

FACTUAL REPORT OF INVESTIGATION

AT:- 14A Greville Road

ON:- 29 October 2003

FOR:- Norwich Union
c/o Cunningham Lindsey - St Albans

REF:- 1837760-14 Greville Road Management

JOB NO:- 48662

SPECIALIST CONTRACTING DIVISION

CET GROUP LIMITED

Lawness Barns, Mountnessing Road, Billericay, Essex CM12 0TS

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Tel: 01277 655377

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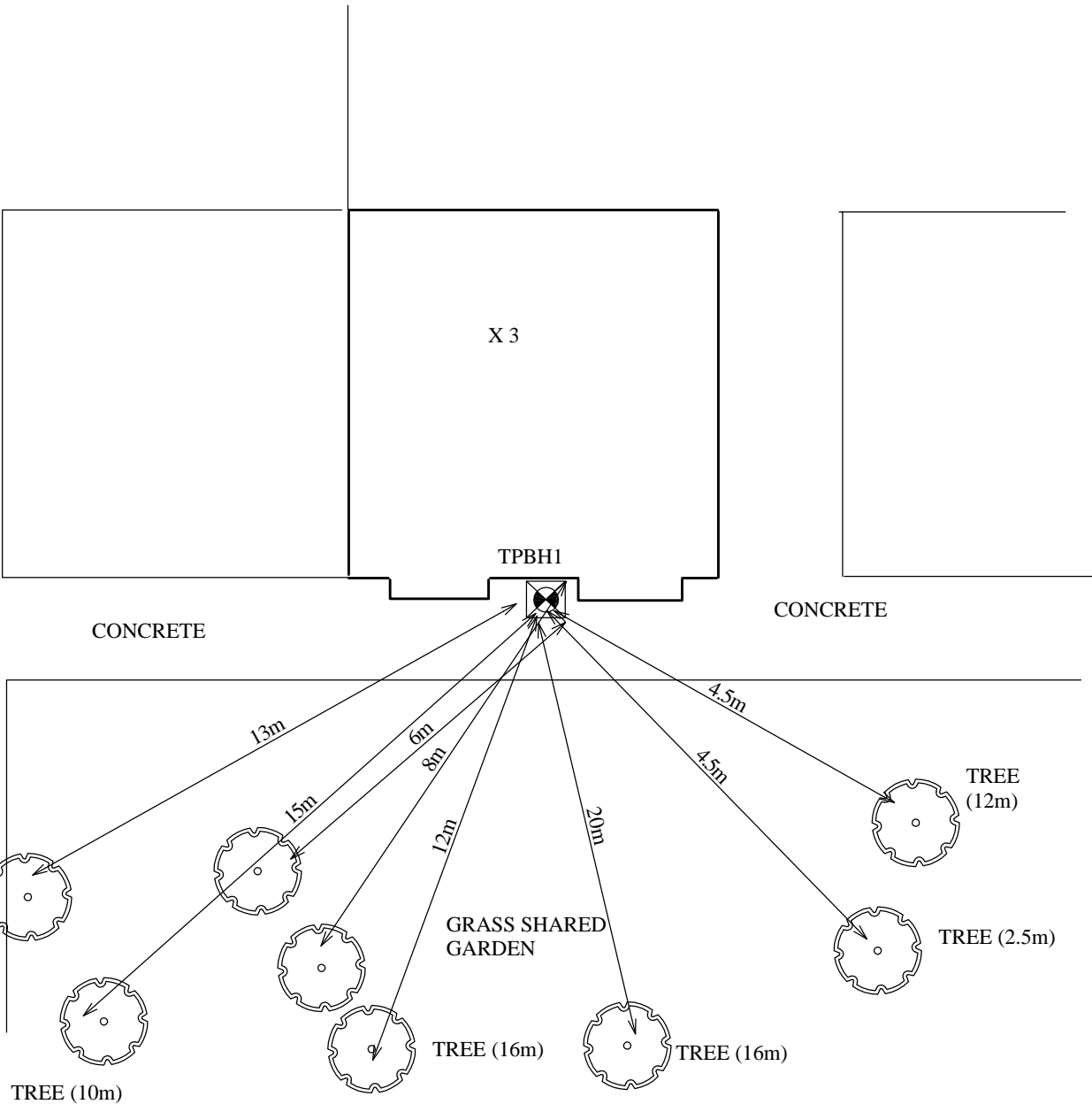
Investigation
Layout Plan

Sheet: 1 of 1
Job No: 48662
Date: 13/11/03

Site: 14A Greville Road, London
Work carried out for: Cunningham Lindsey




Drawn: JF
(SI) (PLT)

Checked: PS



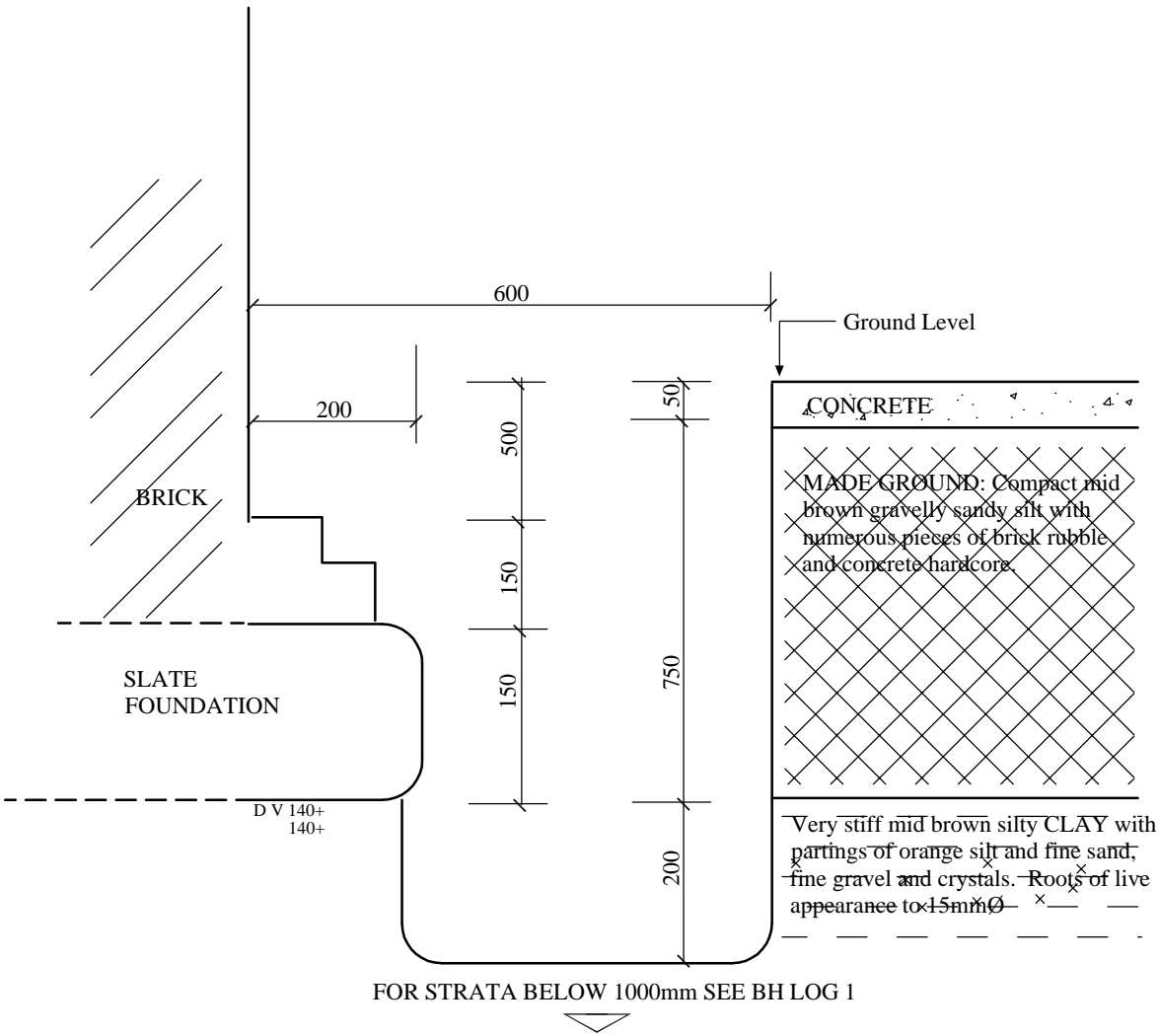
ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Key:			
Combined Gully	RWWG	Surface Water Drain	- - - - -
Manhole	MH	Foul Water Drain	—————
Rain Water Pipe	RWP	Tree / Bush	
Rain Water Gully	RWG	(approx. ht in m)	
Soil Vent Pipe	SVP	Trial Pit	
Waste Gully	WG	Borehole	
Waste Pipe	WP		

Scale: N.T.S.

Trial Pit No: 1	Sheet: 1 of 1	Site: 14a Gredille Road, London
	Job No: 48662	
Excavation Method: Hand Tools	Date: 13/11/03	Work carried out for: Cunningham Lindsey
Weather: Dry	Co-ordinates: 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: JF	Checked: PS	Approved:	Scale: N.T.S.		

Borehole No: 1			Sheet: 1 of 1			Site: 14a Greville Road				
Boring Method: Hand Auger			Job No: 048662							
Diameter: 75mm			Date: 13/11/03							
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)
1.00	As Trial Pit 1		1.00							
2.10	Very stiff fragmented mid brown grey veined silty CLAY with partings of orange silt & fine sand & crystals		1.10	___x ___ ___ x___ ___ ___ ___x. ___	D	V	140+ 140+	1.50	Roots of live appearance to 6mm diameter at 1.5m. ↓ Hair & fibrous roots to 2.0m ↓	
2.50	Very stiff/hard mid brown silty CLAY with crystals & thinly laminated with orange silt & fine sand		0.40	___x ___ ___ ___	D	V	140+ 140+	2.00		
	Borehole ends at 2.5m Too hard to hand auger				D	V	140+ 140+	2.50		
Remarks: Borehole dry & 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: JF	Checked: PS	Approved:			Scale: NTS			Weather:		

Our Ref : 048662

Location : 14A Greville Road

Work carried out for: Cunningham Lindsey - St Albans

Laboratory Testing Results

Date Sampled: 29/10/03

Date Received : 10/12/03

Date Tested : 22/12/03

Date of Report : 22/12/03

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)															SO3 [12]	SO4 [13]	
1	0.80(U/S)	D	23	<5	68	24	44	-0.02	44	CH	168	336	> 140					
	1.5	D	20	<5							168	691	> 140					
	2.0	D	21	<5	70	27	43	-0.14	43	CH			> 140					
	2.5	D	22	<5							168	694	> 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 Group 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 Digest 363 : 1991, Table 1. Reference should also be made to Table 2 which depending on the pH and exposure conditions may require the class to be advanced by 1 or 2.

Key

D Disturbed sample (small)

B Disturbed sample (bulk)

U Undisturbed sample

W Groundwater sample

ENP Essentially Non-Plastic by inspection

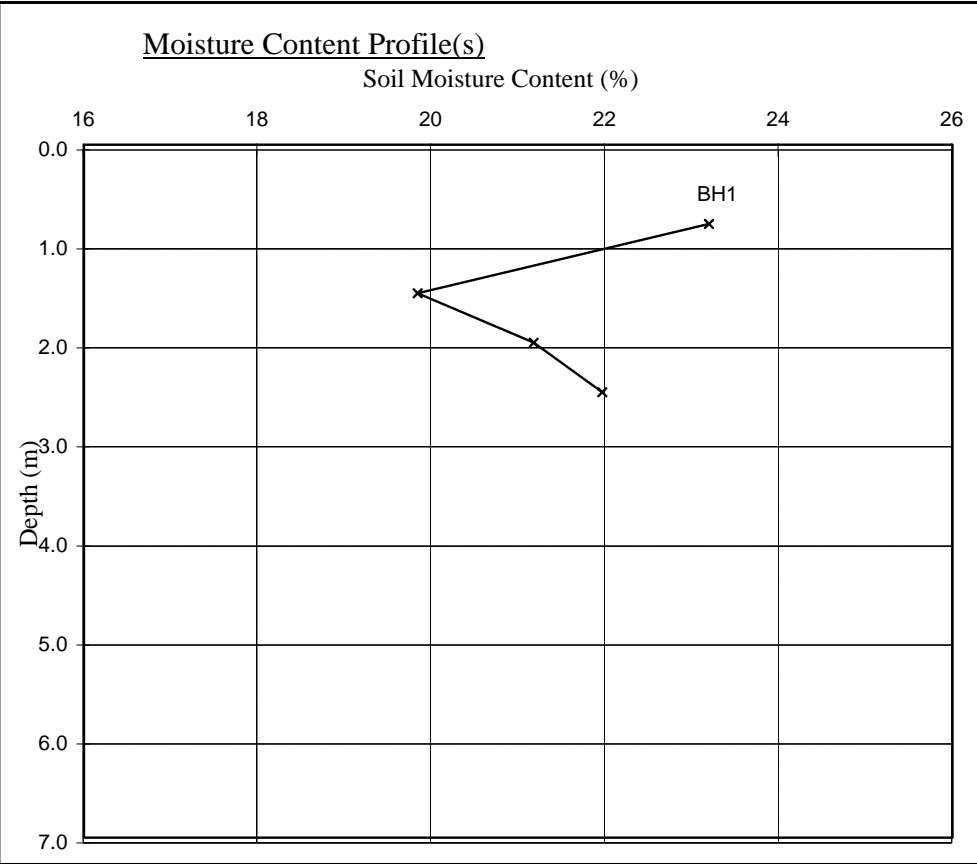
U/S Underside of Foundation

Our Ref : 048662
Location : 14A Greville Road
Work carried out for: Cunningham Lindsey - St Albans

Moisture Content and Suction Profiles

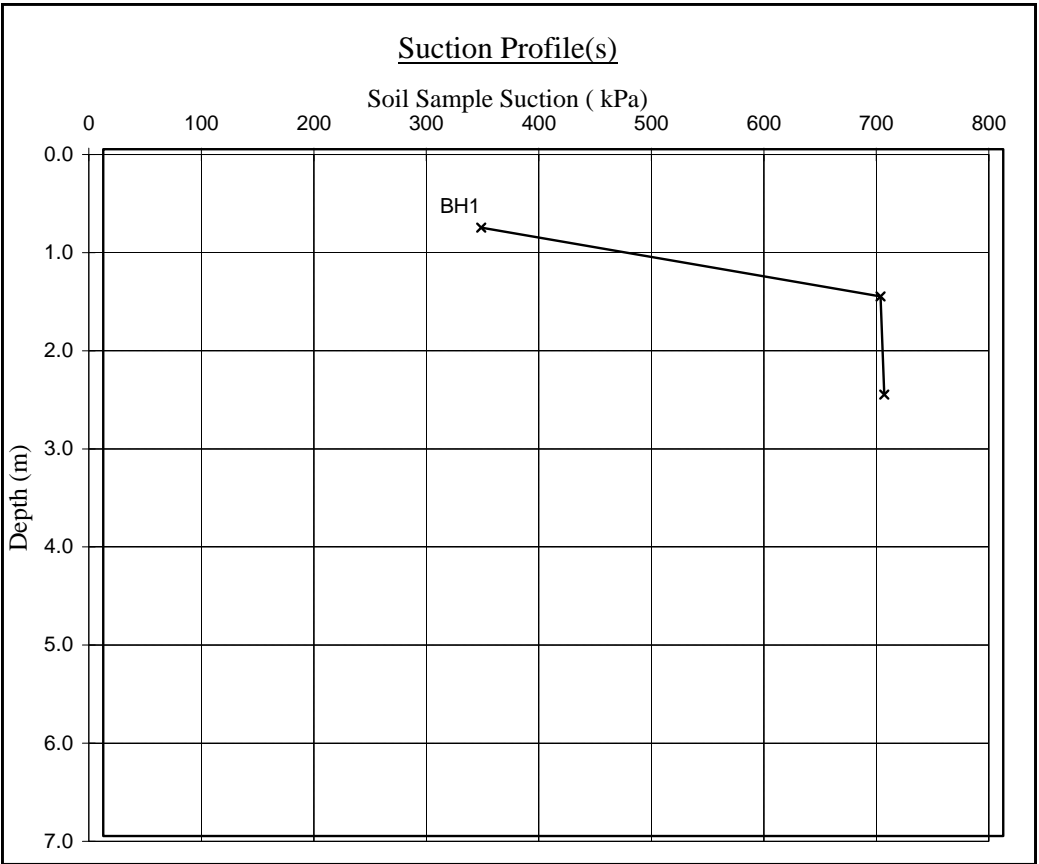
Date Sampled : 29/10/03
Date Received : 10/12/03
Date Tested : 22/12/03
Date of Report : 22/12/03

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



Notes

1. If the Soil Fraction > 0.425mm exceeds 5% the Equivalent Moisture Content of the remainder (calculated in accordance with BS 1377: Part 2 : 1990, cl.3.2.4 note 1) is also plotted and the alternative profile additionally shown as an appropriately coloured broken line.
2. 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

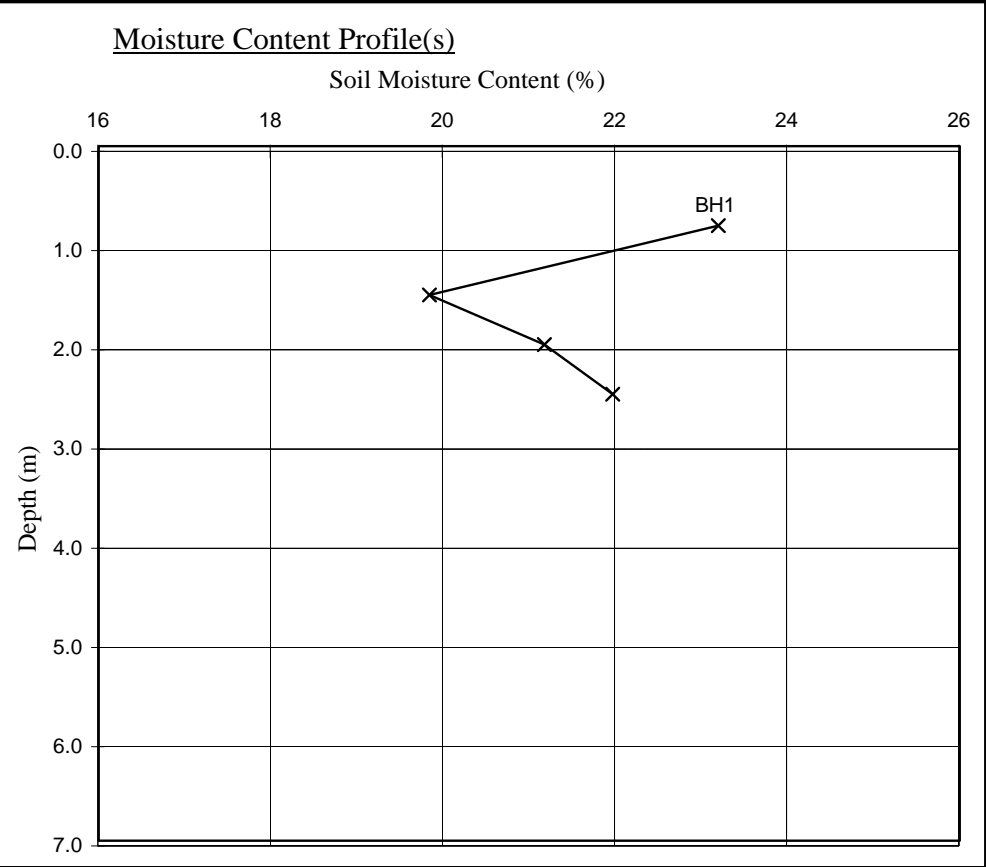
When shown, the theoretical equilibrium suction profiles are based on conventional assumptions associated with London Clay (and similarly overconsolidated clays) at shallow depths. Note that the sample disturbance component is dependant on the method of sampling and any subsequent recompaction. The above 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 : 048662
Location : 14A Greville Road
Work carried out for: Cunningham Lindsey - St Albans

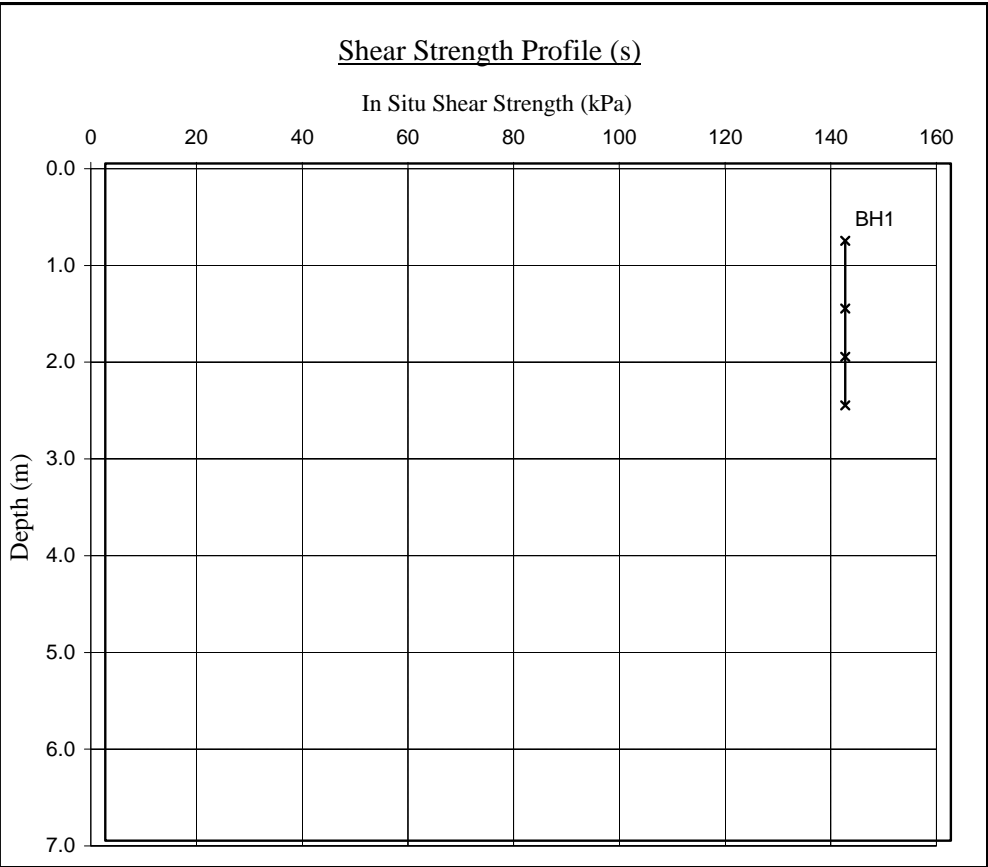
Moisture Content and Shear Strength Profiles

Date Sampled : 29/10/03
Date Received : 10/12/03
Date Tested : 22/12/03
Date of Report : 22/12/03

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



- Notes
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 2. 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 140 kPa.

Tree Root Investigation Ltd

Sheet: 1 of 1
Job No: 048662
Date: 29.11.2003
Order No: 48789/SS

Site: 14A Greville Road,
London, NW6.
Work carried
out for: Cunningham Lindsey.

Certificate of Analysis

The following work was commissioned by CET Group 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 -

Trial pit/ Borehole number	Root diameter (mm)	Tree, shrub or climber from which root originates	Result of starch test#
TP1 (underside)	(i) 7.0	<u>Salix</u> (willow) or <u>Populus</u> (poplar), the roots of which are indistinguishable	positive
	(ii) 15.0	<u>Acer</u> (sycamore; maple)	positive

The presence of starch indicates that the root was alive in the recent past.

Ronald MacLeod

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Accounts/Quality Manager: Fiona M. Sinclair, H.N.C. (Management)

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