FACTUAL REPORT

OF

INVESTIGATION

AT:-		14 Greville Road
ON:-		12 July 2004
FOR:-		Norwich Union
	c/o	Cunningham Lindsey - St Albans
REF:-		1837760-Greville Road Management
JOB NO:-		067877

SPECIALIST CONTRACTING DIVISION

CET GROUP LIMITED

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

WWW.CETGROUP.COM

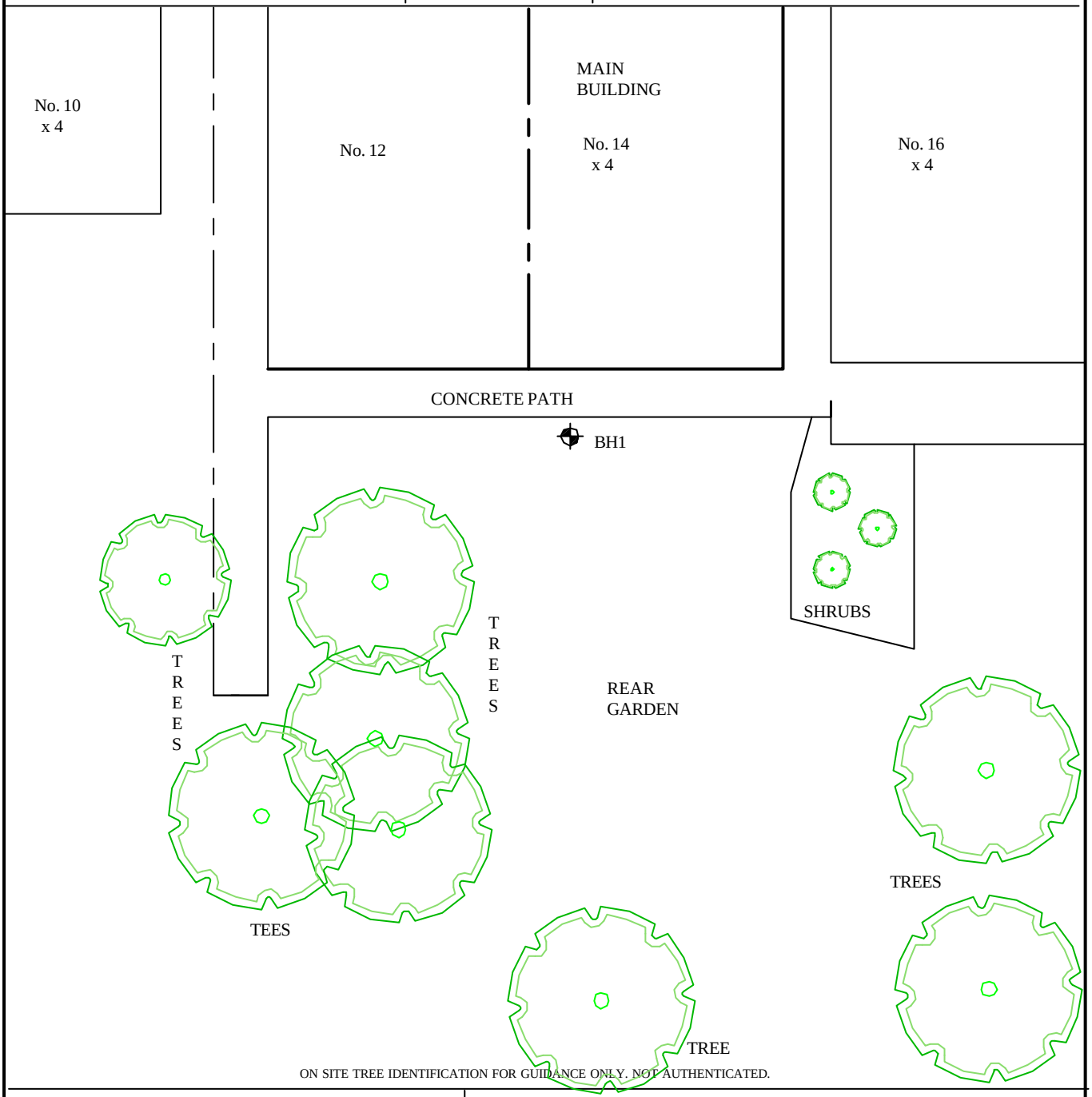
Tel: 01277 655377 Fax: 01277 655977

Investigation Layout Plan

Sheet: 1 of 1
Job No: 67877
Date: 12/7/04

Site: 14 Greville Road
Work carried out for: Cunningham Lindsey

Drawn: NF (SI) MW (Drawn by)
Checked: ME



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 (approx. ht in m)	
Rain Water Gulley	RWG		
Soil Vent Pipe	SVP	Trial Pit	
Waste Gulley	WG	Borehole	
Waste Pipe	WP		

Scale: N.T.S.

Borehole No: 1

Sheet: 1 of 1

Job No: 067877

Date: 12/07/04

Site: 14 Greville Road, London NW6

Boring Method: C.F.A

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	Turf over MADE GROUND: Very stiff, organic, dark brown, silty clay with numerous gravel & occasional brick fragments & glass.	0.70							
0.70	Very stiff, mid brown/orange, silty CLAY with partings of orange & brown silt & fine sand.	0.60		D	V	140+ 140+	1.00	Roots of live and dead appearance to 3mm diameter observed to 1.5m	
1.30	Very stiff, as above, with occasional crystals.	3.20		D	V	140+ 140+	1.50	Roots of live and dead appearance to 1mm diameter observed to 2.4m	
				D	V	140+ 140+	2.00		
				D	V	140+ 140+	2.50		
				D	V	140+ 140+	3.00		
				D	V	140+ 140+	3.50		
				D	V	140+ 140+	4.00		
4.50				D	V	140+ 140+	4.50		
	Borehole ends at 4.5m Too dense to hand auger								

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: MD

Checked: ME

Scale: NTS

Weather:

Our Ref : 067877

Laboratory Testing Results

Date Sampled: 12/07/04

Location : 14 Greville Road

Date Received : 14/07/04

Work carried out for: Cunningham Lindsey - St Albans

Date Tested : 26/07/04

Date of Report : 26/07/04

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]*
1	1.0	D	21	<5	230	22	208	0.00	208	CE			> 140					
	1.5	D	20	<5							168	832	> 140					
	2.0	D	20	<5	71	23	48	-0.07	48	CV	168	856	> 140					
	2.5	D	21	<5							168	812	> 140					
	3.0	D	22	<5	74	23	51	-0.02	51	CV			> 140					
	3.5	D	25	<5							168	611	> 140					
	4.0	D	25	<5									> 140					
	4.5	D	20	<5							168	698	> 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] 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] $SO_4 = 1.2 \times SO_3$

[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.

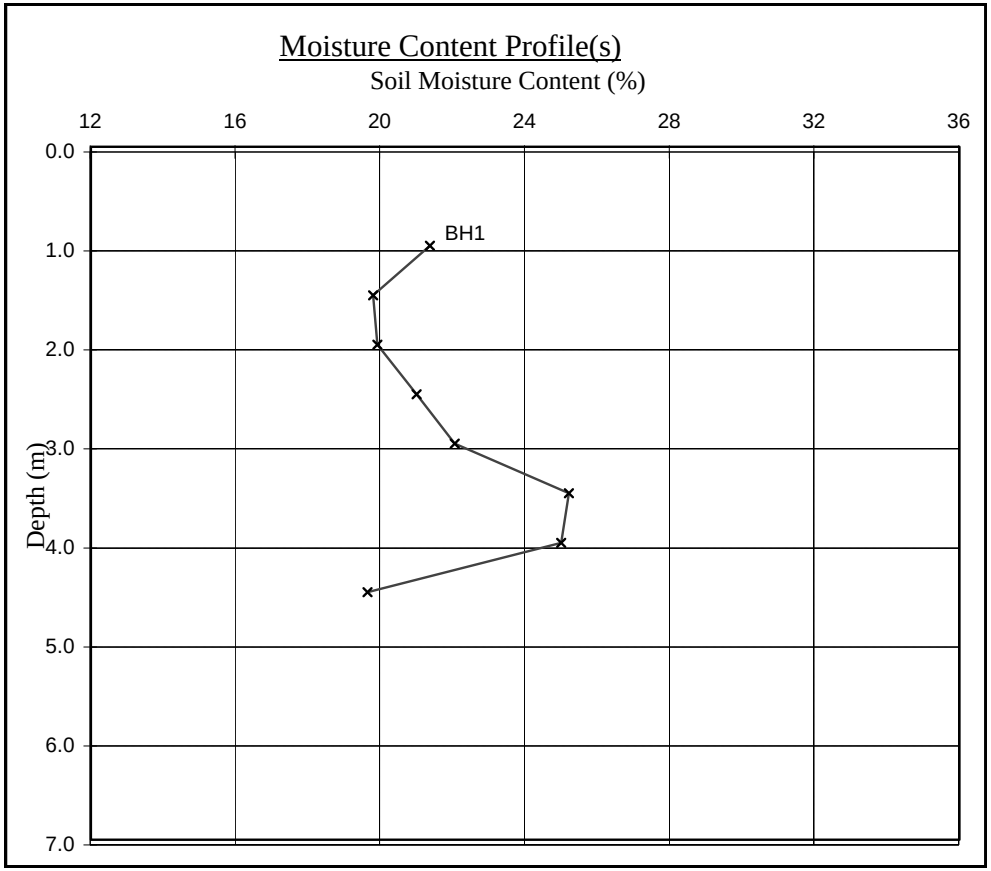
Key

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

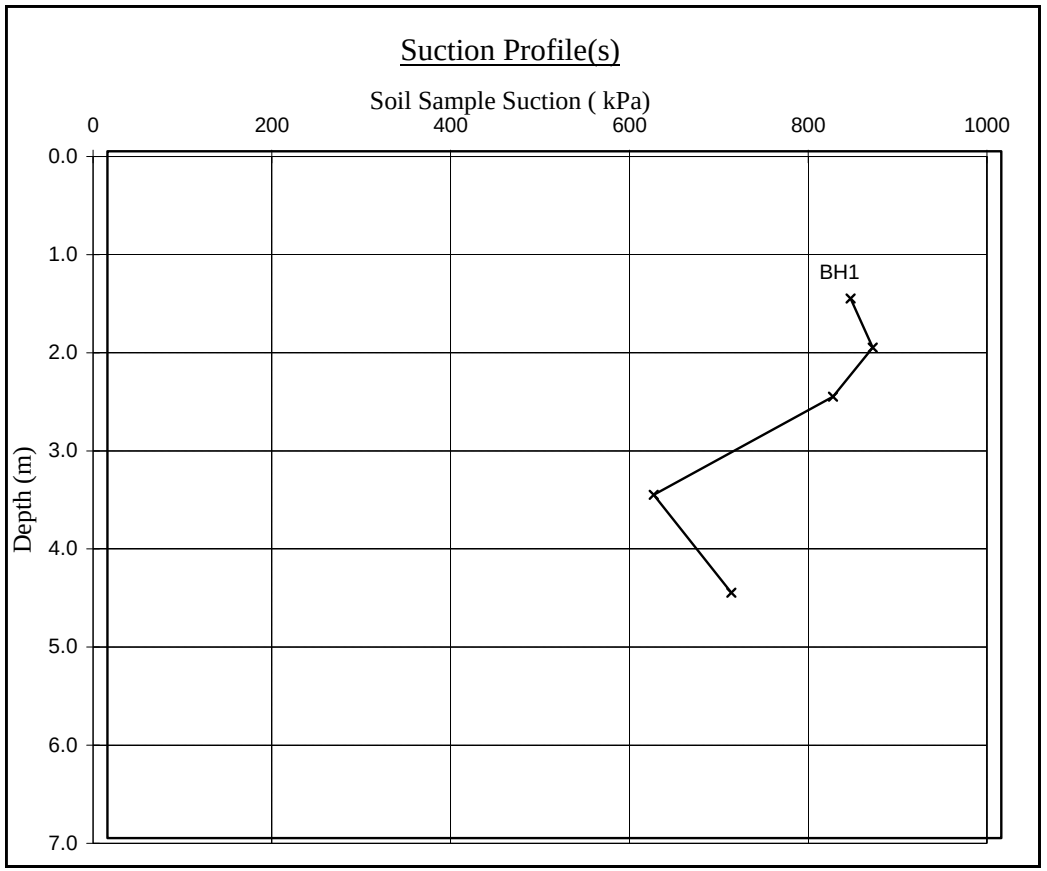
Moisture Content and Suction Profiles

Our Ref :	067877		Date Sampled : 12/07/04
Location :	14 Greville Road		Date Received : 14/07/04
Work carried out for:	Cunningham Lindsey - St Albans	Note : Unless specifically noted the profiles have not been related to a site datum.	Date Tested : 26/07/04
			Date of Report : 26/07/04

Moisture Content Profile(s)



Suction Profile(s)



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.

Moisture Content and Shear Strength Profiles

Our Ref : 067877

Location : 14 Greville Road

Work carried out for: Cunningham Lindsey - St Albans

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

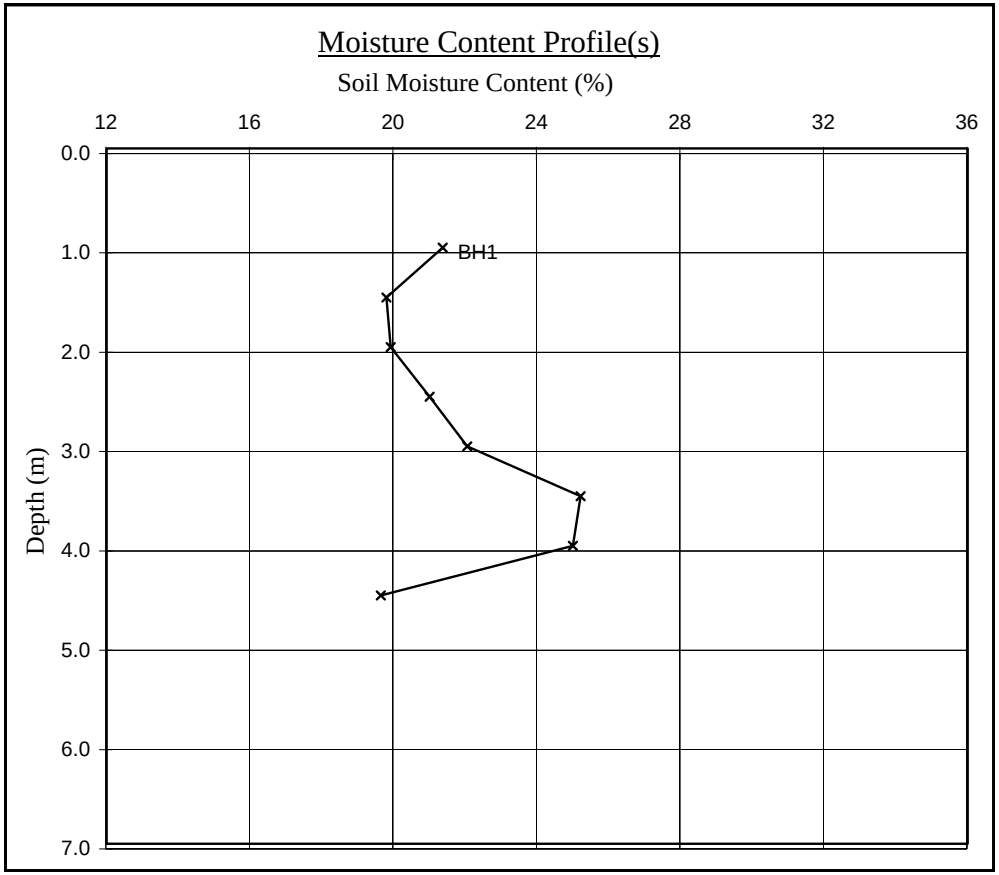
Date Sampled : 12/07/04

Date Received : 14/07/04

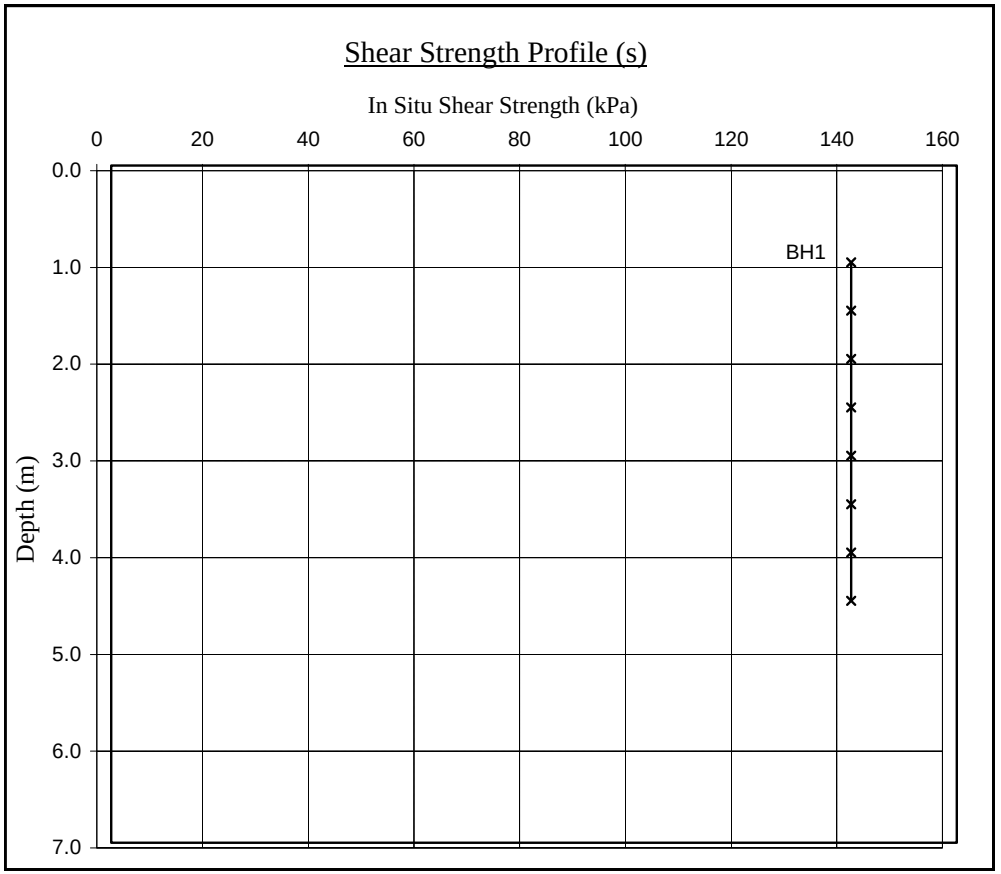
Date Tested : 26/07/04

Date of Report : 26/07/04

Moisture Content Profile(s)



Shear Strength Profile (s)



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

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.