PROPERTY ASSURANCE
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SITE INVESTIGATION
FACTUAL REPORT

Report No:	220552
Client:	Cunningham Lindsey - Maidstone
Site:	11, Fawley Road London
Client Ref:	[redacted]
Date of Visit:	09/12/2014

ISO 9001 REGISTERED FIRM
ISO 14001 REGISTERED FIRM
OHSAS 18001 REGISTERED FIRM
Link-up Qualified via Audit
SAFEcontractor APPROVED
CHAS Accredited Contractor
constructionline

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Investigation Layout Plan

Sheet: 1 of 1

Job No: 220552E

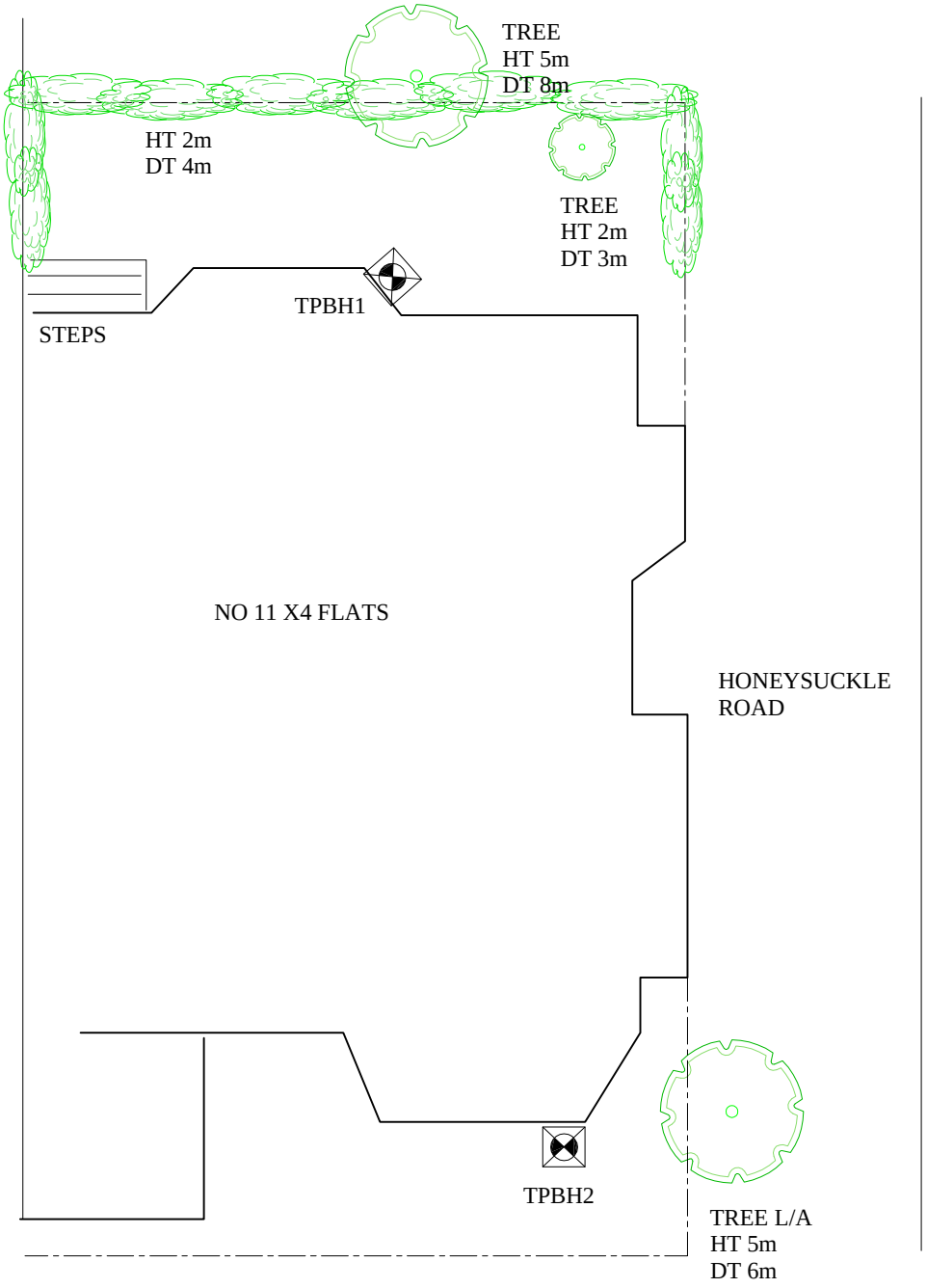
Date: 09/12/14

Site: 11, Fawley Road, NW6

Work carried out for: Cunningham Lindsey

AH (SI) | SE (Checked:) | JF (Drawn By)

Weather : Dry



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

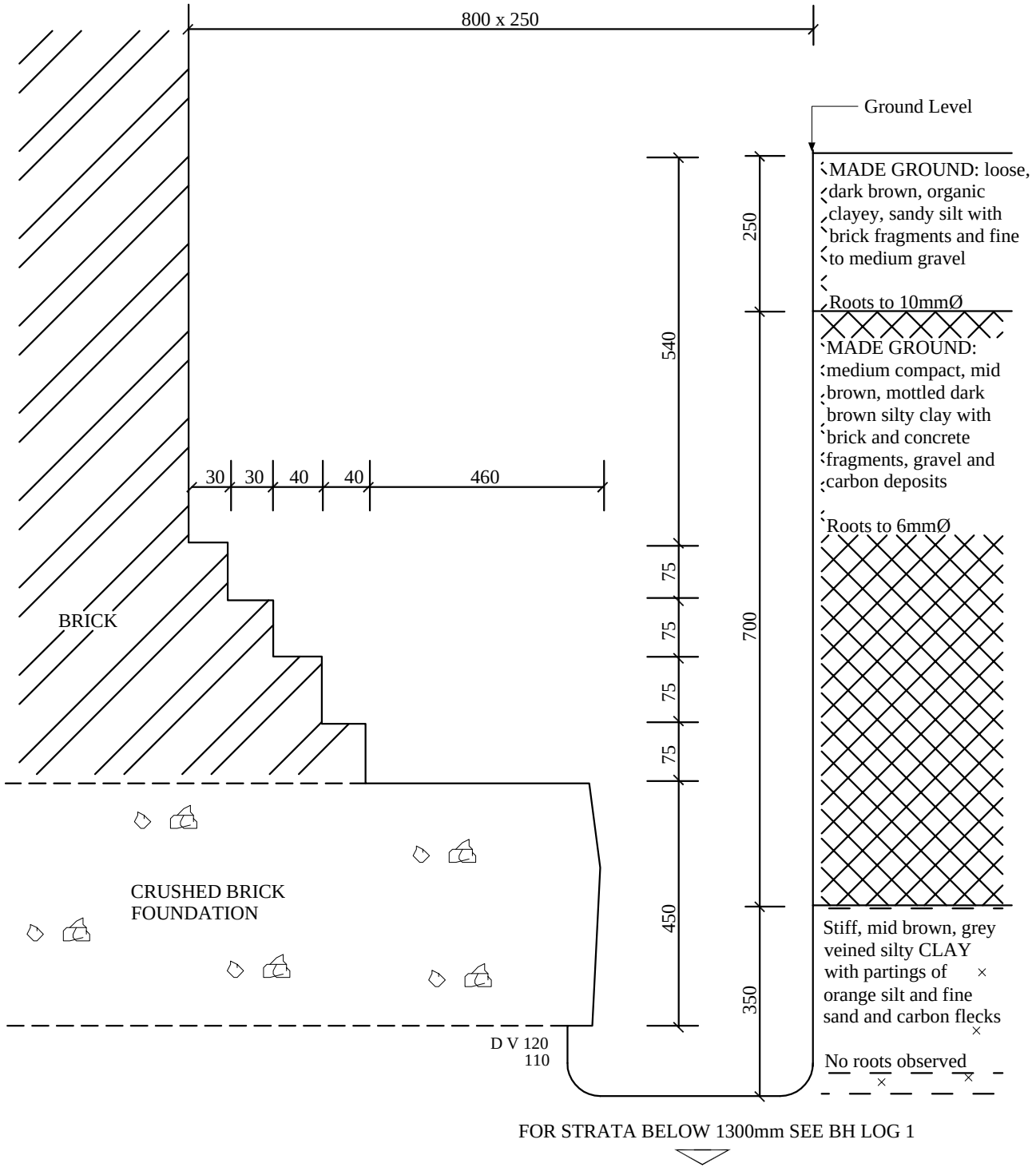
Scale: N.T.S.

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		

Trial Pit No: 1

Sheet:	1 of 1
Job No:	220552E
Date:	09/12/14
Site:	11, Fawley Road, NW6
Excavation Method:	Hand Tools
Drawn by:	Jo F
Work carried out for:	Cunningham Lindsey
Weather:	Dry
Ground Level mOD:	



Remarks: All measurements in millimetres.

U/S located with aid of hand auger and curved steel pin

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:	Checked:	Approved:	Scale:
AH	SE		N.T.S.

Trial Pit No: 2

Sheet: 1 of 1

Job No: 220552E

Date: 09/12/14

Site: 11, Fawley Road, NW6

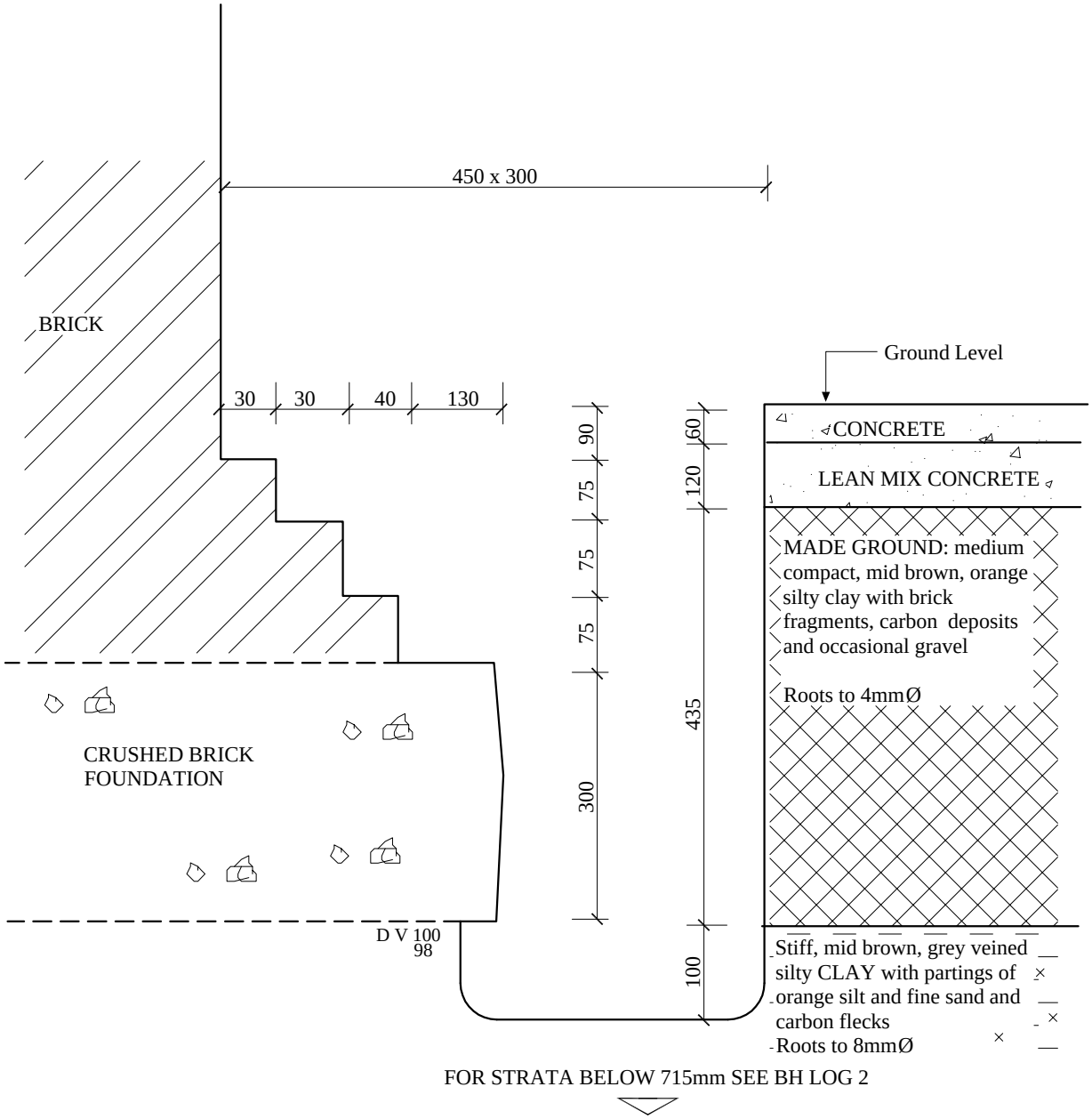
Work carried out for: Cunningham Lindsey

Excavation Method: Hand Tools

Drawn by: Jo F

Weather: Dry

Ground Level mOD:



FOR STRATA BELOW 715mm SEE BH LOG 2

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: AH | Checked By : SE | Approved:

Scale: N.T.S.

Borehole No: 1

Sheet: 1 of 1

Job No: 220552E

Site: 11, Fawley Road, NW6

Boring Method: Hand Auger

Date: 09/12/2014

Diameter: 75mm

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)
	As trial pit 1	1.30							
1.30	Stiff, mid brown, grey veined silty CLAY with partings of orange silt and fine sand	0.50		D	V	106 112	1.50	Roots to 1mm diameter to 2.0m	
1.80	Stiff, mid brown, grey veined silty CLAY with partings of orange silt and fine sand and occasional claystone nodules	3.20		D	V	98 100	2.00	No roots observed below 2.0m	
				D	V	120+ 120+	2.50		
				D	V	120+ 120+	3.00		
				D	V	120+ 120+	3.50		
				D	V	120+ 120+	4.00		
				D	V	120+ 120+	4.50		
5.00				D	V	120+ 120+	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: AH | Checked: SE | Drawn by Jo F | Scale: NTS | Weather: Dry

Borehole No: 2			Sheet: 1 of 1							
			Job No: 220552E			Site:		11, Fawley Road, NW6		
Boring Method: Hand Auger			Date: 09/12/2014							
Diameter: 70mm	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)
	As trial pit 2	0.715							
0.715								Roots to 1mm diameter to 2.0m	
			.x	D	V	102 98	1.00		
			x	D	V	120+ 120+	1.50		
			.x	D	V	120+ 120+	2.00	No roots observed below 2.0m	
	Stiff, mid brown, grey veined silty CLAY with partings of orange silt and fine sand and carbon flecksd	0.485	x	D	V	120+ 120+	2.50		
			x.	D	V	120+ 120+	3.00		
			.x	D	V	120+ 120+	3.50		
			x	D	V	120+ 120+	4.00		
				D	V	120+ 120+	4.50		
5.00			.x	D	V	120+ 120+	5.00		
	Borehole ends at 5.0m								

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: AH	Checked: SE	Drawn by Jo F	Scale: NTS	Weather: Dry

Our Ref : 220552

Laboratory Testing Results

Date Sampled: 09/12/2014

Location : 11, Fawley Road, NW6

Date Received : 10/12/2014

Work carried out for: Cunningham Lindsey - Maidstone

Date Tested : 10/12/2014

Date of Report : 15/12/2014

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) *[8]*	Soil Sample Suction (kPa)	In situ Shear Vane Strength (kPa) *[9]*	Organic Content (%)*[10]*	pH Value *[11]*	Sulphate Content (g / l) SO_3 *[12]*	Sulphate Content (g / l) SO_4 *[13]*	Class *[14]*
1	1.29(U/S)	D	25	<5	78	24	54	0.02	54	CV			115					
	1.5	D	27	<5									109					
	2.0	D	26	<5	75	25	50	0.01	50	CV			99					
	2.5	D	28	<5									> 120					
	3.0	D	30	<5	72	24	48	0.12	48	CV			> 120					
	3.5	D	30	<5									> 120					
	4.0	D	31	<5									> 120					
	4.5	D	30	<5									> 120					
	5.0	D	32	<5									> 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 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

Our Ref : 220552

Laboratory Testing Results

Date Sampled : 09/12/2014

Location : 11, Fawley Road, NW6

Work carried out for: Cunningham Lindsey - Maidstone

Date Received : 10/12/2014

Date Tested : 10/12/2014

Date of Report : 15/12/2014

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) *[8]*	Soil Sample Suction (kPa)	In situ Shear Vane Strength (kPa) *[9]*	Organic Content (%)*[10]*	pH Value *[11]*	Sulphate Content (g / l) SO_3 *[12]*	Sulphate Content (g / l) SO_4 *[13]*	Class *[14]*
2	0.62(U/S)	D	28	<5	72	24	48	0.07	48	CV			99					
	1.0	D	28	<5									99					
	1.5	D	28	<5	70	24	46	0.08	46	CV			> 120					
	2.0	D	26	<5	69	25	44	0.03	44	CH			> 120					
	2.5	D	27	<5									> 120					
	3.0	D	30	<5	75	27	48	0.05	48	CV			> 120					
	3.5	D	31	<5									> 120					
	4.0	D	31	<5									> 120					
	4.5	D	31	<5									> 120					
	5.0	D	31	<5									> 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

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[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

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D	Disturbed sample (small)
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U	Undisturbed sample
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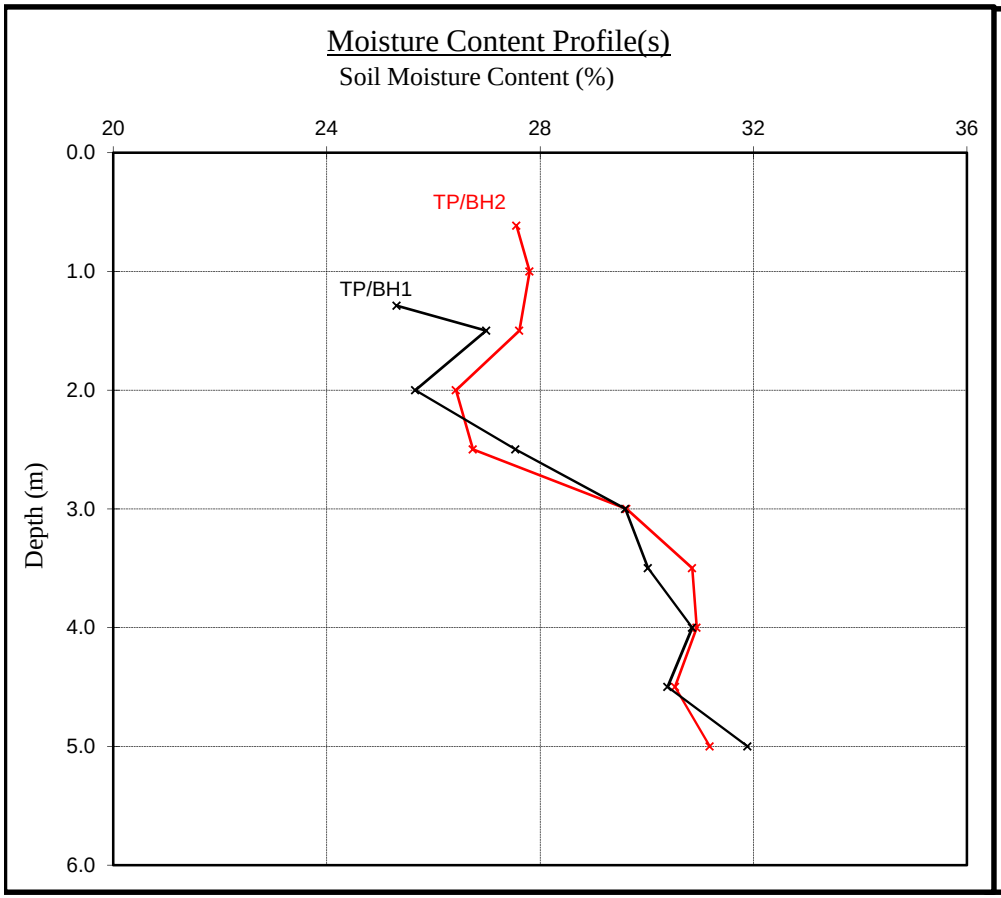
ENP	Essentially Non-Plastic by inspection
U/S	Underside of Foundation

Moisture Content and Shear Strength Profiles

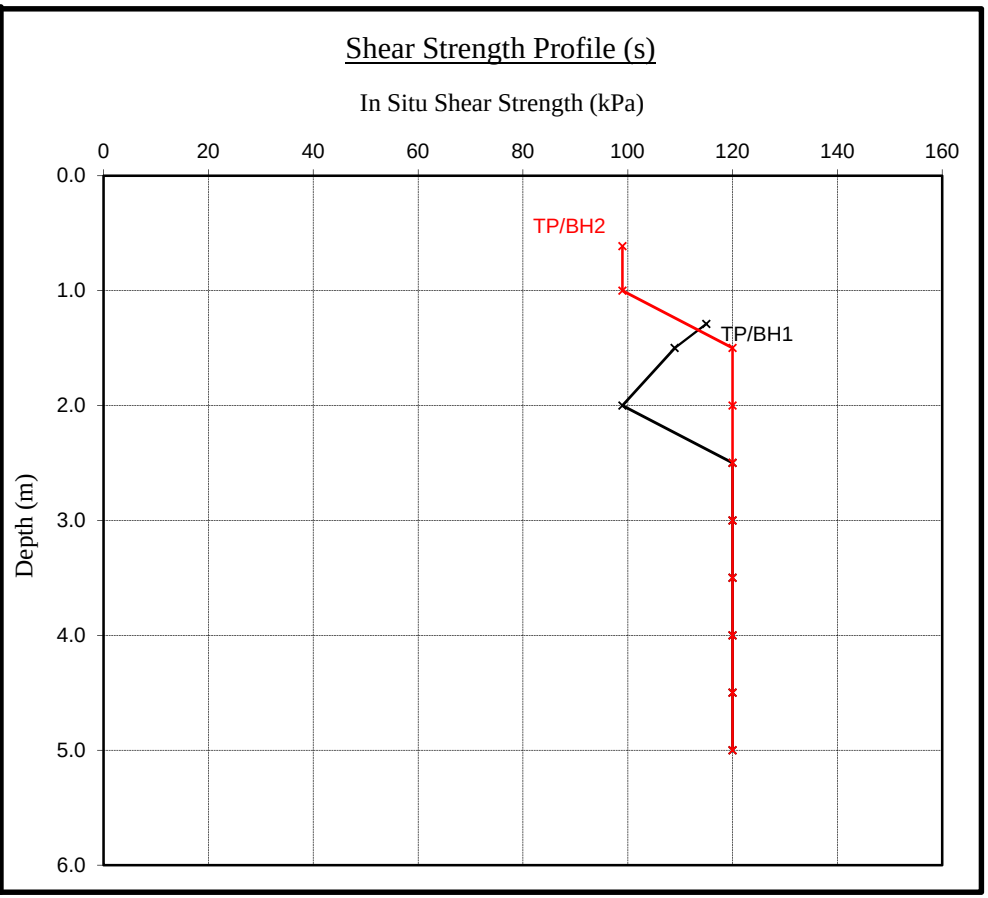
Our Ref :	220552	Date Sampled :	09/12/2014
Location :	11, Fawley Road, NW6	Date Received :	10/12/2014
Work carried out for:	Cunningham Lindsey - Maidstone	Date Tested :	10/12/2014
		Date of Report :	15/12/2014

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

Moisture Content Profile(s)



Shear Strength 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

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.

Moisture Content and Suction Profiles

Our Ref : 220552

Location : 11, Fawley Road, NW6

Work carried out for: Cunningham Lindsey - Maidstone

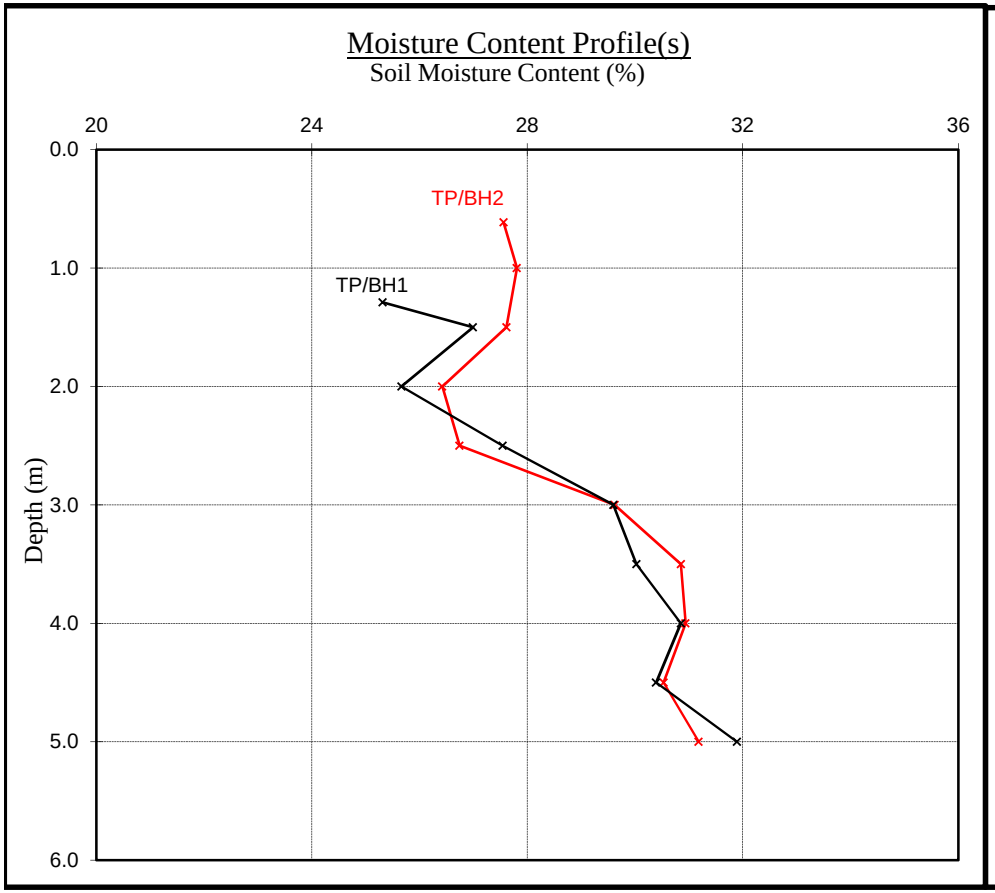
Note : Unless specifically noted the profiles have not been related to a site datum.

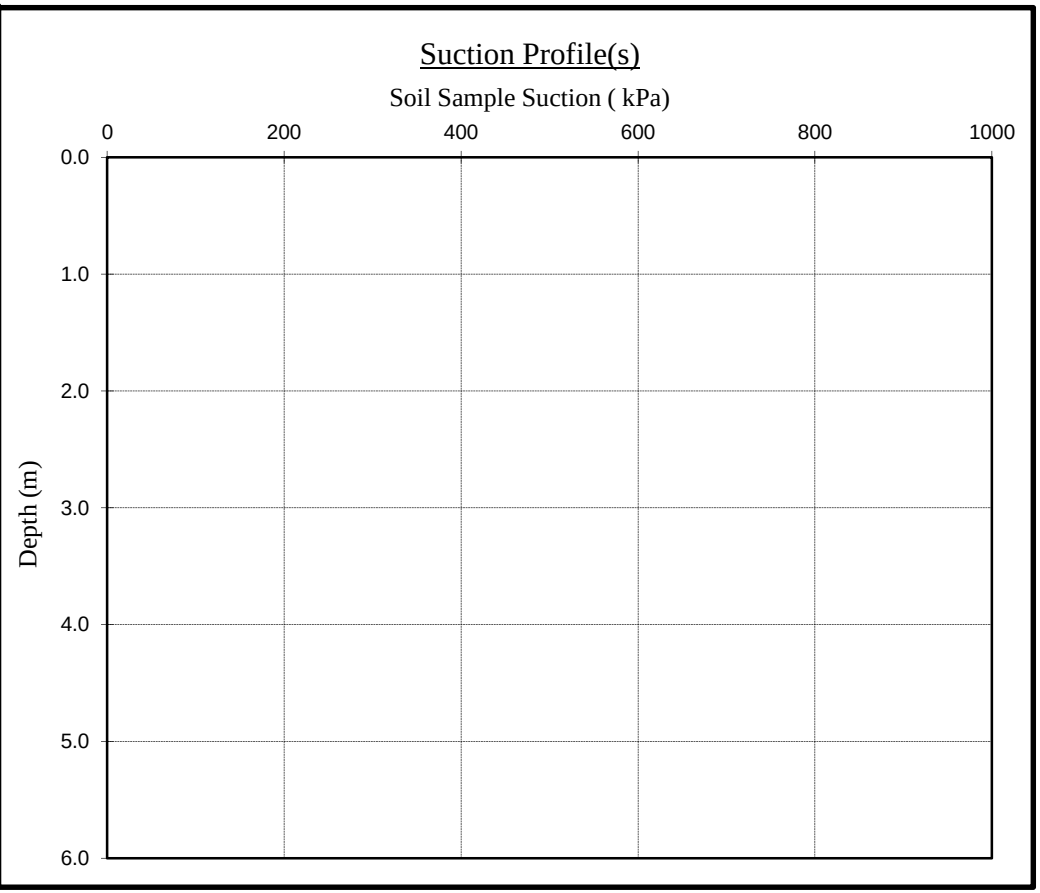
Date Sampled : 09/12/2014

Date Received : 10/12/2014

Date Tested : 10/12/2014

Date of Report : 15/12/2014





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.

EPSL ***European Plant Science Laboratory***	Sheet: 1 of 1 Job No: **220552** Date: **15/12/2014** Order No: **640240** EPSL Ref: **R9605**	Site: **11 Fawley 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 2m)	1 mm	Ficus spp.	Negative
TP2 (USF)	6 mm	Pomoideae gp. 3 roots	Positive
BH2 (to 2m)	1 mm	Pomoideae gp. 2 roots	Positive

Ficus spp. are figs.
Pomoideae gp include apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam.

MDM

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