

SITE INVESTIGATION FACTUAL REPORT

Report No: 399437
Client: Cunningham Lindsey - Maidstone
Site: Flat 1 & 2, 108 Greencroft Gardens
Client Ref: 6332780-108 [REDACTED]
Date of Visit: 21/02/17

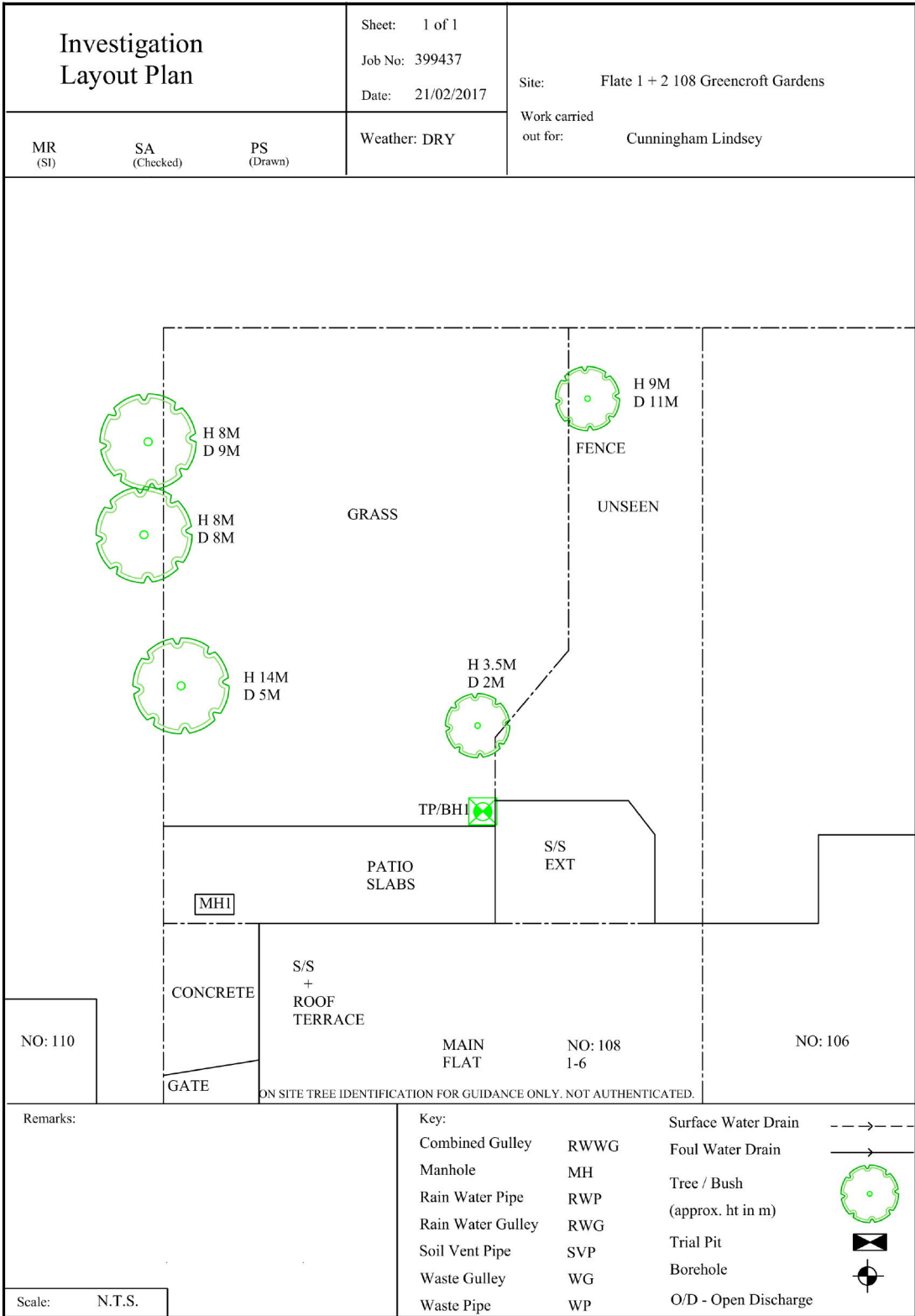


Home Emergency Response - Subsidence Investigation - Drainage Services – Crack & Level Monitoring – Property Video Surveys

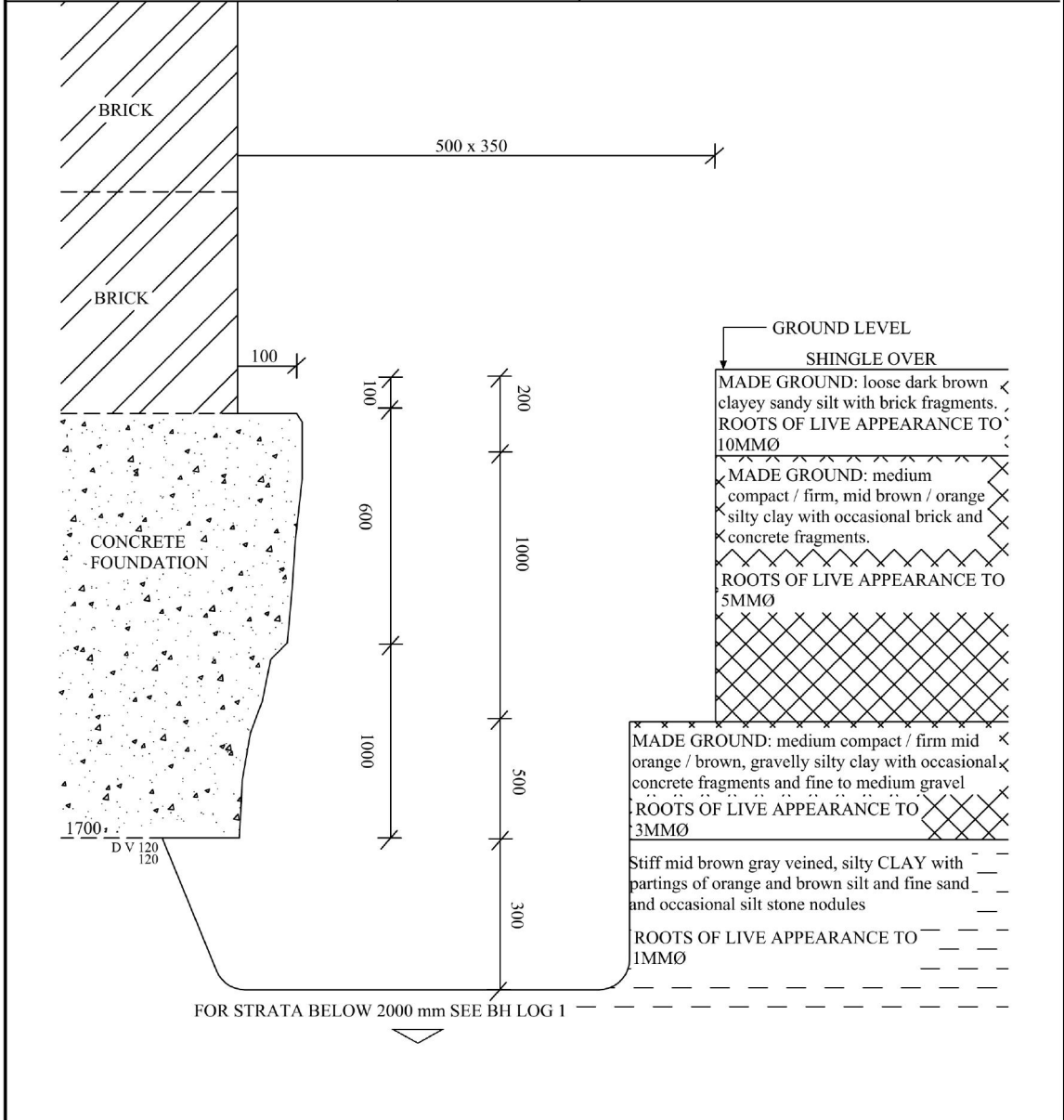
Unit E2 First Floor Suite, Boundary Court
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CET is the trading name of CET Structures Ltd
Registered in England No. 02527130



Trial Pit No: 1	Sheet: 1 of 1	Site: Flat 1 & 2 108 Greencroft Gardens
	Job No: 399437	
Hand Tools	Date: 21/02/2017	Work carried out for: Cunningham Lindsey
Weather: DRY	Drawn by: RM	
	Ground Level mOD:	



Remarks: All measurements in millimetres. TP excavated to 1200MM. Then extended to 2000MM with the aid of a hand auger, curved steel pin driven 100MM under foundation at 1700MM below ground level.	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: MR	Checked: SA	Approved:	Scale: N.T.S.
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Laboratory Summary Results

Our Ref: 399437 Date Sampled: 21/02/17
 Location: Flat 1 & 2, Greenerof Gardens, NW6 Date Received: 22/02/17
 Client: Cunningham Lindsey - Maidstone Date Tested: 23/02/17
 Address: 4 North Court, South Park Business Village, Armstrong Road, ME15 6JZ Date of Report: 07/03/17

TP/BH No	Sample Ref	Depth (m)	Type	Moisture Content (%) [11]	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)	Soil Sample Suction (kPa) [8]	Oedometer Strain [9]	Estimated Heave Potential (DD) (mm) [10]	In situ Shear Vane Strength (kPa) [11]	Organic Content (%) [12]	pH Value [13]	Sulphate Content* (g/l)			Class [16]
																			SO3 [14]	SO4 [15]		
1	U/S 1.70		D	26	<5	70	23	47	0.07	47	CV	168	677			> 120						
		2.0	D	28	<5											> 120						
		2.5	D	32	<5	72	29	43	0.07	43	CV	168	333			> 120						
		3.0	D	30	<5											> 120						
		3.5	D	30	<5	69	29	40	0.04	40	CH	168	422			> 120						
		4.0	D	29	<5											> 120						
		4.5	D	31	<5							168	481			> 120						
		5.0	D	31	<5							168	521			> 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 SN adapted from BRE IP 493

[9] In-house Test Procedure S17a: One Dimensional Swell/Shrink Test

[10] Estimated Heave Potential (DD)

[11] Values of shear strength were determined in situ by CET using

a Picon hand vane or Geonor vane (GV).

[12] BS 1377: Part 3: 1990, Test No. 4

[13] BS 1377: Part 2: 1990, Test No. 9

[14] BS 1377: Part 3: 1990, Test No. 5.6

[15] SO₄ = 1.2 x SO₃

[16] BRE Special Digest One (Concrete in Aggressive Ground) August 2005

Note that if the SO₄ content falls into the DS4 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.

* These tests are not UKAS accredited

Full reports can be provided upon request

Key

- D Disturbed sample (small)
- B Disturbed sample (bulk)
- U Undisturbed sample
- W Groundwater sample
- ENP Essentially Non-Plastic by inspection
- US Underside of Foundation



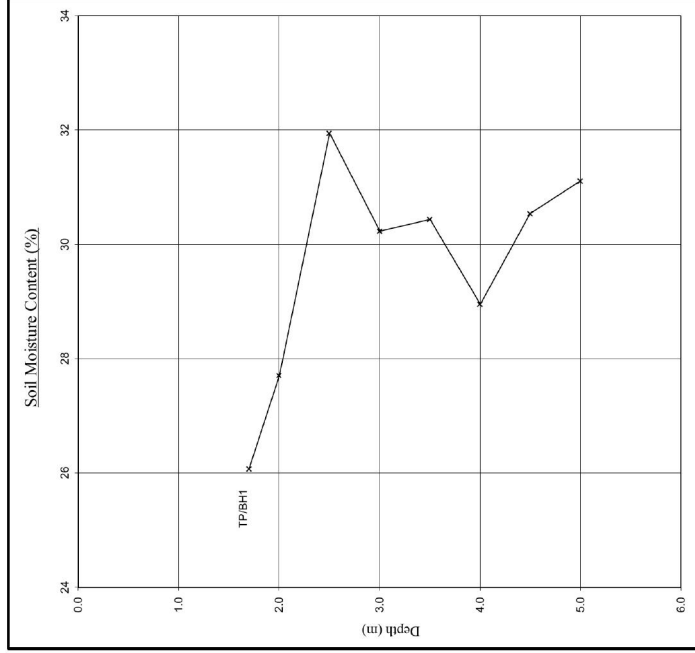
Version: 5BH V1.4 - 11/05/15

CET Structures Ltd - CET Property Assurance Division - Lawness Barns, Mountnessing Road, Billerica, Essex CM12 0TS

Moisture Content Profiles

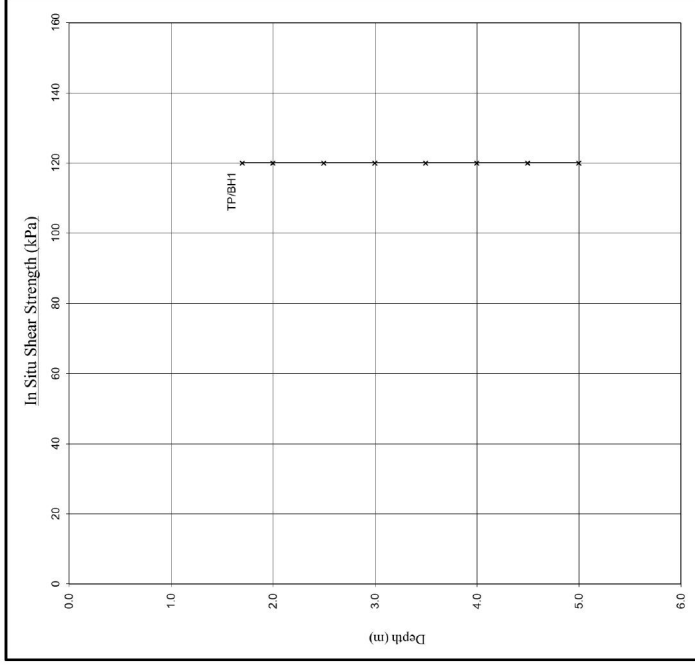
Our Ref: 399437
 Location: Flat 1 & 2, Greencroft Gardens, NW6
 Work carried out for: Cunningham Lindsey - Maidenstone

Date Sampled: 21/02/17
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NOTES
 1. If plotted, 0.4 LI and PL₂-2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
 2. Unless specifically noted the profiles have not been related to a site datum.

Shear Strength Profiles

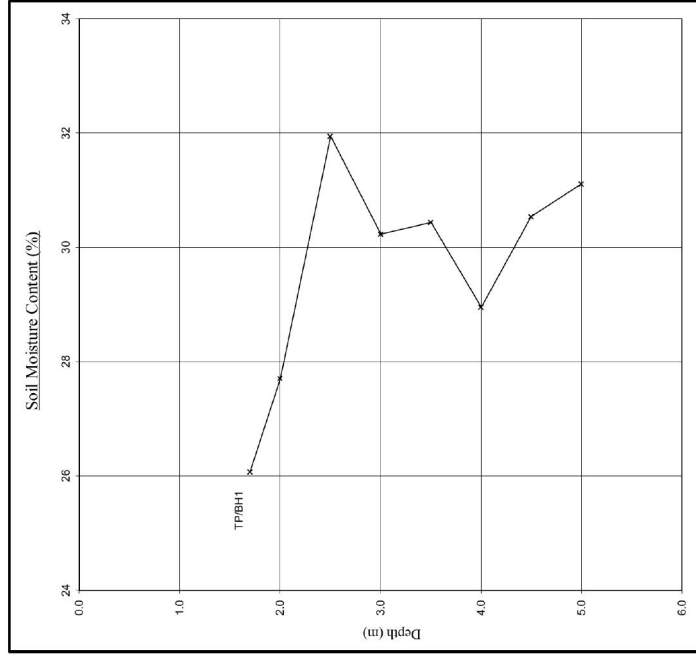


Note
 1. Unless otherwise stated, values of Shear Strength were determined in situ by CET using a Picon Hand Vane the calibration of which is limited to a maximum reading of 120 kPa.
 2. Unless specifically noted the profiles have not been related to a site datum.

Moisture Content Profiles

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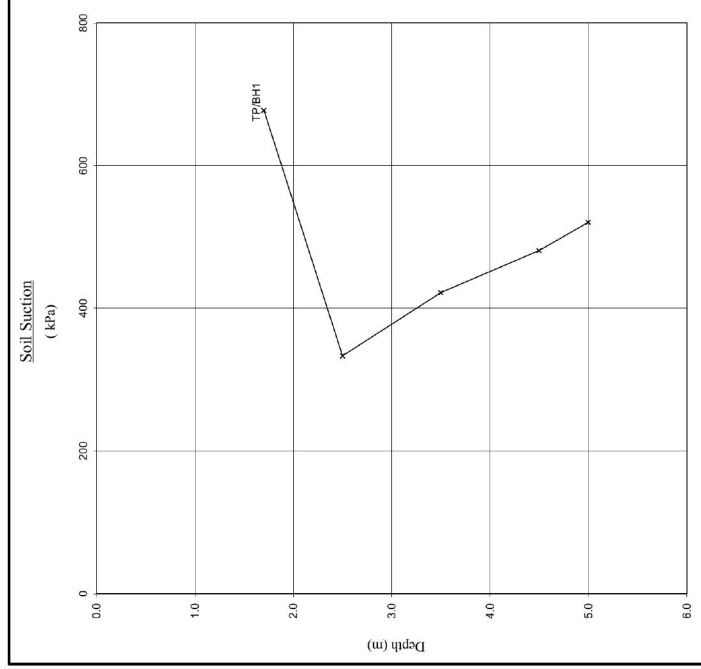
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Notes
 1. If plotted, 0.4 LI and PI_{u-2} (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
 2. Unless specifically noted the profiles have not been related to a site datum.

Soil Suction Profiles

Date Sampled: 21/02/17
 Date Received: 22/02/17
 Date Tested: 23/02/17
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Notes
 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 dependent 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 <i>European Plant Science Laboratory</i>	Sheet: 1 of 1	Site: Flats 1 and 2, 108 Greencroft Gardens,
	Job No: 399437 Date: 01/03/2017 Order No: 951263 EPSL Ref: R18020	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
TP1 (USF)	1 mm	Quercus spp. 4 roots	Positive
BH1 (2.9-4.6m)	1 mm	Quercus spp. 4 roots	Positive

Quercus spp. are oaks (both deciduous and evergreen).



MDM

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