

FACTUAL REPORT

OF

INVESTIGATION

AT:- 16, Downside Crescent
LONDON

ON:- 28 February 2012

FOR:-
c/o Cunningham Lindsey - Solent

REF:- 2893347-Mr Nuala Herbert

JOB NO:- 119901

REPORT ISSUED:- 14/03/2012

SPECIALIST CONTRACTING DIVISION

CET SAFEHOUSE LIMITED

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Investigation Layout Plan

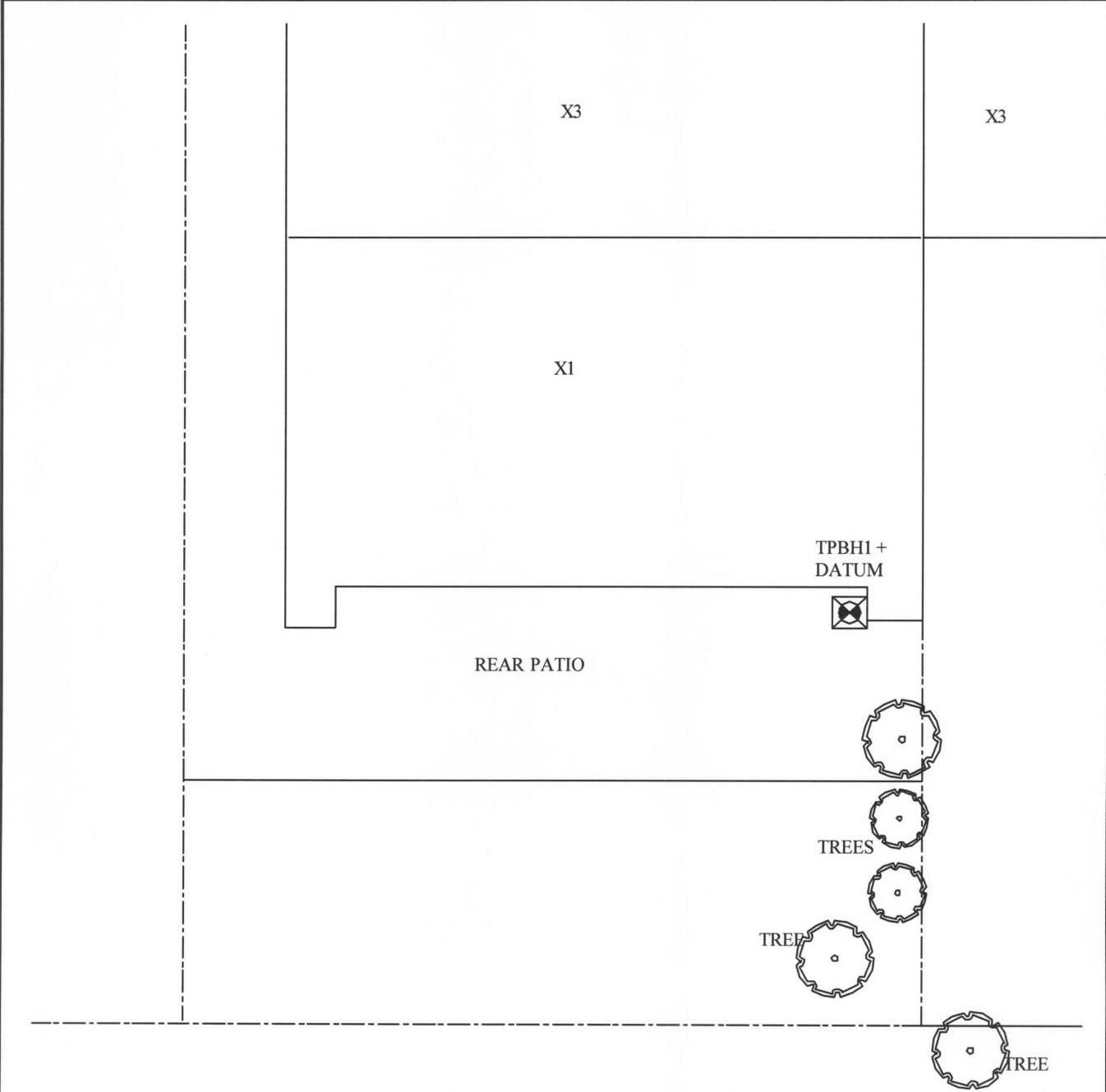
Sheet: 1 of 1
 Job No: 119901E
 Date: 28/02/12

Site: 16, Downside Crescent, NW3

DB (SI) PS (Checked) Jo F (Drawn)

Weather: Dry

Work carried out for: Cunningham Lindsey



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	
Rain Water Gulley	RWG	(approx. ht in m)	
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: 119901E

Date: 28/02/12

Site: 16, Downside Crescent, NW3

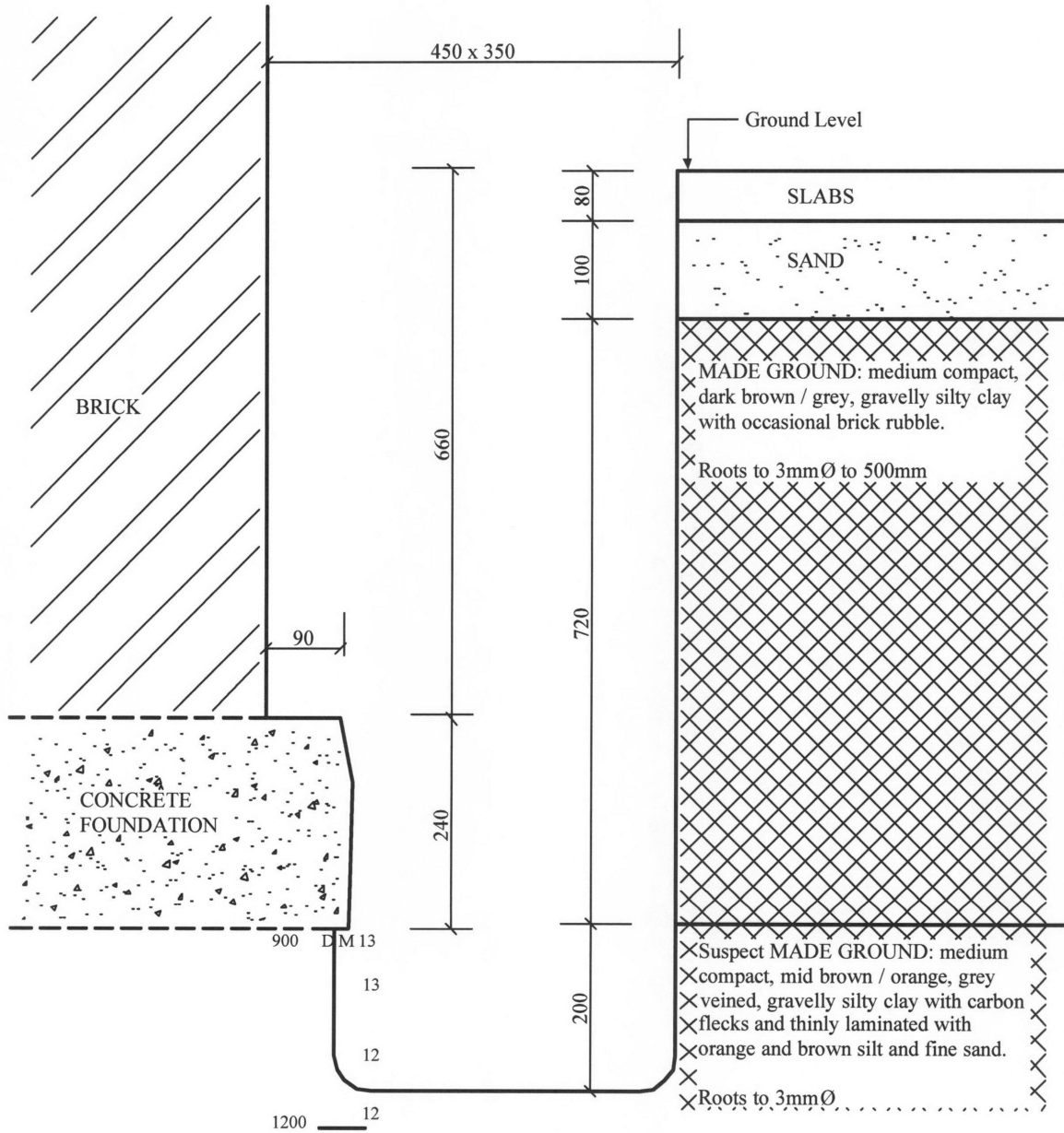
Excavation Method: Hand Tools

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: DB

Checked: PS

Approved:

Scale: N.T.S.

Borehole No: 1		Sheet: 1 of 2		Site: 16, Downside Crescent, NW3					
& Datum		Job No: 119901E							
Boring Method: C.F.A		Date: 28/02/2012							
Diameter: 100mm		Coordinates:		Ground Level mOD:		Work Carried out for: Cunningham Lindsey			
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
1.10	As trial pit 1	1.10							
2.00	Firm, mid brown / orange, grey veined silty CLAY with carbon flecks and thinly laminated with orange and brown silt and fine sand	0.90		D			1.50	Roots to 4mm diameter to 2.0m and 1mm diameter to 2.7m	
2.50	Stiff, mid brown / orange, grey veined silty CLAY with carbon flecks, occasional claystone and thinly laminated with orange and brown silt and fine sand	0.50		D	V	120+ 120+	2.00		
3.00	Stiff, mid brown / orange, grey veined silty CLAY with crystals and carbon flecks and thinly laminated with orange and brown silt and fine sand	2.50		D	V	120+ 120+	2.50	No roots observed below 2.7m	
3.50				D			3.00		
4.00				D	V	120+ 120+	3.50		
4.50				D			4.00		
				D			4.50		
Remarks:				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: DB	Checked: PS	Drawn By: Jo F	Scale: NTS			Weather: Dry			

Borehole No: 1		Sheet: 2 of 2		Site: 16, Downside Crescent, NW3 Cunningham Lindsey							
& Datum		Job No: 119901E								Date: 28/02/2012	
Boring Method: C.F.A	Coordinates:		Ground Level mOD:								
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)		
5.00	Stiff, mid brown / orange, grey veined silty CLAY with crystals and carbon flecks and thinly laminated with orange and brown silt and fine sand			D	V	120+ 120+	5.00				
8.00	Stiff, mid brown / orange, grey veined silty CLAY with crystals and carbon flecks and thinly laminated with orange and brown silt and fine sand	3.00									
	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 5.0m				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: DB	Checked: PS	Drawn by: Jo F	Scale: NTS	Weather: Dry							

Our Ref : 119901
 Location : 16, Downside Crescent
 Work carried out for: Cunningham Lindsey - Solent

Laboratory Testing Results

Date Sampled: 28/02/2012
 Date Received : 29/02/2012
 Date Tested : 01/03/2012
 Date of Report : 12/03/2012

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	0.90(U/S)	D	21	34	56	20	36	0.00	24	CH										
	1.5	D	35	<5	81	23	58	0.20	58	CV	168	77								
	2.0	D	33	<5									> 120							
	2.5	D	32	<5	79	23	55	0.15	55	CV	168	191								
	3.0	D	32	<5									> 120							
	3.5	D	31	<5	76	23	53	0.15	53	CV	168	160								
	4.0	D	32	<5									> 120							
	4.5	D	32	<5								168	192							
	5.0	D	31	<5								168	206	> 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] Values of shear strength were determined in situ by CET Group using

- a Pilon 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 2001

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 : 119901

Location : 16, Downside Crescent

Work carried out for: Cunningham Lindsey - Solent

Moisture Content and Suction Profiles

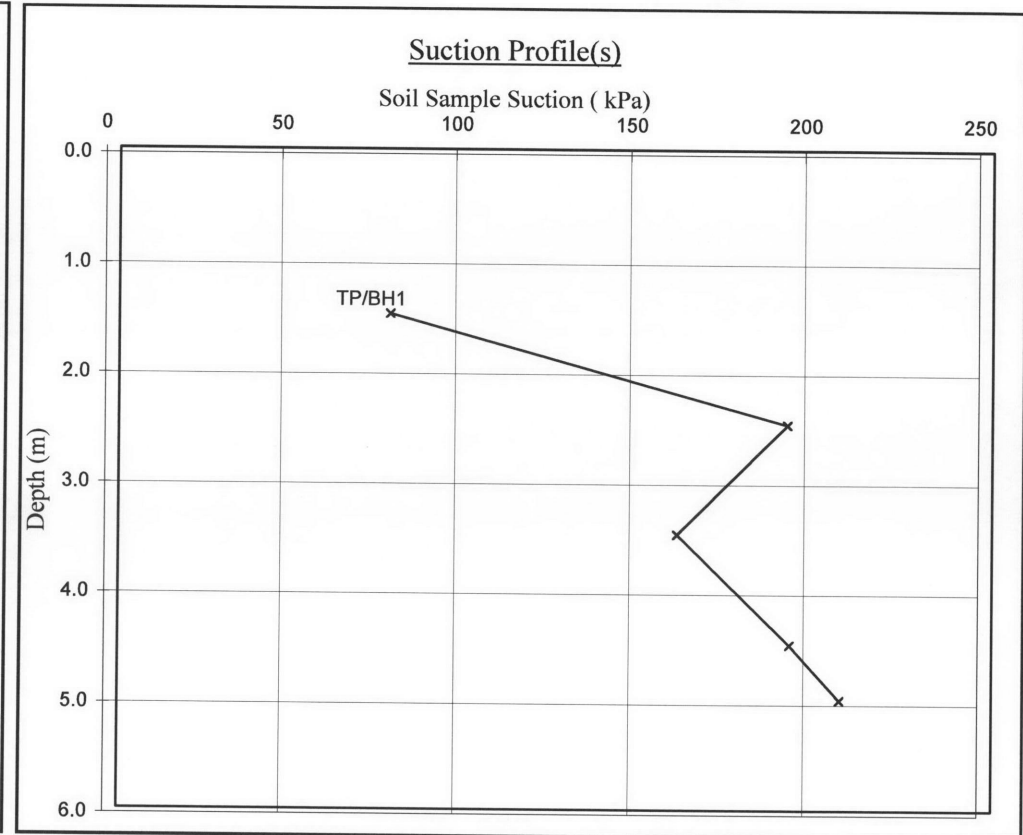
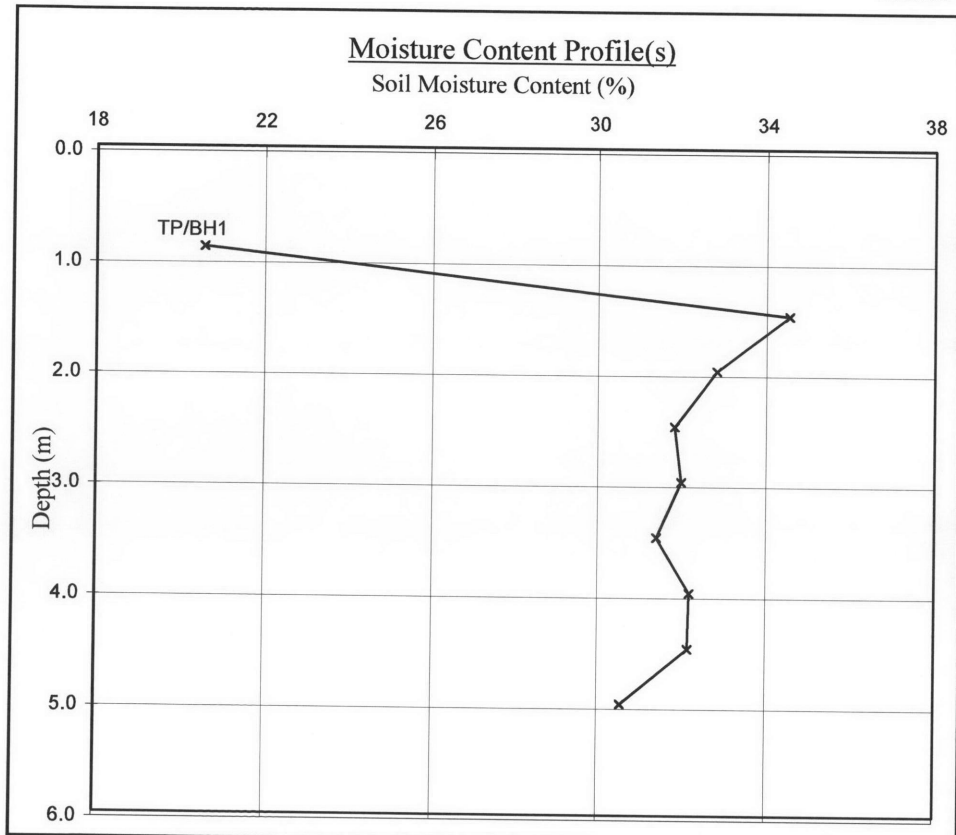
Date Sampled : 28/02/2012

Date Received : 29/02/2012

Date Tested : 01/03/2012

Date of Report : 12/03/2012

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



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.

Our Ref : 119901

Moisture Content and Shear Strength Profiles

Location : 16, Downside Crescent

Work carried out for: Cunningham Lindsey - Solent

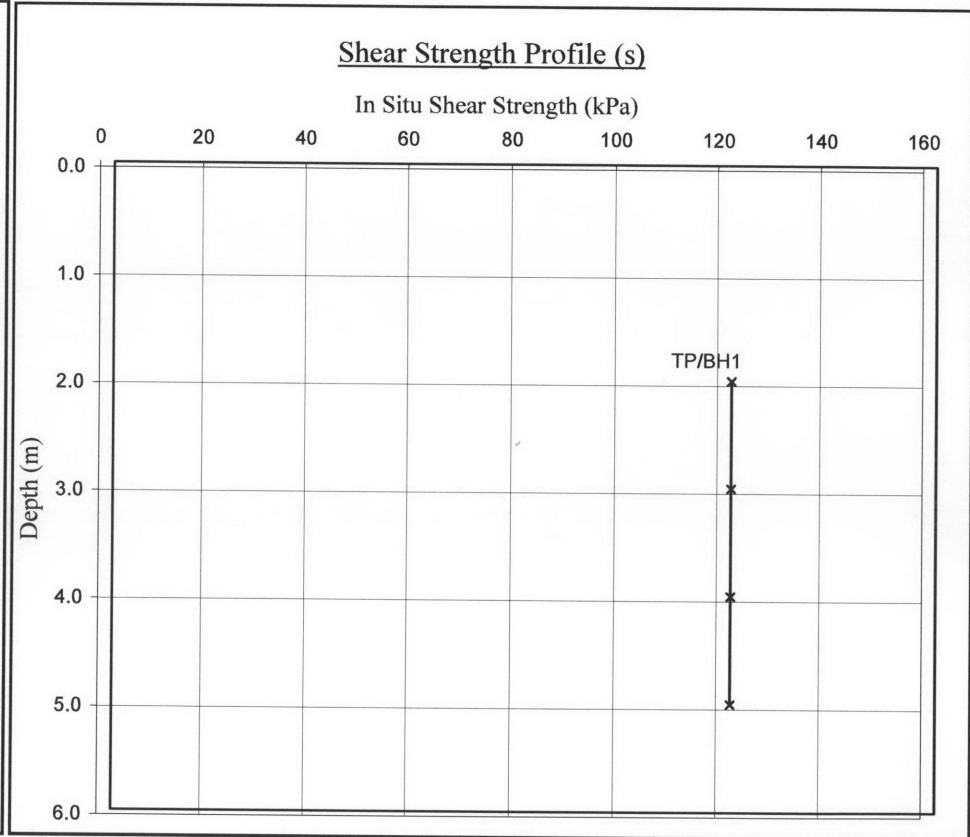
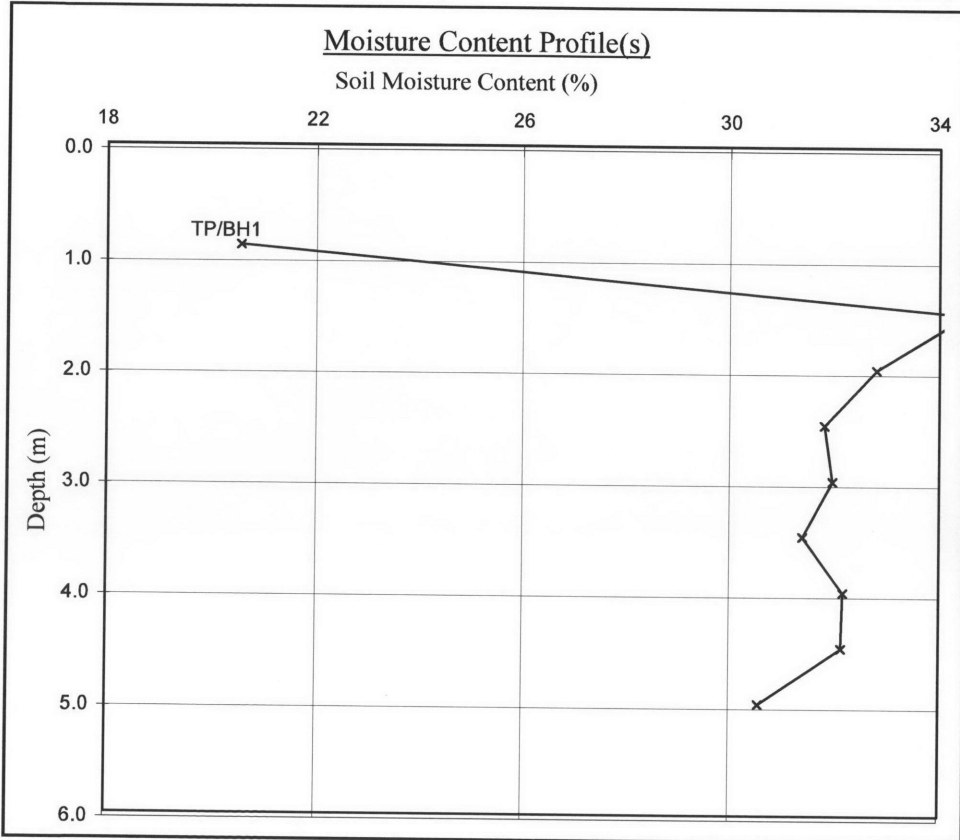
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Notes

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 Group using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 120 kPa.

EPSL**European Plant Science Laboratory**

Sheet: 1 of 1

Job No: 119901

Date: 05/03/2012

Order No: 391032

EPSL Ref: 020312120640

Site: 16 Downside Crescent, London

Work carried
out for: Cunningham Lindsey**Certificate of Analysis**

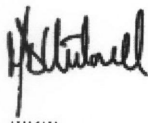
The following work was commissioned by CET Safehouse Limited on behalf of their client. Root samples were obtained in sealed packets from the above site with no reference given as to the types of tree or shrub from which they may have originated.

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 (U/S)	1.5	Fraxinus spp. (5 roots)	Positive
BH1 (to 2.7m)	3	Taxodiaceae spp. (2 roots)	Positive
BH1 (to 2.7m)	<1	broadleaved species, too decayed for positive identification	Negative

Fraxinus spp. include common ash.

Taxodiaceae spp. include coast redwood, dawn redwood, Wellingtonia and Japanese red cedar.



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

Plant Anatomist: Dr F M Cardias Williams B.Sc., M.Sc., Ph.D.

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

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