PROPERTY ASSURANCE
Giving our all

SITE INVESTIGATION
FACTUAL REPORT

Report No:	169984
Client:	Cunningham Lindsey - Maidstone
Site:	99 Greencroft Gardens, London
Client Ref:	7498207-[redacted]
Date of Visit:	11/01/2014

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

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

Unit E2 First Floor Suite, Boundary Court
Willow Farm Business Park, Castle Donington
Leicestershire, DE74 2NN

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✉ enquiries@cet-uk.com
💻 www.cet-uk.com

Investigation Layout Plan

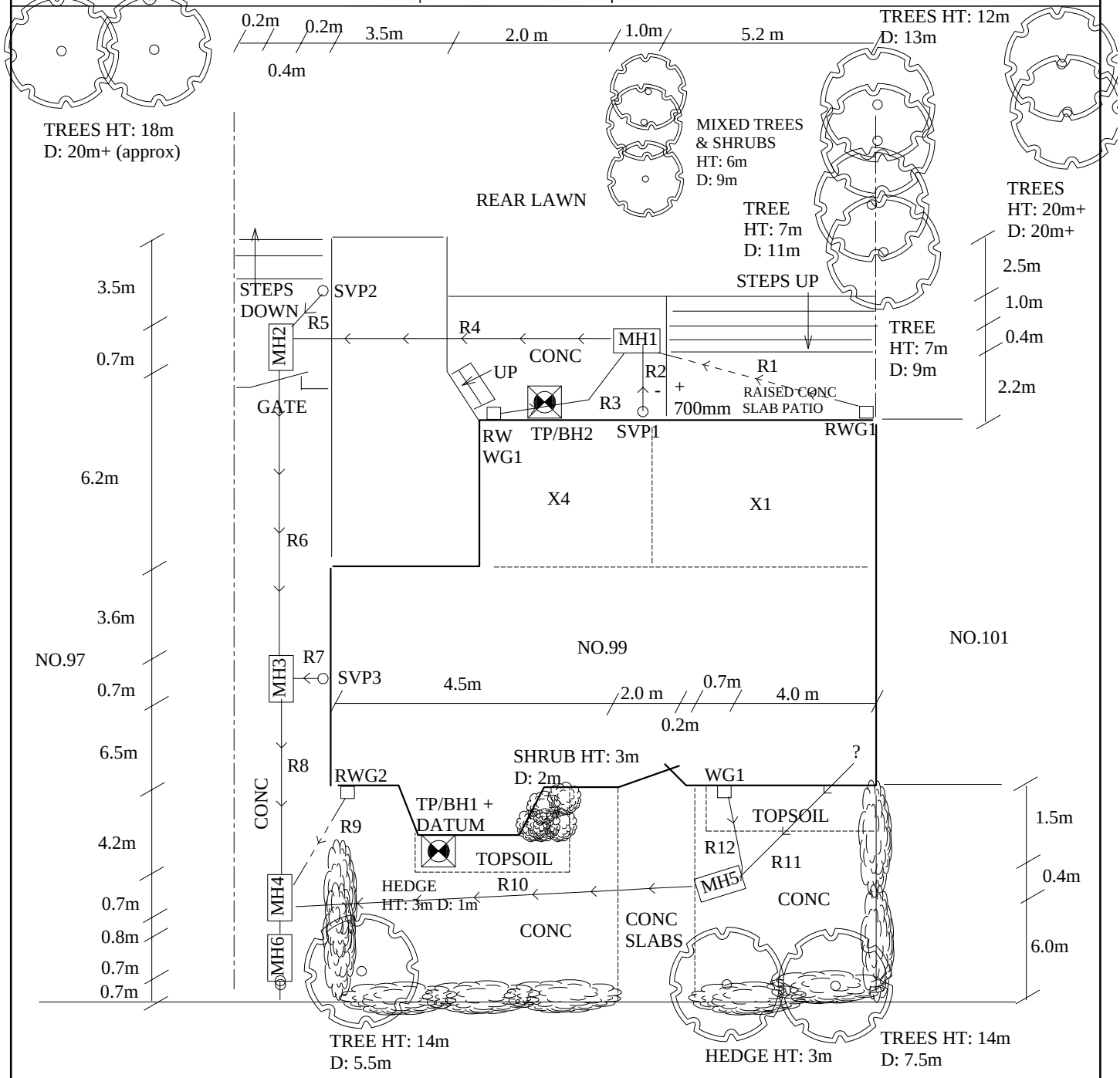
Sheet: 1 of 1
Job No: 169984E
Date: 11/01/2014

Site: 99 Greencroft Gardens, NW6 3PG

Work carried out for: Cunningham Lindsey

MD	SE	AR
(SI)	(Checked)	(Drawn)

Weather: DRY



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Parking - road.
Water supply - outside tap.
Site access - good.
Power - internal.

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: 169984E

Date: 11/01/14

Site: 99 Greencroft Gardens, NW6

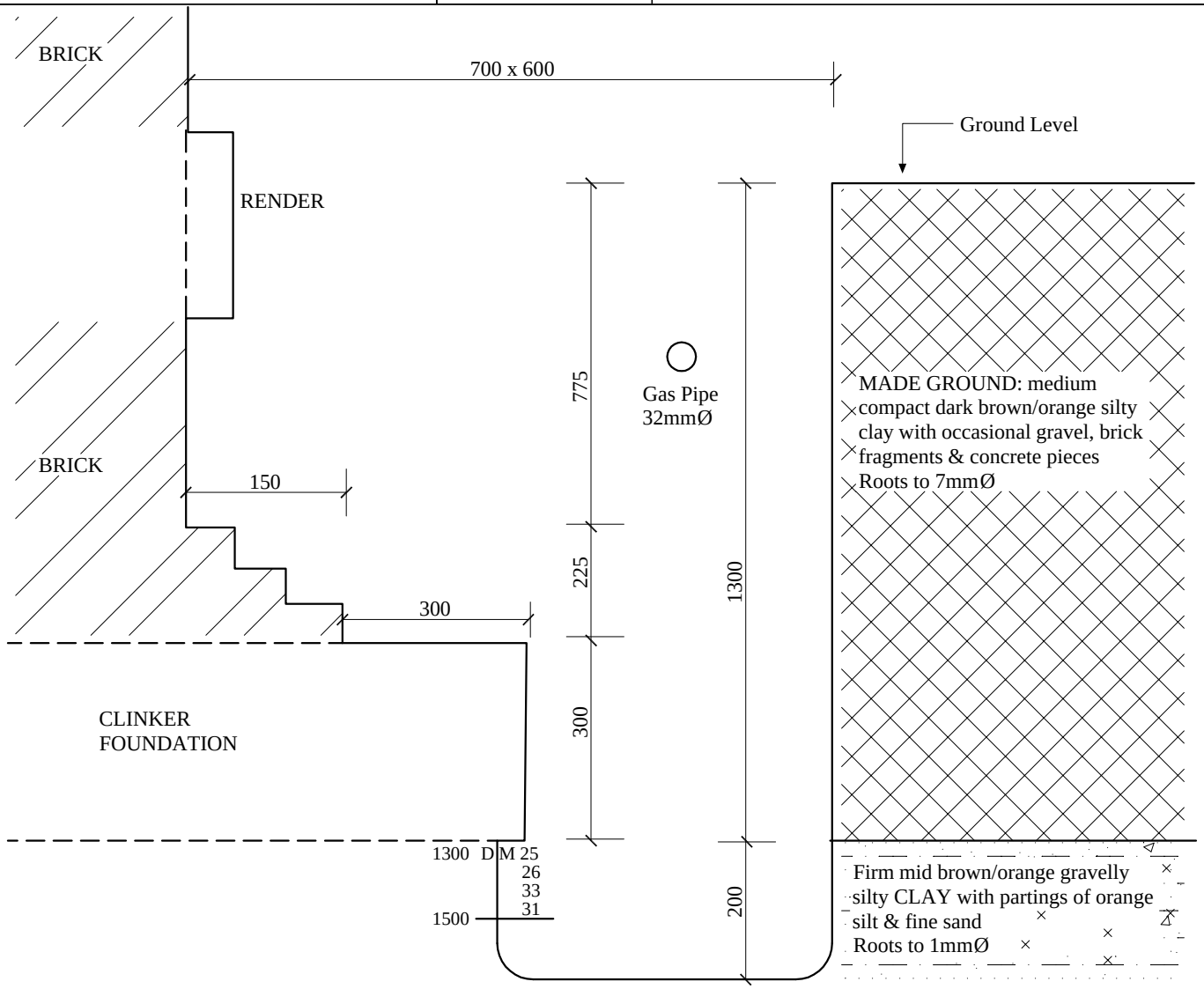
Excavation Method: Hand Tools

Drawn by: NR

Work carried out for: Cunningham Lindsey

Weather: Dry

Ground Level mOD:



FOR STRATA BELOW 1500mm SEE BH LOG 1

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: SP | Checked: SE | Approved:

Scale: N.T.S.

Trial Pit No: 2

Sheet: 1 of 1

Job No: 169984E

Date: 11/01/14

Site: 99 Greencroft Gardens, NW6

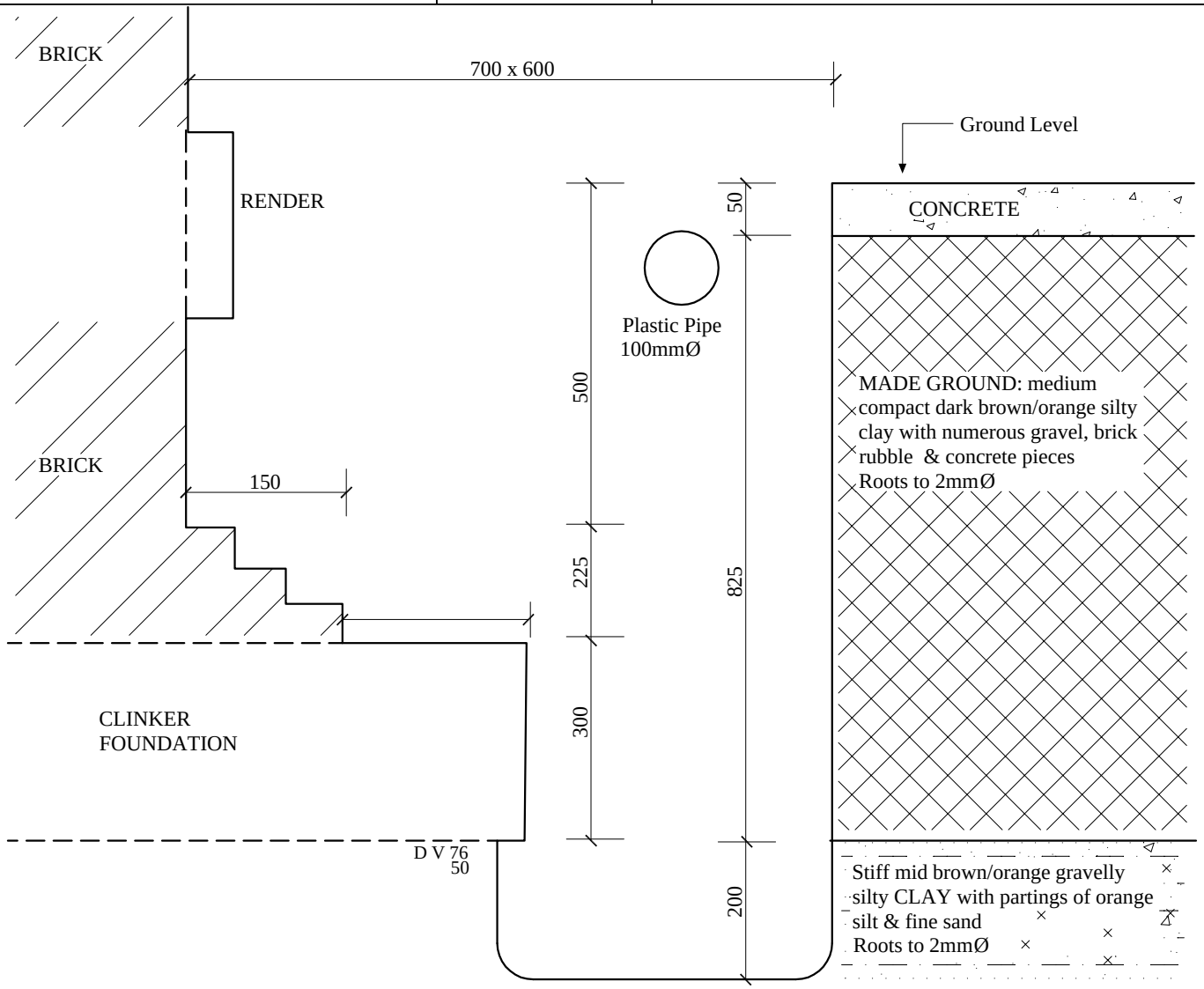
Work carried out for: Cunningham Lindsey

Excavation Method: Hand Tools

Drawn by: NR

Weather: Dry

Ground Level mOD:



FOR STRATA BELOW 1125mm 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: SP | Checked: SE | Approved:

Scale: N.T.S.

Borehole No: 1 & DATUM			Sheet: 1 of 1			Site: 99 Greencroft Gardens, NW6			
			Job No: 169984E						
Boring Method: CFA			Date: 11/01/2014						
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)
	As Trial Pit 1	1.50						Roots to 1mm diameter to 3.0m	
1.50	Firm mid brown/orange, gravelly silty CLAY with partings of orange silt & fine sand	0.20	o x o						
1.70	Stiff mid brown/orange grey veined silty CLAY with partings of orange silt & fine sand	0.80	.x x	D	V	110 112	2.00		
2.50				D			2.50		
			.x	D	V	130+ 130+	3.00	No roots observed below 3.0m	
	Stiff as above with occasional crystals	3.50	x.	D			3.50		
			x	D	V	130+ 130+	4.00		
				D			4.50		
			x.	D	V	130+ 130+	5.00		
6.00			.x						
	BH ends at 6.0m								

Remarks: BH dry & open on completion
Datum installed at 6.0m no samples taken or insitu strength tests carried out below 5.0m

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: SP	Checked: SE	Drawn by NR	Scale: NTS	Weather: Dry

Borehole No: 2			Sheet: 1 of 1							
			Job No: 169984E		Site:	99 Greencroft Gardens, NW6				
Boring Method: Hand Auger			Date: 11/01/2014							
Diameter: 80mm	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	1.125						Roots to 1mm diameter to 2.2m	
1.125	Stiff mid brown/orange, gravelly silty CLAY with partings of orange silt & fine sand	0.375	o x o	D	V	90	1.50		
1.50	Stiff mid brown/orange, grey veined silty CLAY with partings of orange silt & fine sand with occasional fine gravel & crystals	0.50	.x			80			
2.00				D	V	100	2.00		
			.x			100		No roots observed below 2.2m	
				D	V	130+	2.50		
			x			130+			
	Stiff mid brown/orange, grey veined silty CLAY with partings of orange silt & fine sand & occasional crystal	3.00		D	V	130+	3.00		
			x.			130+			
			x	D	V	130+	3.50		
						130+			
				D	V	130+	4.00		
						130+			
			x.	D	V	130+	4.50		
			.x			130+			
5.00				D	V	130+	5.00		
	BH ends at 5.0m					130+			

Remarks:
BH 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: SP	Checked: SE	Drawn by NR	Scale: NTS	Weather: Dry

Our Ref : 169984

Laboratory Testing Results

Date Sampled: 11/01/2014

Location : 99, Greencroft Gardens, MW6

Work carried out for: Cunningham Lindsey - Maidstone

Date Received : 13/01/2014

Date Tested : 13/01/2014

Date of Report : 22/01/2014

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	1.30(U/S)	D	25	18	64	28	36	-0.10	29	CH	168	40						
	2.0	D	28	<5	70	25	45	0.05	45	CV	168	222	111					
	2.5	D	27	<5														
	3.0	D	29	<5	70	24	46	0.10	46	CV	168	162	> 130					
	3.5	D	30	<5														
	4.0	D	32	<5							168	162	> 130					
	4.5	D	30	<5														
	5.0	D	31	<5							168	174	> 130					

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 : 169984

Laboratory Testing Results

Date Sampled : 11/01/2014

Location : 99, Greencroft Gardens, MW6

Date Received : 13/01/2014

Work carried out for: Cunningham Lindsey - Maidstone

Date Tested : 13/01/2014

Date of Report : 22/01/2014

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]*
2	0.93(U/S)	D	23	32	74	26	48	-0.05	32	CV	168	76	78					
	1.5	D	27	26	68	27	42	0.00	31	CH	168	36	85					
	2.0	D	29	<5									100					
	2.5	D	29	<5	66	25	40	0.10	40	CH	168	132	> 130					
	3.0	D	33	<5									> 130					
	3.5	D	33	<5	76	29	47	0.09	47	CV	168	124	> 130					
	4.0	D	32	<5									> 130					
	4.5	D	32	<5							168	165	> 130					
	5.0	D	31	<5							168	225	> 130					

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

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[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)
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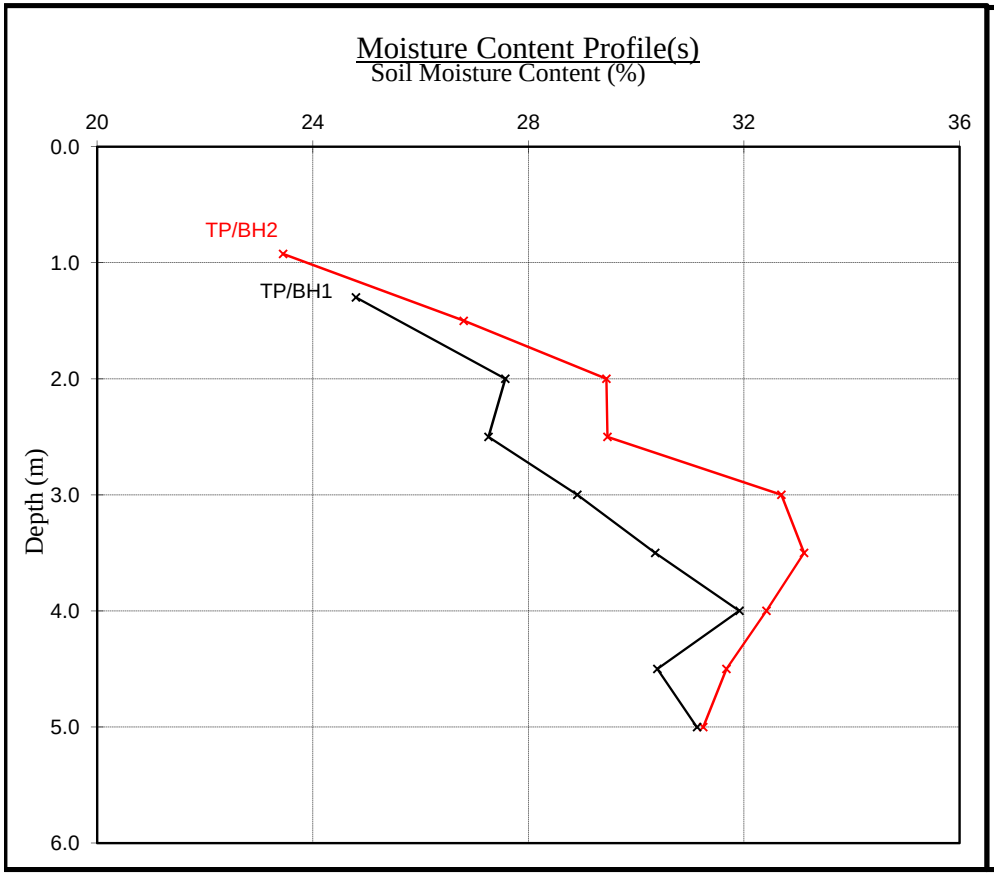
ENP	Essentially Non-Plastic by inspection
U/S	Underside of Foundation

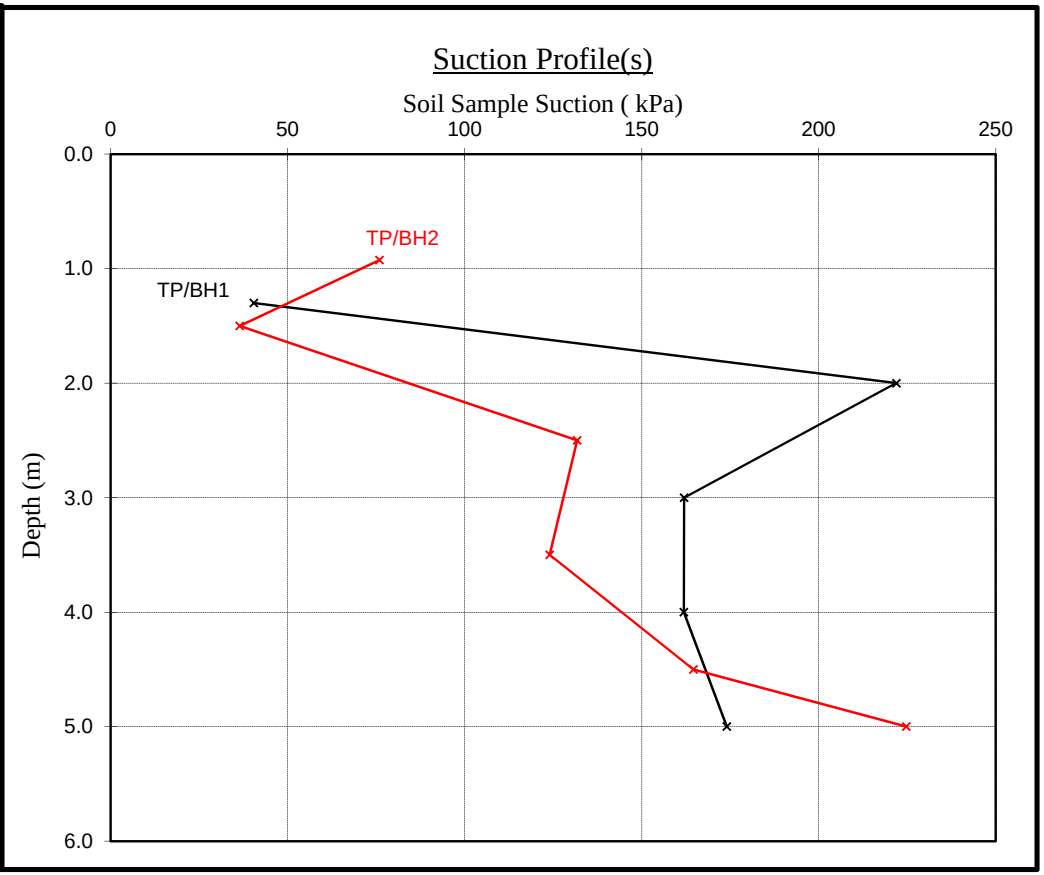
Moisture Content and Suction Profiles

Our Ref :	169984		Date Sampled : 11/01/2014
Location :	99, Greencroft Gardens, MW6		Date Received : 13/01/2014
Work carried out for:	Cunningham Lindsey - Maidstone	Note : Unless specifically noted the profiles have not been related to a site datum.	Date Tested : 13/01/2014
			Date of Report : 22/01/2014

Moisture Content Profile(s)



Suction 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

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.

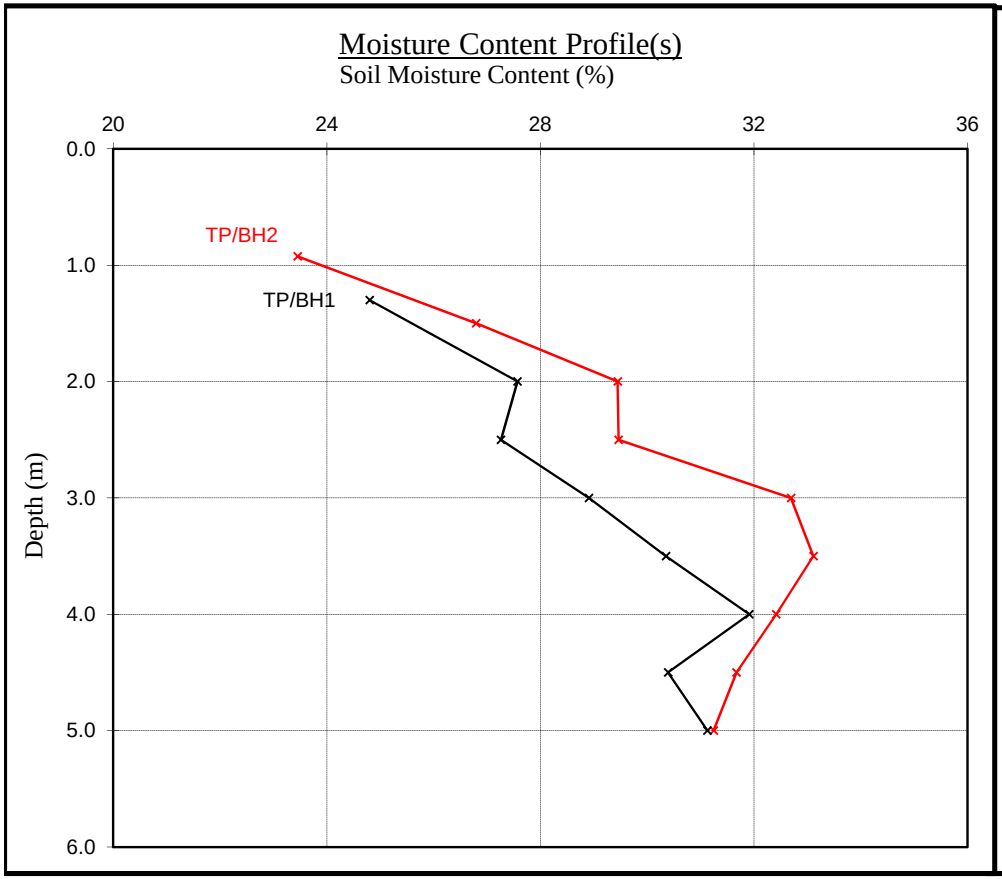
Moisture Content and Shear Strength Profiles

Our Ref :	169984	Date Sampled :	11/01/2014
Location :	99, Greencroft Gardens, MW6	Date Received :	13/01/2014
Work carried out for:	Cunningham Lindsey - Maidstone	Date Tested :	13/01/2014
		Date of Report :	22/01/2014

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

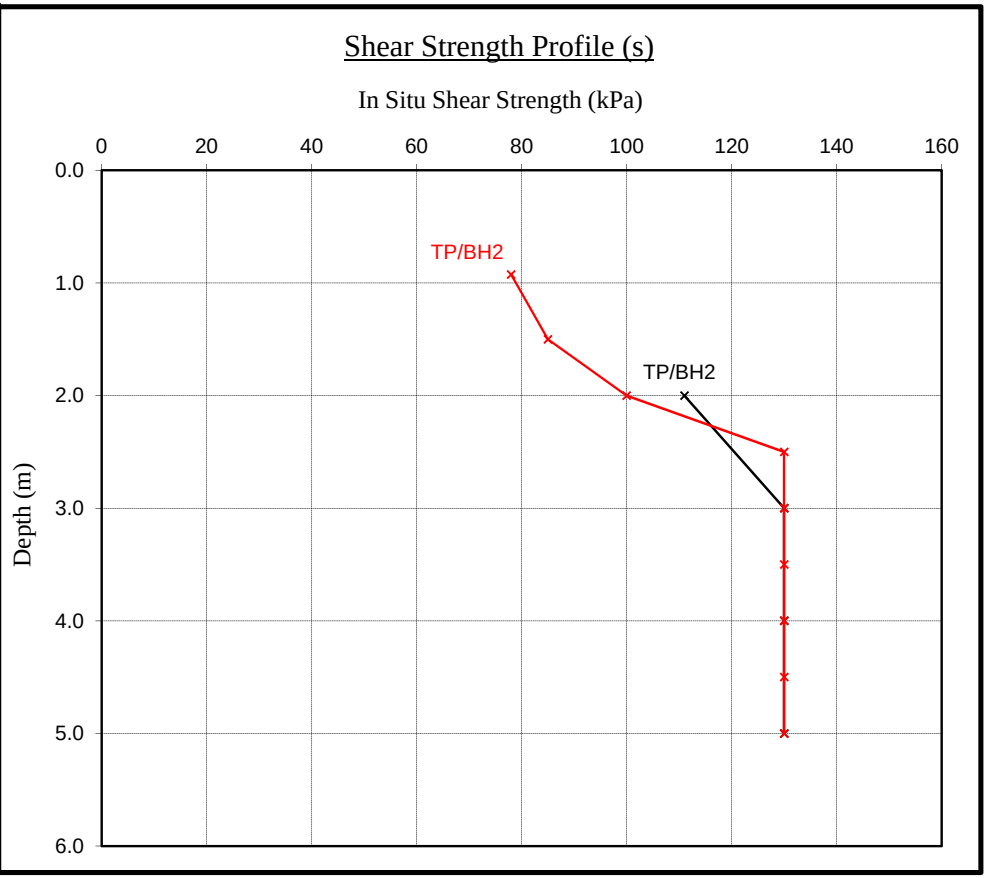
Moisture Content Profile(s)

Soil Moisture Content (%)



Shear Strength Profile (s)

In Situ Shear Strength (kPa)



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.

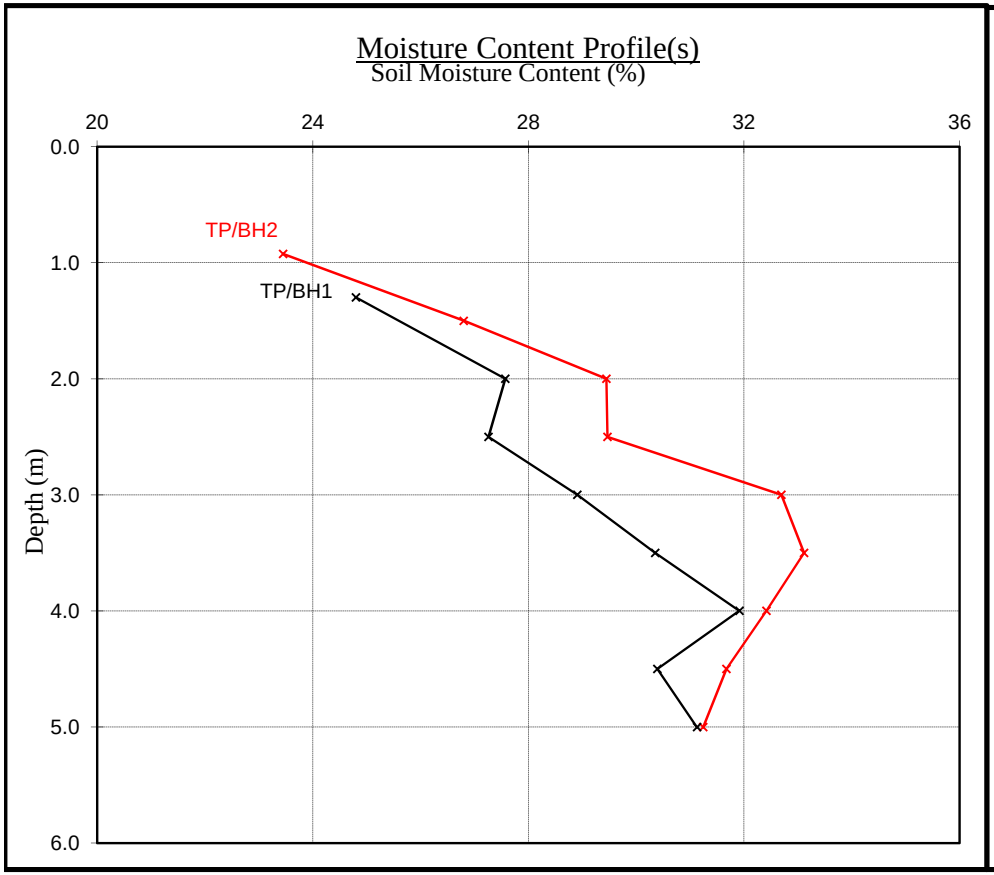
Note

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 130 kPa.

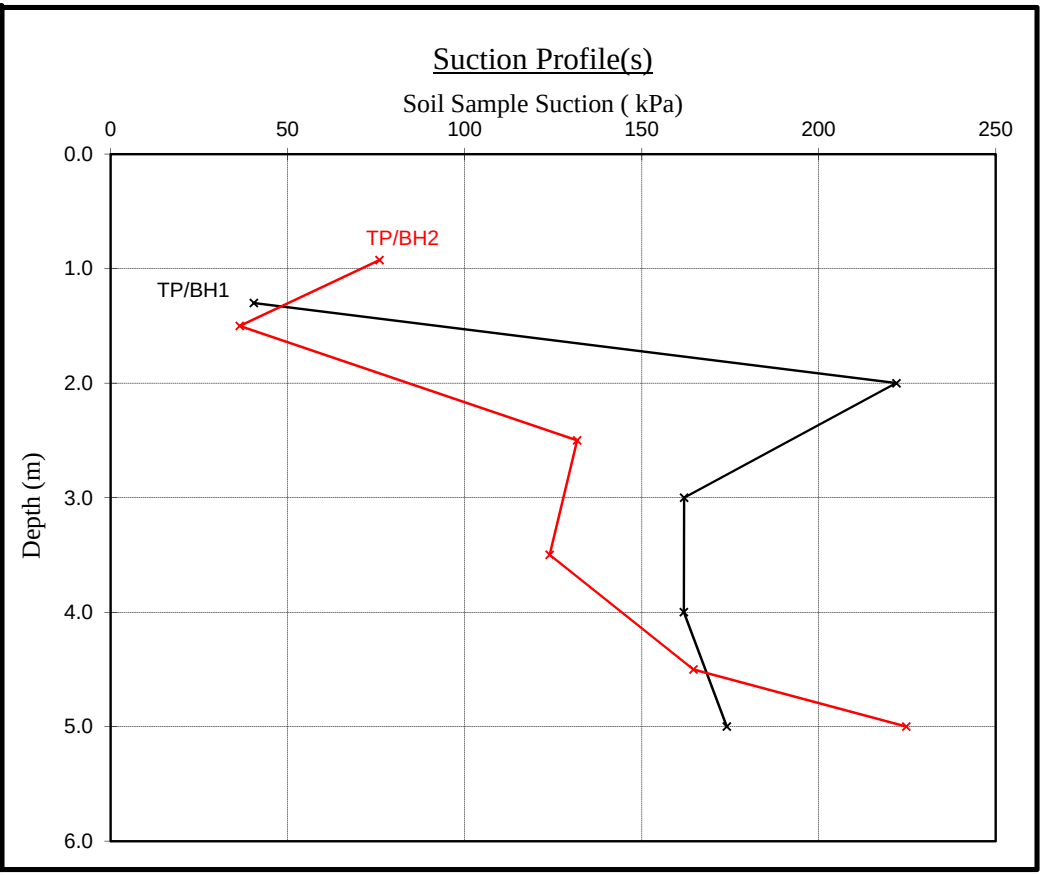
Moisture Content and Suction Profiles

Our Ref :	169984		Date Sampled : 11/01/2014
Location :	99, Greencroft Gardens, MW6		Date Received : 13/01/2014
Work carried out for:	Cunningham Lindsey - Maidstone	Note : Unless specifically noted the profiles have not been related to a site datum.	Date Tested : 13/01/2014
			Date of Report : 22/01/2014

Moisture Content Profile(s)



Suction Profile(s)



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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: **169984** Date: **16/01/2014** Order No: **509375** EPSL Ref: **R4399**	Site: **99 Greencroft Gardens, 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**
TP1 (USF)	1 mm	Tilia spp. 2 roots	Positive
BH1 (to 3m)	<1 mm	Tilia spp. *	Negative
TP2 (USF)	1.5 mm	Platanus spp. 2 roots	Positive
BH2 (to 2.2m)	<1 mm	probably Populus spp. but possibly Salix spp. ** 3 roots	Negative

* Plus 1 other too decayed for identification.
** All in a state of decay.

Tilia spp. are limes.
Platanus spp. include London plane and Oriental plane.
Populus spp. are poplars and aspen; Salix spp. are willows.

MDM

Address for correspondence: EPSL , Intec, Parc Menai, Bangor, Gwynedd, North Wales, LL57 4FG
Telephone: 01248 672 652
e-mail: lab@marishalthompson.co.uk
Head of Laboratory Services : M D Mitchell B.Sc. (Hons), M.Phil.
Plant Anatomist : Dr G S Turner B.Sc. (Hons), M.Sc., Ph.D
Consultant: Dr M P Denne B.Sc. (Hons), M.Sc., Ph.D
Registered in England. No 295427, Registered Office: 6G Greensfield Court, Alnwick, Northumberland, NE66 2DE

To: Cunningham Lindsey - Maidstone
4 North Court
South Park Business Village
Armstrong Road
Kent
ME15 6JZ

Our Ref: **169984**

Your Ref: **7498207**

Date: **13-Jan-14**

Ftao: Yiu-Shan Wong

ESTIMATE

Site:- **99 Greencroft Gardens, London**

Item		Amount
	No recommendations required to the private drainage surveyed.	

Notes

Repairs to shared runs and off boundary pipe-work may be the responsibility of the water authority.

Total	£0.00
plus VAT @20%	£0.00
Total + VAT	£0.00

Condition Grade

A - Structurally sound with no leakage evident.
B - Cracks and fractures observed.
C - Structurally unsound

Quotation is binding only if accepted within 28 days from date of issue and is subject to our Standard Terms and Conditions
The price qualification notes, stated on the drainage solutions schedule of rates, apply to this quotation.
CET Structures Ltd undertakes to return to site free of charge to carry out remedial work to the drainage repairs set out above for a period of 2 months from the date of this invoice. The company standard charge rates will apply to the visit should the work requested be unrelated to the said repairs.

Underground Drainage Report	Sheet: 1 of 5 Job No: 169984 Date: 11-Jan-14	Site: 99 Greencroft Gardens, London Work carried out for: Cunningham Lindsey - Maidstone

MANHOLE DETAILS

Manhole	Depth to Invert	Condition
MH1	350mm	As built
MH2	775mm	As built
MH3	1000mm	As built
MH4	1250mm	As built
MH5	850mm	As built
MH6	3200mm	Poor

CCTV Survey:-

1. Drainage Run:

From manhole 1 run 1 to rain water gully 1 - 100mm clay surface water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Raised concrete slab patio
0.1	MC	Lined	
4.4	FH	Reached RWG1	

2 Drainage Run:

From manhole 1 run 2 to soil vent pipe 1 - 100mm plastic foul water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
1.9	LU		
2.1	FH	Reached SVP	

Water Test Grade:

0 - Unable to fill
1 - Heavy Loss
2 - Medium Loss over 2 minutes
3 - Slow Loss over 5 minutes
4 - No Loss

3 Drainage Run:

From manhole 1 run 3 to rain water waste gully 1 - 100mm plastic combined - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.2	LR	Slight	
1.2	LR		
1.8	DE	20%	
2.6	LL		
2.9	FH	Reached RWWG1	

4 Drainage Run:

From manhole 1 run 4 to manhole 2 - 100mm clay combined - Downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.1	MC	Cast iron	
2.0			Under house
5.5			Concrete
5.7	FH	Reached MH2	

5 Drainage Run:

From manhole 5 run 5 to soil vent pipe 2 - 100mm plastic foul water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.1	LU		
0.8	GO	Line levels out	
3.3	LU		
3.5	FH	Reached SVP2	

Water Test Grade:

0 - Unable to fill
1 - Heavy Loss
2 - Medium Loss over 2 minutes
3 - Slow Loss over 5 minutes
4 - No Loss

6 Drainage Run:

From manhole 2 run 6 to manhole 3 - 100mm liner combined - Downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
2.0	WL	10%	
2.8	ESL	From 5 o'clock to 7 o'clock - 10%	
4.0	ESL	From 5 o'clock to 7 o'clock - 10%	
9.7	FH	Reached MH3	

7 Drainage Run:

From manhole 3 run 7 to soil vent pipe 3 - 100mm clay foul water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.2	LU		
0.6	FH	Reached SVP3	

8 Drainage Run:

From manhole 3 run 8 to manhole 4 - 100mm cast iron combined - Downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
8.5	WL	10%	
10.0	DE	10%	
10.4	WL	25%	
11.0	WL	50%	
11.2	CU	Due to interceptor blocked in MH6	
11.8	FH	Reached MH4	

Water Test Grade:

0 - Unable to fill
1 - Heavy Loss
2 - Medium Loss over 2 minutes
3 - Slow Loss over 5 minutes
4 - No Loss

9 Drainage Run:

From manhole 4 run 9 to rain water gully 2 - 100mm clay surface water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.4	LU		
0.4	LL		
1.2	GO	Line levels out	
1.5	FH	Unable to push - too many bends	

10 Drainage Run:

From manhole 4 run 10 to manhole 5 - 100mm cast iron combined - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.2			Topsoil
0.3	DE	20%	
1.0	DE	40%	Concrete
5.5	ESH	From 12 o'clock to 12 o'clock - 50%	
5.5	FH	Unable to push	
	GO	Survey completed on run 10	

11 Drainage Run:

From manhole 5 run 10 to manhole 4 - 100mm cast iron combined - Downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
0.2			Concrete slabs
2.2			Concrete
6.0			Topsoil
6.2	ESM	30%	
7.0			Concrete
7.8	FH	Reached MH4	

Water Test Grade:

0 - Unable to fill
1 - Heavy Loss
2 - Medium Loss over 2 minutes
3 - Slow Loss over 5 minutes
4 - No Loss

12 Drainage Run:

From manhole 5 run 11 to unknown - 100mm plastic foul water - Upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
5.6	LU		
6.1	GO	Line levels out	
6.9	FH	Unable to push	

13 Drainage Run:

Break -in - waste gully 1 run 12 to manhole 5 - 100mm plastic foul water - Downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Concrete
1.0	LR		
1.5	FH	Reached MH5	

- END OF SURVEY -

Our assessment of the drainage system is based on our visual inspection and on information collated at the time of the survey. Where assumptions have been made these are based on our experience and do not constitute any form of guarantee, nor do we guarantee that further deterioration will not occur following this survey. CCTV video records will be stored for a period of 3 months from date of inspection and then destroyed.

Water Test Grade:

0 - Unable to fill
1 - Heavy Loss
2 - Medium Loss over 2 minutes
3 - Slow Loss over 5 minutes
4 - No Loss

Water Authority Sewer Condition Codes

B	Broken pipe at… (or from… to..) o'clock
BR	Branch Major
CC	Crack circumferential from… to… o'clock
CL	Crack longitudinal @… o'clock
CM	Cracks multiple from… to… o'clock
CN	Connection at… o'clock, diameter… mm
CNI	Connection at… o'clock, diameter… mm, intrusion… mm
CU	Camera under water
CX	Connection defective at… o'clock
CXI	Connection defective at… o'clock, diameter… mm, intrusion… mm
D	Deformed sewer… %
DB	Displaced bricks at (or from.. to..) o'clock
DC	Dimension of sewer changes at this point
DE	Debris (non silt/grease)… % cross-sectional loss
DEG	Debris grease… % cross-sectional area loss
DES	Debris silt… % cross-sectional area loss
DI	Dropped invert, gap… mm
EHJ	Encrustation heavy from.. to.. o'clock % cross-sectional area loss (at joint)
ELJ	Encrustation light from.. to.. o'clock%
EMJ	Encrustation medium from.. to.. o'clock %, cross-sectional area loss (at joint)
ESH	Scale heavy… % cross-sectional area loss from... to… o'clock
ESL	Scale light from… to… o'clock
ESM	Scale medium… % cross-sectional area loss from… to… o'clock
FC	Fracture circumferential from… to… o'clock
FL	Fracture longitudinal at… o'clock
FM	Fractures multiple from… to… o'clock
GO	General observation at this point
GP	General photograph number… taken at this point
H	Hole in sewer at… o'clock
IDJ	Infiltration dripper at (or from… to…) o'clock (at joint)
IGJ	Infiltration gusher at (or from… to…) o'clock (at joint)
IRJ	Infiltration runner at (or from… to…) o'clock (at joint)
ISJ	Infiltration seeper at (or from… to…) o'clock (at joint)
JDM	Joint displaced medium
JDL	Joint displaced large
JN	Junction at…o'clock, diameter…mm
JX	Junction defective at.. o'clock, diameter.. mm
LC	Lining of sewer changes/starts/finishes at this point
LD	Line of sewer deviates down
LL	Line of sewer deviates left
LN	Line defect at (or from.. to..) o'clock
LR	Line of sewer deviates right
LU	Line of sewer deviates up
MB	Missing bricks at.. (or from.. to..) o'clock
MC	Material of sewer changes at this point
MH	Manhole/node
MM	Mortar missing medium at.. (or from.. to..) o'clock
MS	Mortar missing surface at.. (or from.. to..) o'clock
MT	Mortar missing total at.. (or from.. to..) o'clock
OB	Obstruction… % height/diameter loss
OJL	Open joint large
OJM	Open joint medium
PC	Length of pipe forming sewer changes at this point, new length…mm
RFJ	Roots fine (at joint)
RMJ	Roots mass… % cross-sectional area loss (at joint)
RTJ	Roots tap (at joint)
SA	Survey abandoned
SC	Shape of sewer changes at this point
SSL	Surface damage, spalling large at (or from.. to..) o'clock
SSM	Surface damage, spalling medium at (or from.. to..) o'clock
SSS	Surface damage, spalling slight at (or from.. to..) o'clock
SWL	Surface damage, wear large at… (or from.. to..) o'clock
SWM	Surface damage, wear medium at… (or from.. to..) o'clock
SWS	Surface damage, wear slight at.. (or from.. to..) o'clock
V	Vermin (rats and mice)
WL	Water level… % height/diameter
X	Sewer collapsed… % cross-sectional area loss
FH	End of survey

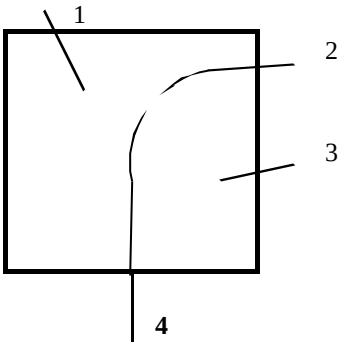
Contract: 169984

Date: 11-Jan-14

Operative Initial: MD

Site Address: 99 Greencroft Gardens, London

M/H: 1 **Depth:** 350mm



Chamber Dimension (mm):

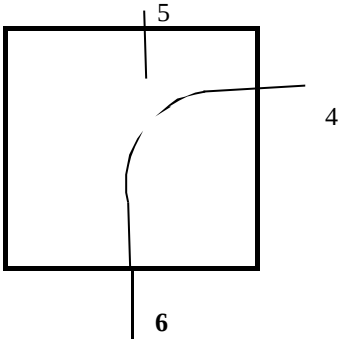
Depths of run if different to invert level:-

Run

Manhole Condition

As built

M/H: 2 **Depth:** 775mm



Chamber Dimension (mm):

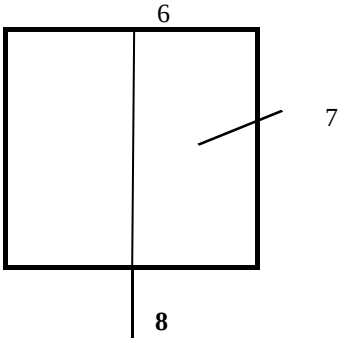
Depths of run if different to invert level:-

Run 5 500mm

Manhole Condition

As built

M/H: 3 **Depth:** 1000mm



Chamber Dimension (mm):

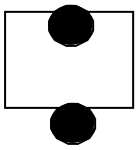
Depths of run if different to invert level:-

Run

Manhole Condition

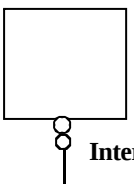
As built

KEY….



Internal Back Drop

External Back Drop



Interceptor

Water Pressure Test Results

From: To: Pass / Fail

Contract: 169984

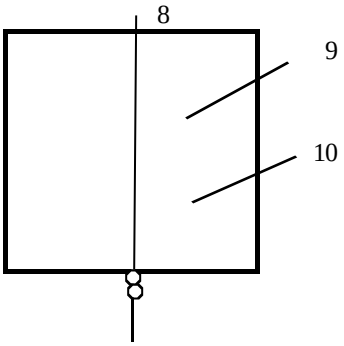
Site Address: 99 Greencroft Gardens, London

Date: 13-Jan-14

Operative Initial: MD

Page: 2 of 2

M/H: 4 **Depth:** 1250mm



Chamber Dimension (mm):

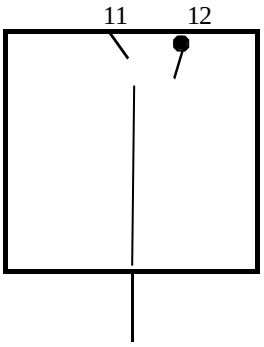
Depths of run if different to invert level:-

Run

Manhole Condition

As built

M/H: 5 **Depth:** 850mm



Chamber Dimension (mm):

Depths of run if different to invert level:-

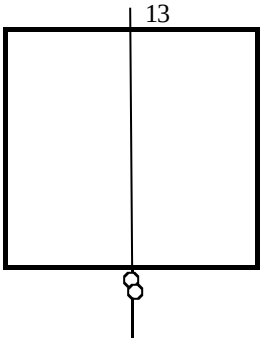
Run 11 300mm

12 500mm

Manhole Condition

As built

M/H: 6 **Depth:** 3200mm



Chamber Dimension (mm):

Depths of run if different to invert level:-

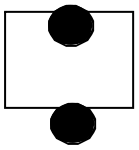
Run

Manhole Condition

Poor

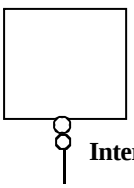
Blocked at interceptor

KEY….



Internal Back Drop

External Back Drop



Interceptor

Water Pressure Test Results

From: To: Pass / Fail