PROPERTY ASSURANCE
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SITE INVESTIGATION
FACTUAL REPORT

Report No:	148724
Client:	Cunningham Lindsey - Maidstone
Site:	13 Laurier Road London
Client Ref:	[redacted]
Date of Visit:	07/08/2013

ISO 9001 REGISTERED FIRM
ISO 14001 REGISTERED FIRM
OHSAS 18001 REGISTERED FIRM
Link-up Qualified via Audit
SAFEcontractor APPROVED
CHAS Accredited Contractor
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Home Emergency Response - Subsidence Investigation - Drainage Services – Crack & Level Monitoring – Property Video Surveys

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Investigation Layout Plan

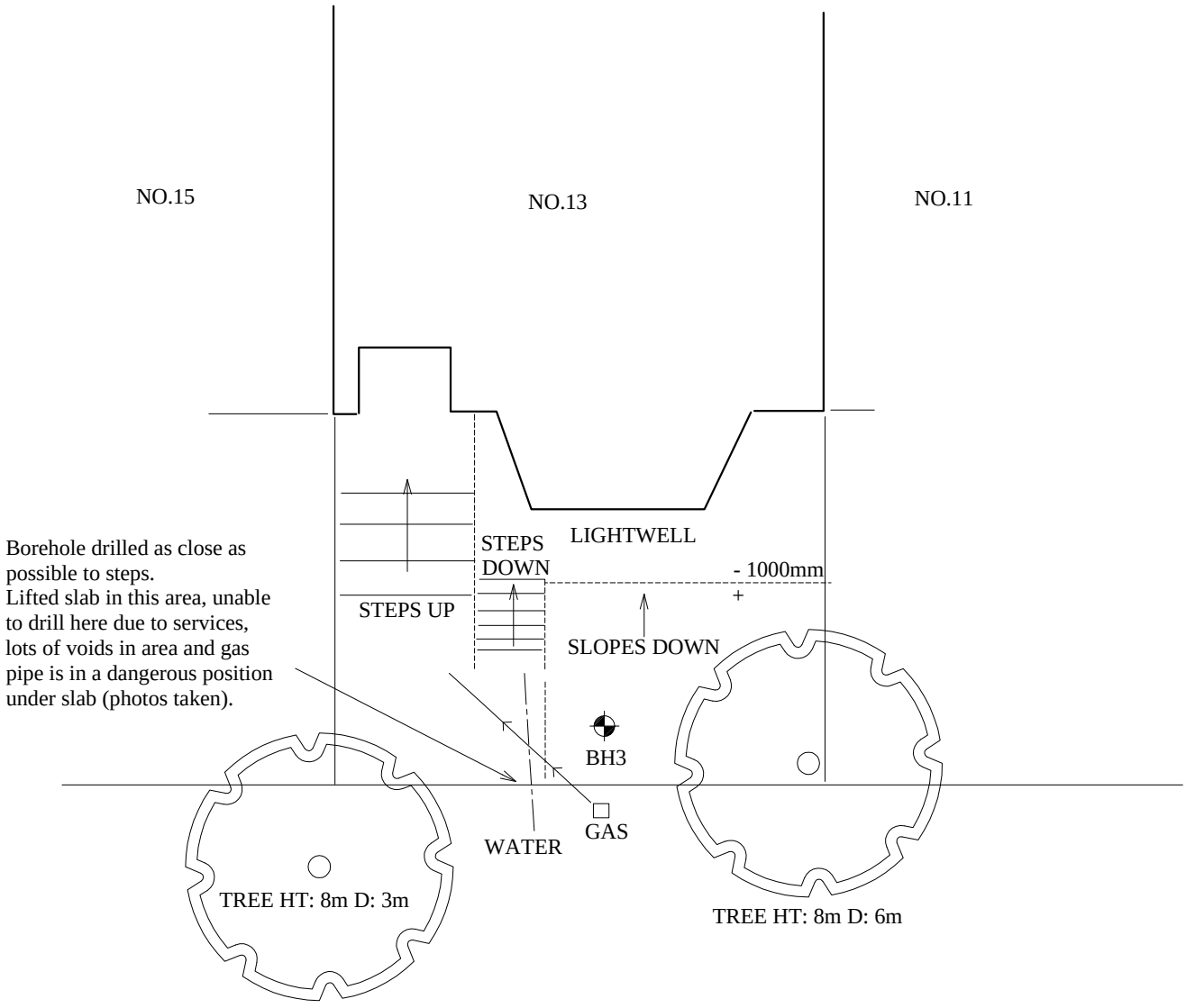
Sheet: 1 of 1
Job No: 148724E
Date: 07/08/2013

Site: 13 Laurier Rd, NW5

Work carried out for: Cunningham Lindsey

MD (SI) PS (Checked) AR (Drawn)

Weather: DRY



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

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

Borehole No: 3

Sheet: 1 of 1

Job No: 148724E

Site: 13 Laurier Road, NW5

Boring Method: CFA

Date: 07/08/2013

Diameter: 100mm

Coordinates:

Ground Level mOD:

Work Carried out for: Cunningham Lindsey

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	Topsoil over MADE GROUND: medium compact dark brown/orange, silty clay with occasional gravel, brick fragments & stone fragments	0.90		D	M	14 19 23 20	0.50	Roots to 1mm diameter to 3.0m	
0.90	MADE GROUND: medium compact mid brown/orange, as above	1.40		D	M	19 21 21 25	1.00		
				D			1.50		
2.30				D	M	18 17 50(60)	2.00		
	Stiff mid brown/orange, silty CLAY with partings of orange & brown silt & fine sand & occasional claystone nodules	1.20		D		25	2.50		
				D	V	76 82	3.00	No roots observed below 3.0m	
3.50				D			3.50		
	Stiff as above, with very occaisonal gravel	0.50							
4.00				D	V	130+ 130+	4.00		
	Stiff mid brown/orange, grey veined silty CLAY with partings of orange & brown silt & fine sand	1.00		D			4.50		
5.00				D	V	130+ 130+	5.00		
	BH ends at 5.0m								

Remarks:

BH dry & 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: MD

Checked: PS

Drawn by SL

Scale: NTS

Weather: Dry

Our Ref : 148724

Laboratory Testing Results

Date Sampled: 07/08/2013

Location : 13, Laurier Road, NW5

Work carried out for: Cunningham Lindsey - Maidstone

Date Received : 08/08/2013

Date Tested : 08/08/2013

Date of Report : 16/08/2013

Sample Ref		Type	Moisture Content	Soil Fraction	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Modified Plasticity Index	Soil Class	Filter Paper Contact Time	Soil Sample Suction	In situ Shear Vane Strength	Organic Content	pH Value	Sulphate Content (g / l)		Class
TP/BH No	Depth (m)		(%) *[1]*	> 0.425mm (%) *[2]*	(%) *[3]*	(%) *[4]*	(%) *[5]*	*[5]*	(%) [6]	*[7]*	(h) *[8]*	(kPa)	(kPa) *[9]*	(%)*[10]*	*[11]*	SO_3 *[12]*	SO_4 *[13]*	*[14]*
BH3	0.5	D	19	37	58	25	33	-0.17	21	CH								
	1.0	D	17	40														
	1.5	D	23	23	70	24	47	-0.01	36	CV								
	2.0	D	22	19														
	2.5	D	30	<5	74	22	52	0.15	52	CV	168	140						
	3.0	D	27	7									79					
	3.5	D	21	21	59	21	39	0.01	30	CH	168	46						
	4.0	D	30	<5							168	268	> 130					
	4.5	D	30	<5							168	314						
	5.0	D	33	<5							168	248	> 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] 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] $SO_4 = 1.2 \times SO_3$

[14] BRE Special Digest One (Concrete in Aggressive Ground) August 2005
Note that if the SO_4 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

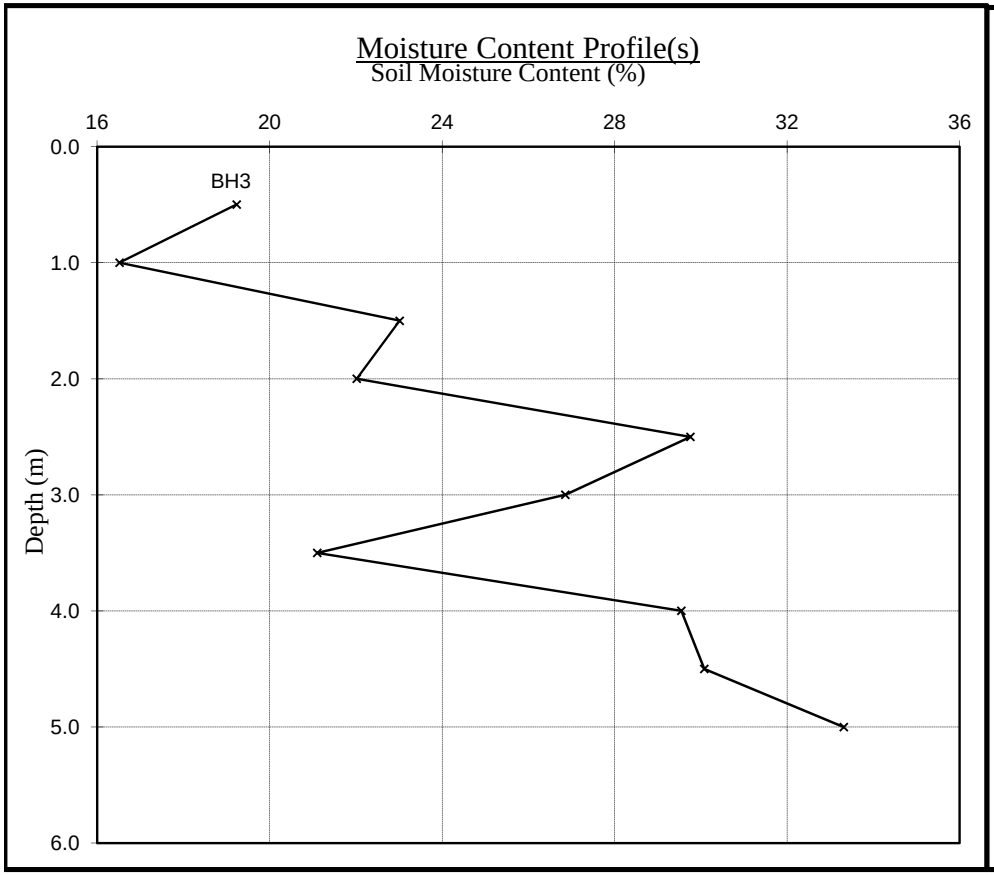
Key

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

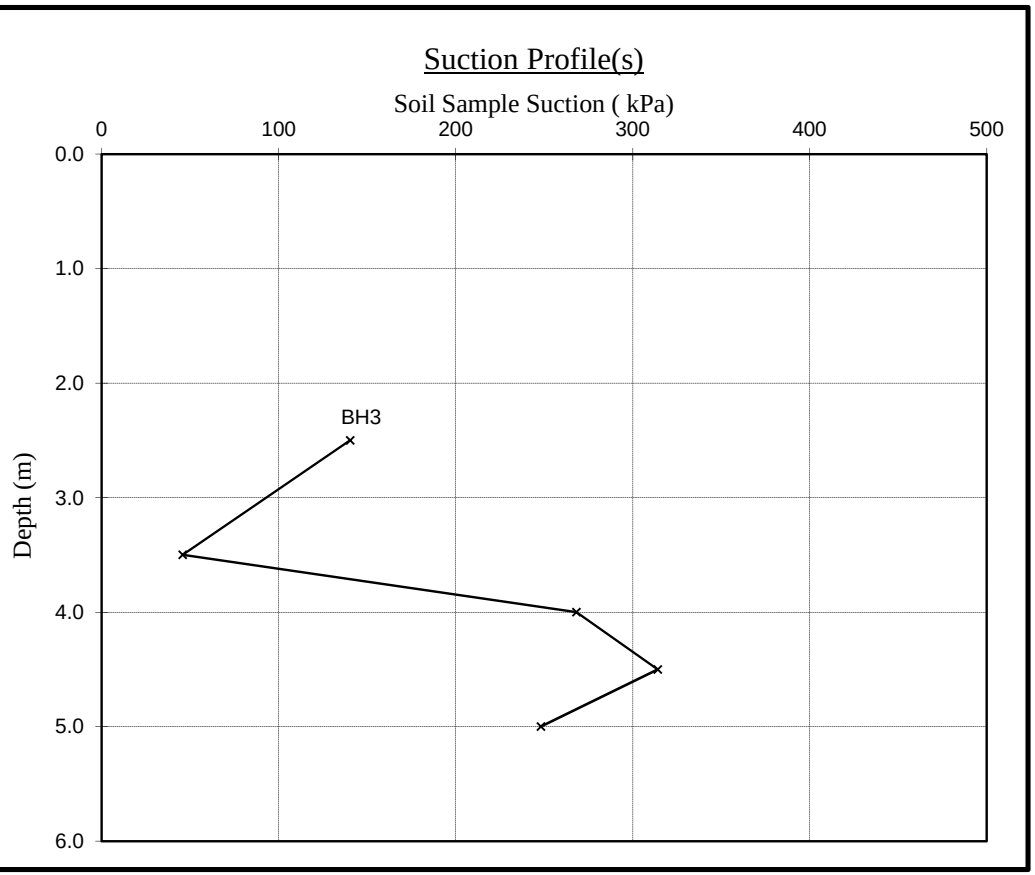
Moisture Content and Suction Profiles

Our Ref :	148724		Date Sampled : 07/08/2013
Location :	13, Laurier Road, NW5		Date Received : 08/08/2013
Work carried out for:	Cunningham Lindsey - Maidstone	Note : Unless specifically noted the profiles have not been related to a site datum.	Date Tested : 08/08/2013
			Date of Report : 16/08/2013

Moisture Content Profile(s)



Suction Profile(s)



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

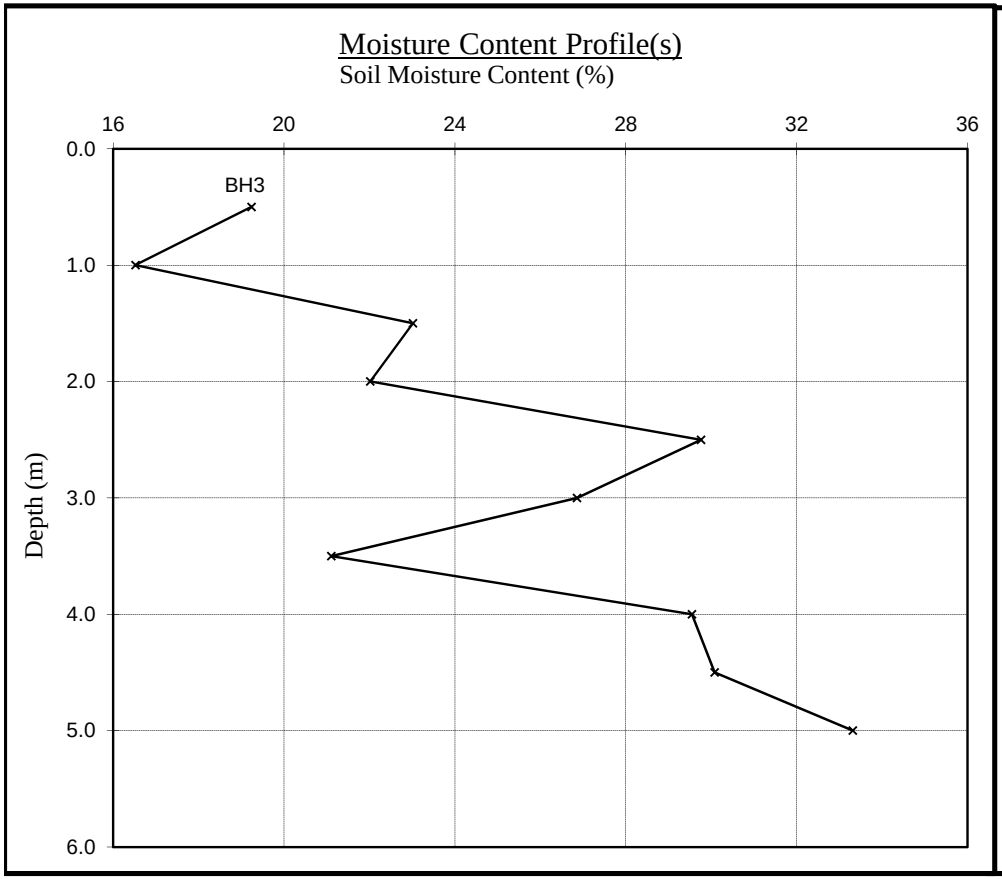
When shown, the theoretical equilibrium suction profiles are based on conventional assumptions associated with London Clay (and similarly overconsolidated clays) at shallow depths. Note that the sample disturbance component is dependant on the method of sampling and any subsequent recompaction. The above 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.

Moisture Content and Shear Strength Profiles

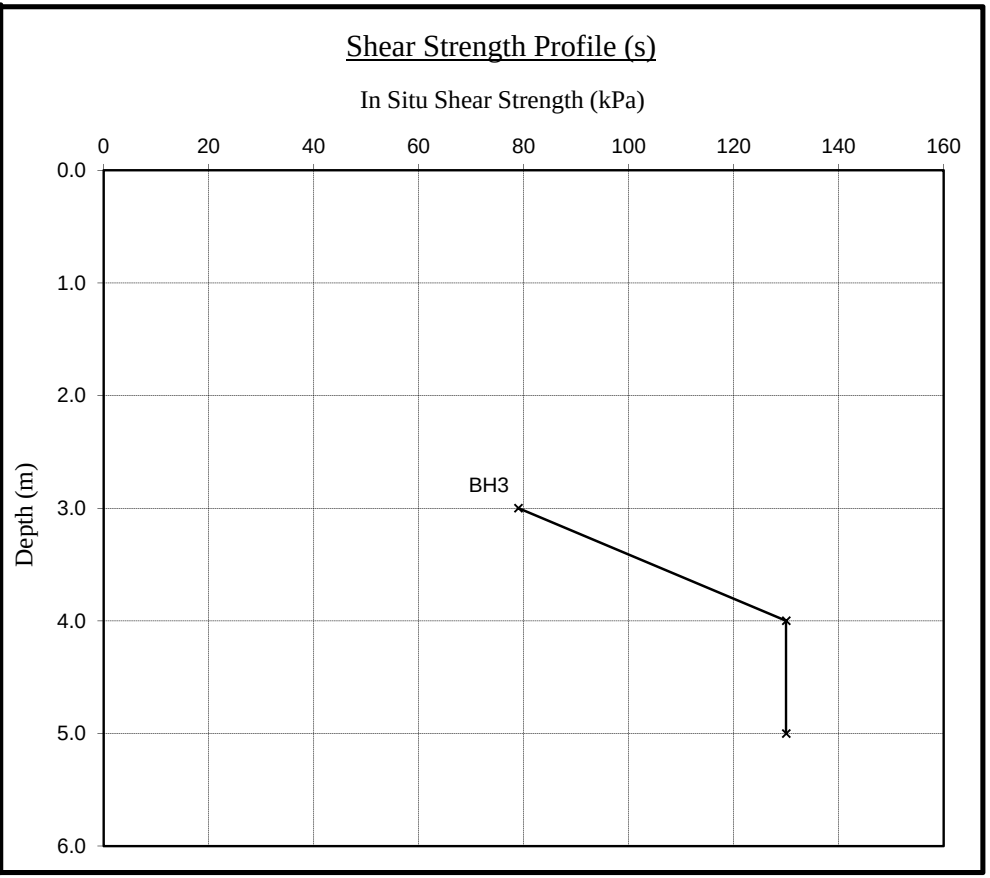
Our Ref :	148724	Date Sampled :	07/08/2013
Location :	13, Laurier Road, NW5	Date Received :	08/08/2013
Work carried out for:	Cunningham Lindsey - Maidstone	Date Tested :	08/08/2013
		Date of Report :	16/08/2013

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

Moisture Content Profile(s)



Shear Strength Profile (s)



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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 130 kPa.

Moisture Content and Suction Profiles

Our Ref :	148724		Date Sampled : 07/08/2013
Location :	13, Laurier Road, NW5		Date Received : 08/08/2013
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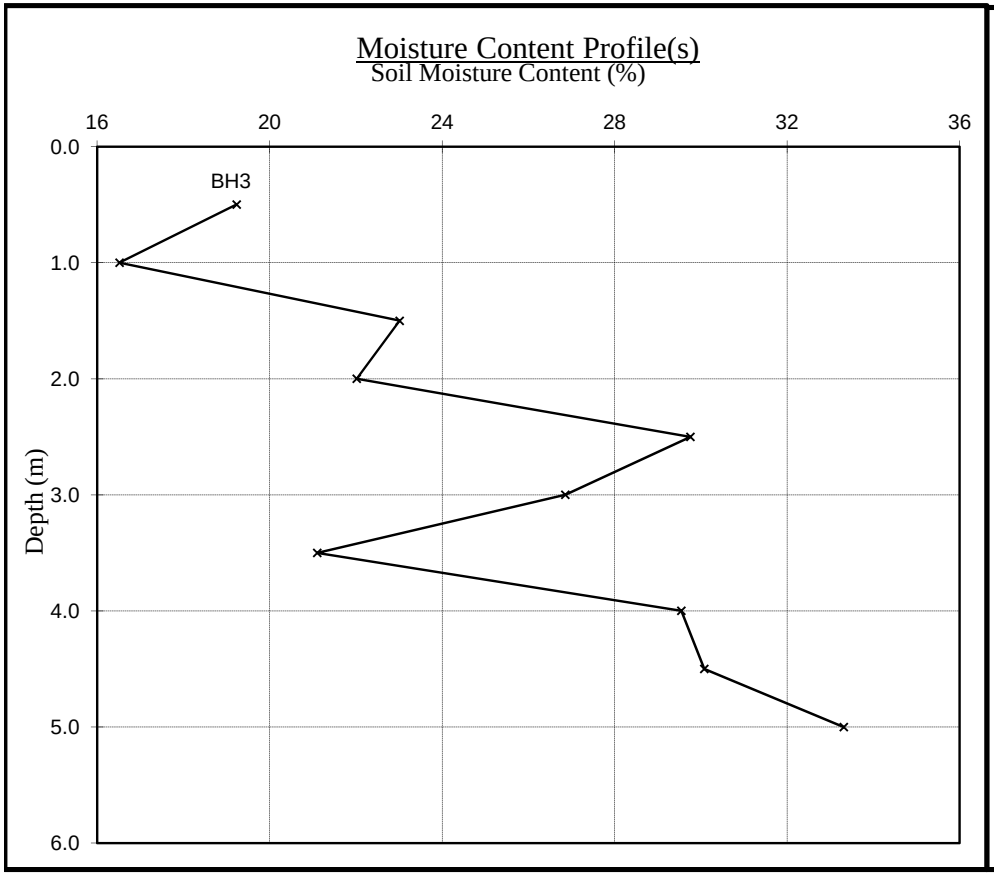
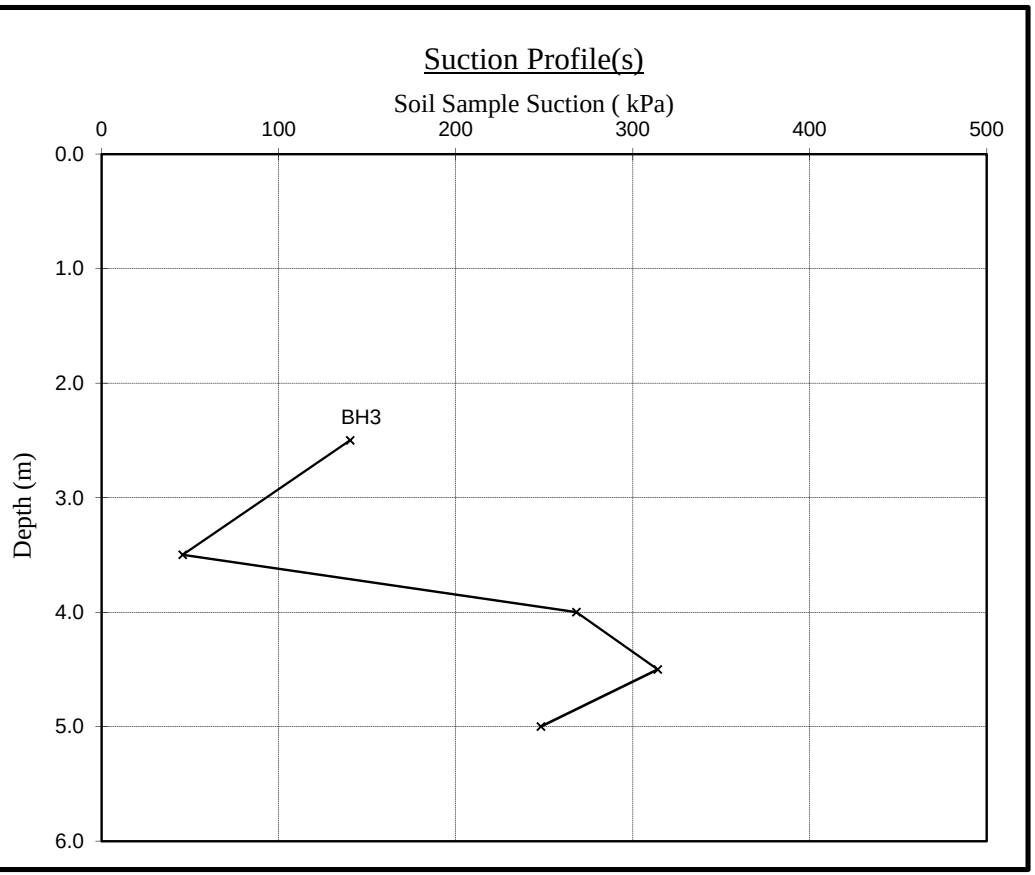


Suction Profile(s)



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EPSL ***European Plant Science Laboratory***	Sheet: 1 of 1 Job No: **148724** Date: **09/08/2013** Order No: **458681** EPSL Ref: **R2794**	Site: **13 Laurier Road, 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 -

Trial pit/ Borehole number	**Root diameter (mm)**	**Tree, shrub or climber from which root originates**	**Result of starch test**
BH1 (to 3m)	1 mm	Fuchsia spp.	Positive
BH1 (to 3m)	<1 mm	Pomoideae gp. 2 roots	Negative
BH1 (to 3m)	<1 mm	Leguminosae spp.	Positive

Fuchsia spp. are common flowering shrubs.
Pomoideae gp include apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam.
Leguminosae spp. include laburnum, Robinia (false acacia or locust), broom, the pagoda tree and the climber wisteria.

MDM

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