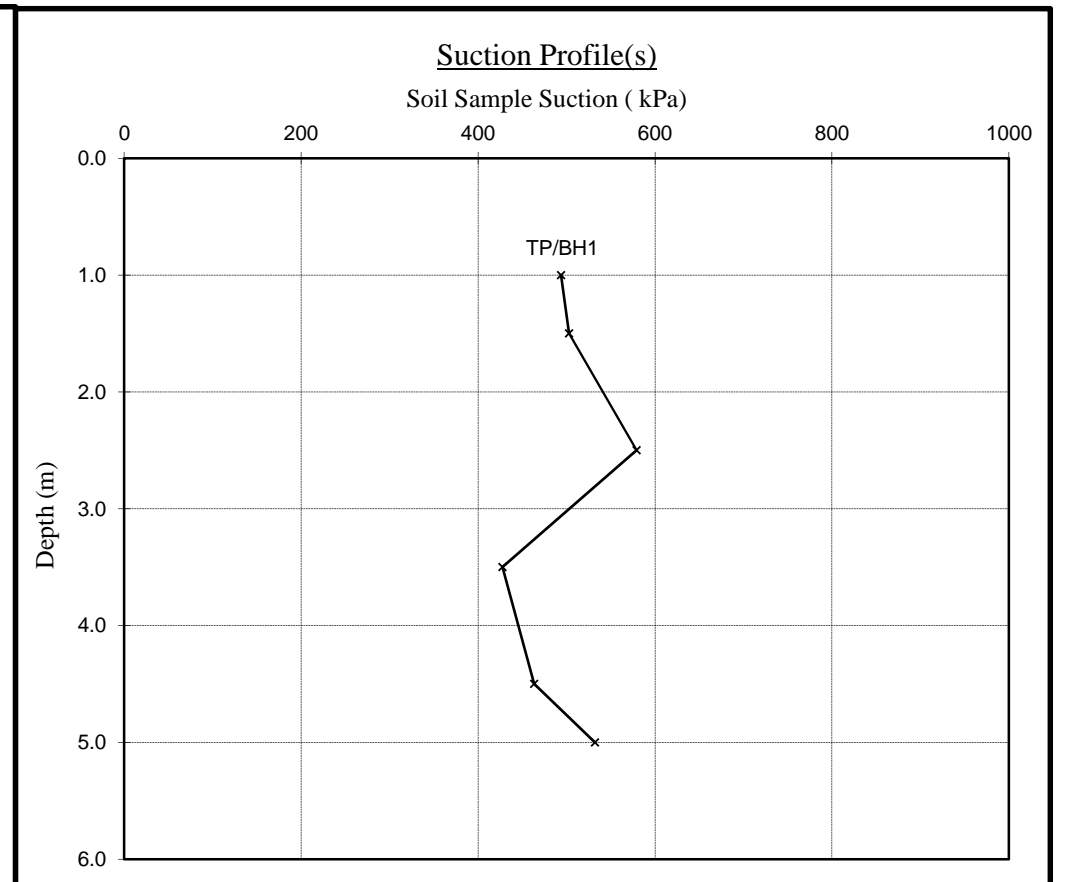
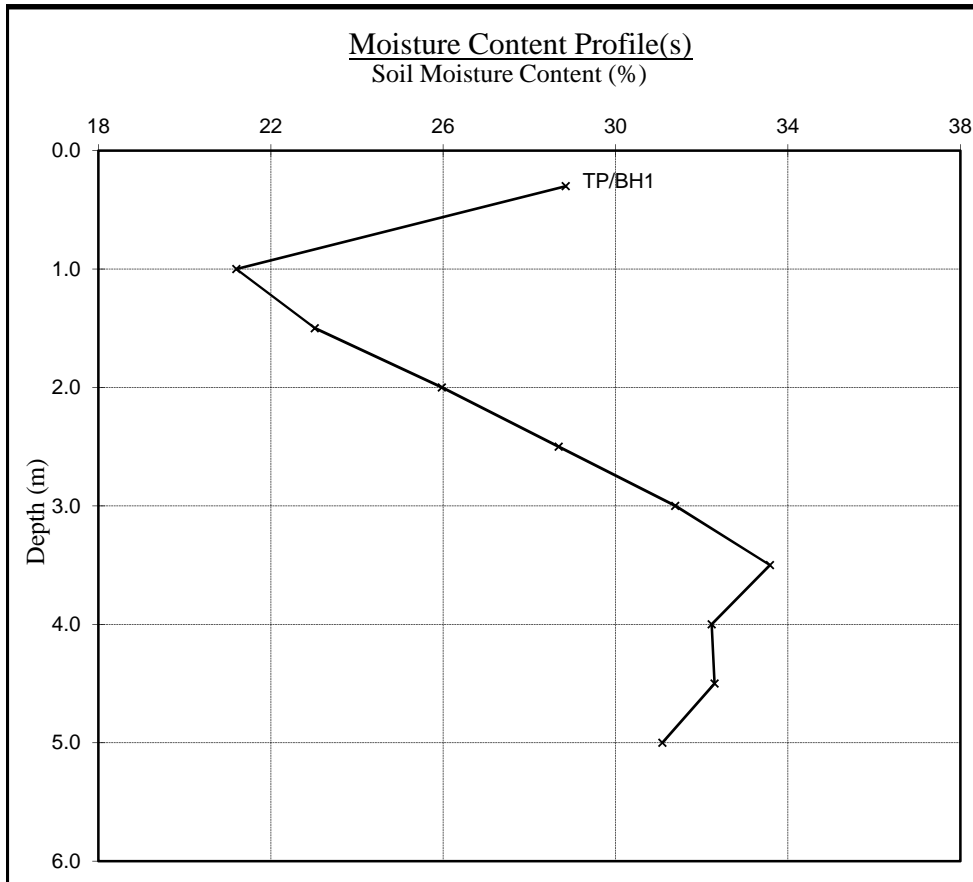
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EPSL**European Plant Science Laboratory**

Sheet: 1 of 1

Job No: 220468

Date: 27/11/2014

Order No: 632604

EPSL Ref: R9467

Site: 15 Fairhazel Gardens, London,

Work carried
out for: Cunningham Lindsey***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 -

<u>Trial pit/ Borehole number</u>	<u>Root diameter (mm)</u>	<u>Tree, shrub or climber from which root originates</u>	<u>Result of starch test</u>
TP1 (USF)	1.5 mm	Platanus spp. 5 roots	Positive
BH1 (0.4-1.7m)	1.5 mm	Platanus spp. 5 roots	Positive

Platanus spp. include London plane and Oriental plane.



MDM



DPA

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Telephone: 01248 672 652

e-mail: lab@innovation-environmental.co.uk

Head of Laboratory Services : MD Mitchell B.Sc. (Hons), M.Phil.

Plant Anatomist : Dr G S Turner B.Sc. (Hons), M.Sc., Ph.D

Plant Anatomist : Dr D P Aebischer B.Sc. (Hons), M.Sc., Ph.D

Consultant: Dr M P Denne B.Sc. (Hons), M.Sc., Ph.D

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