

SITE INVESTIGATION FACTUAL REPORT

Report No: 408792
Client: Crawford Claims Management
Site: 157 Gloucester Avenue
Client Ref: SU1604979-157 Gloucester Avenue Ltd
Date of Visit: 02/03/17



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

☎ 0843 2272362
✉ enquiries@cet-uk.com
🌐 www.cet-uk.com

CET is the trading name of CET Structures Ltd
Registered in England No. 02527130

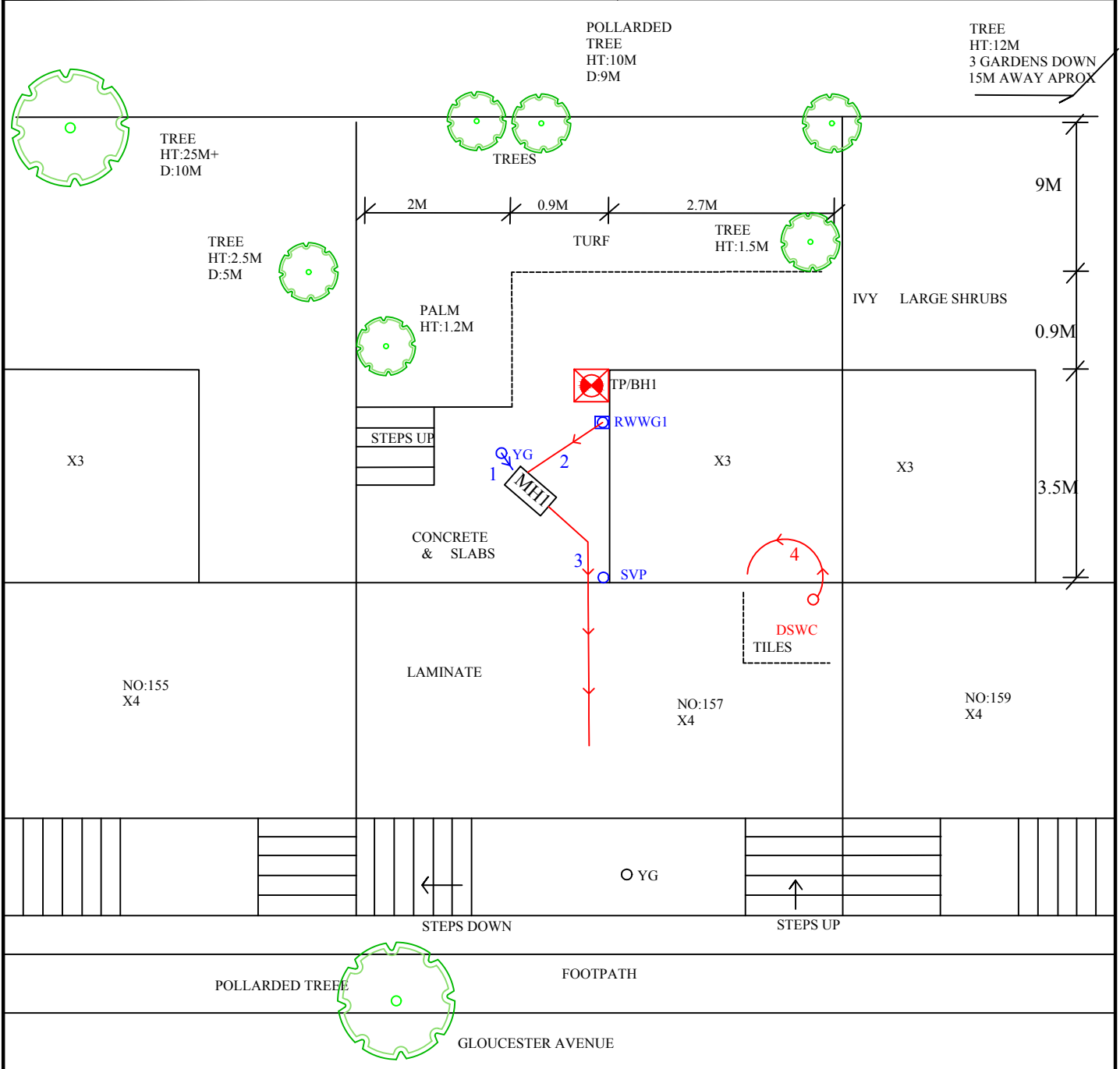
Drainage Layout Plan

Sheet: 1 of 1
 Job No: 408792
 Date: 02/03/2017

Site: 157 Gloucester Avenue, NW1
 Work carried out for: Crawford Claims MGMT SUS

MH (SI) SA (Checked) SK (Drawn)

Weather: DRY



DRAIN REPAIR RECOMMENDATIONS

Mh 1 upstream to Yg 1 - Run 1. Excavate and replace gully + pipework downstream to Mh 1

Mh 1 upstream to Rwwg 1 - Run 2. Excavate and replace gully + pipework downstream to Mh 1.

Mh 1 downstream - Run 3. From Mh 1 excavate and replace pipework downstream to and including junction with Svp 1.

Dswc downstream - Run 4. Remove wc (to be done by others) excavate and replace rest bend + 1 meter of pipework downstream. From excavation complete cctv and repair as necessary. If findings or repair exceptional then discuss with engineer before repair.

Surface Water Drain ---
 Foul Water Drain ---

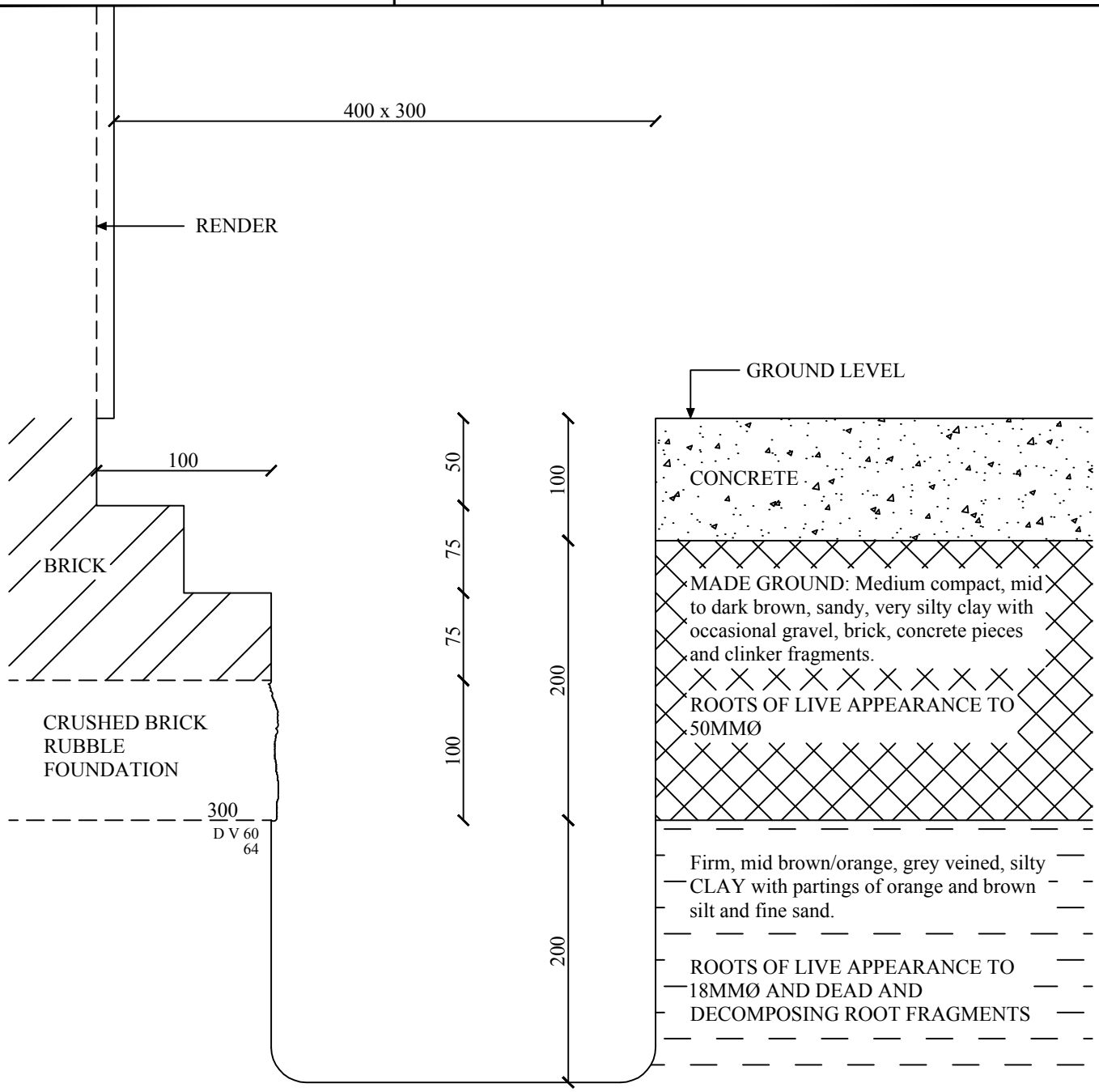
Scale: N.T.S. | Parking: Yes | Power: Yes | Water: Yes | Approx age:

Trial Pit No: 1

Sheet: 1 of 1
 Job No: 408792
 Date: 02/03/2017

Site: 157 Gloucester Avenue
 Work carried out for: Crawford Claims MGMT SUS

Hand Tools
 Weather: DRY
 Drawn by: KL
 Ground Level mOD:



FOR STRATA BELOW 500mm 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: MH
 Checked: SA
 Approved:

Scale: N.T.S.

Borehole		1	Sheet: 1 of 1		Site: 157 Gloucester Avenue			
				Job No: 408792				
				Date: 02/03/2017				
Boring Method:	Hand Auger			Ground Level:				
Diameter (mm):	75	Weather:	Dry	Client:	Crawford Claims Management			
Depth (m)	Soil Description			Thickness	Legend	Samples and Tests		
				Depth	Type	Result		
0.00	See Trial Pit			0.50				
0.50	Firm mid brown grey veined silty CLAY with partings of orange silt & fine sand ,carbon flecks and crystals			0.30	x x x			
0.80	Stiff mid brown grey veined silty CLAY with partings of orange silt & fine sand ,carbon flecks and crystals			2.20	x x x x x x x x x x x x x x x x x x			
						1.00	DV	76
								80
						1.50	DV	130+
								130+
						2.00	DV	130+
								130+
	2.50	DV	130+					
			130+					
3.00	End of BH					3.00 DV 130+		
						130+		
Remarks: BH ends at 3.0m .BH dry & open on completion. No roots observed below 1.7m.				Key: D - Disturbed Sample B - Bulk Sample W - Water Sample Roots J - Jar Sample Roots V - Pilcon Shear Vane (kPa) Roots M - Mackintosh Probe Depth to Water (m) TDTD - Too Dense To Drive		To	Max	
						Depth	Dia	
						(m)	(mm)	
						1.00	2	
						1.70	1	
Logged:	Lbi	SA	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.	

Laboratory Summary Results

Our Ref : 408792
 Location : 157 Gloucester Avenue, London
 Client: Crawford Claims Management
 Address: Cartwright House, Tottle Road, Riverside Business Park, NG2 1RU

Date Sampled: 02/03/17
 Date Received : 06/03/17
 Date Tested : 07/03/17
 Date of Report : 15/03/17

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)	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]
TP/BH No	Depth (m)																	SO ₃ [14]	SO ₄ [15]	
1	U/S 0.30	D	34	<5	63	22	41	0.30	41	CH	168	64.0			62					
	1.0	D	29	<5	74	27	47	0.05	47	CV	168	324			78					
	1.5	D	28	<5							168	655			> 130					
	2.0	D	32	<5	74	28	46	0.08	46	CV	168	540			> 130					
	2.5	D	34	<5							168	497			> 130					
	3.0	D	34	<5	77	29	48	0.10	48	CV	168	661			> 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] In-house Test Procedure S17a: One Dimensional Swell/Strain Test
- [10] Estimated Heave Potential (Dd)
- [11] Values of shear strength were determined in situ by CET using a Pilcon 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 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.

* These tests are not UKAS accredited
 Full reports can be provided upon request

Key

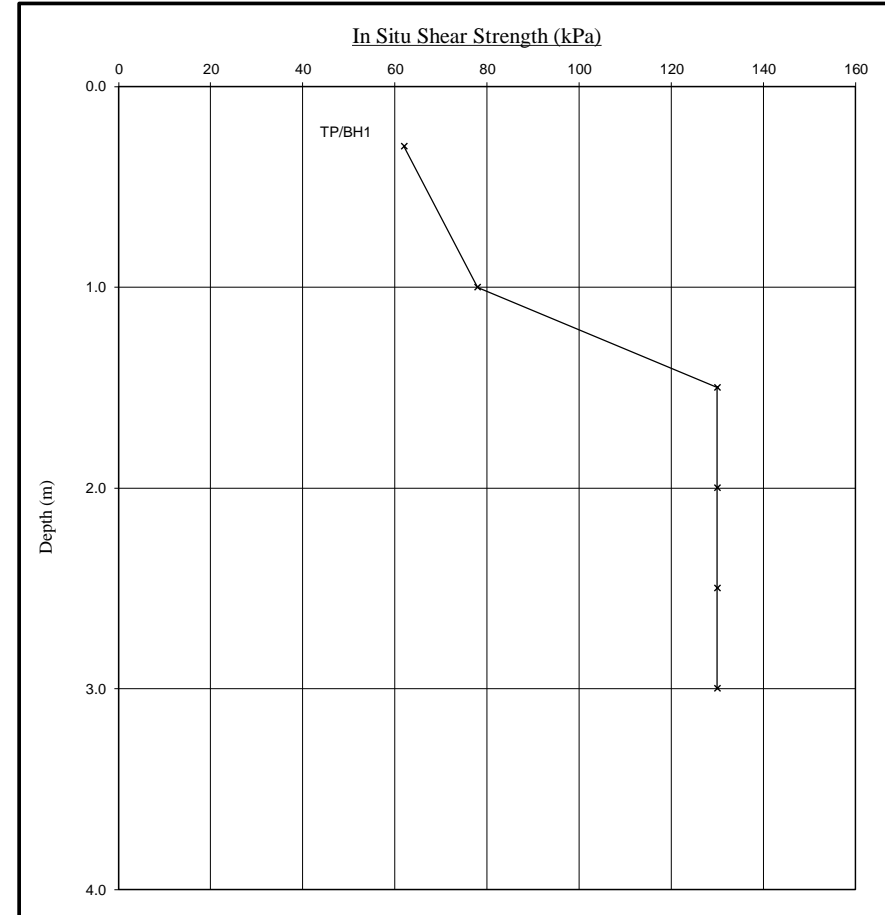
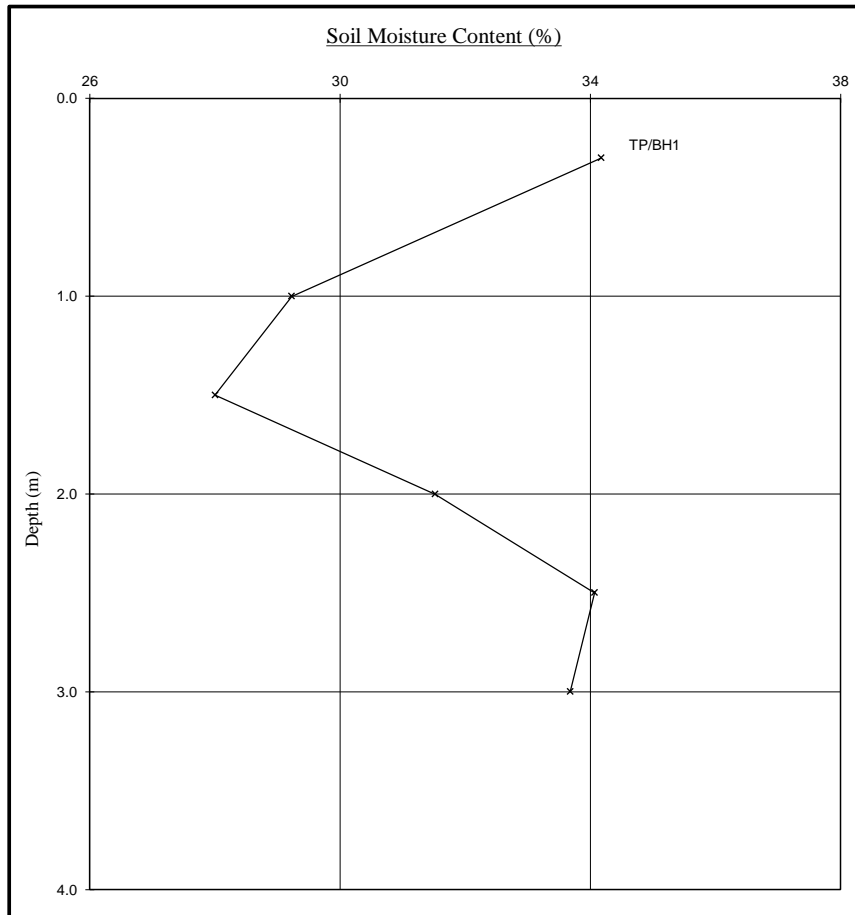
- D Disturbed sample (small)
- B Disturbed sample (bulk)
- U Undisturbed sample
- W Groundwater sample
- ENP Essentially Non-Plastic by inspection
- U/S Underside of Foundation



Moisture Content Profiles

Our Ref : 408792
 Location : 157 Gloucester Avenue, London
 Work carried out for: Crawford Claims Management

Date Sampled : 02/03/17
 Date Received : 06/03/17
 Date Tested : 07/03/17
 Date of Report : 15/03/17



Notes

1. If plotted, 0.4 LL and PL+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.

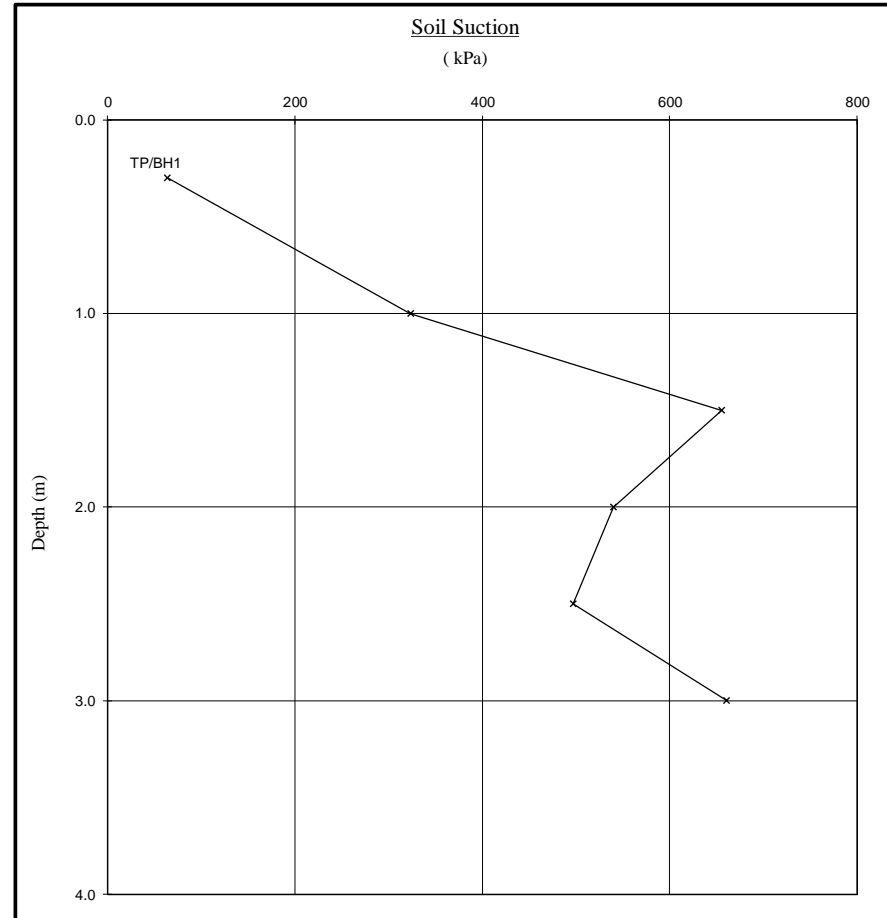
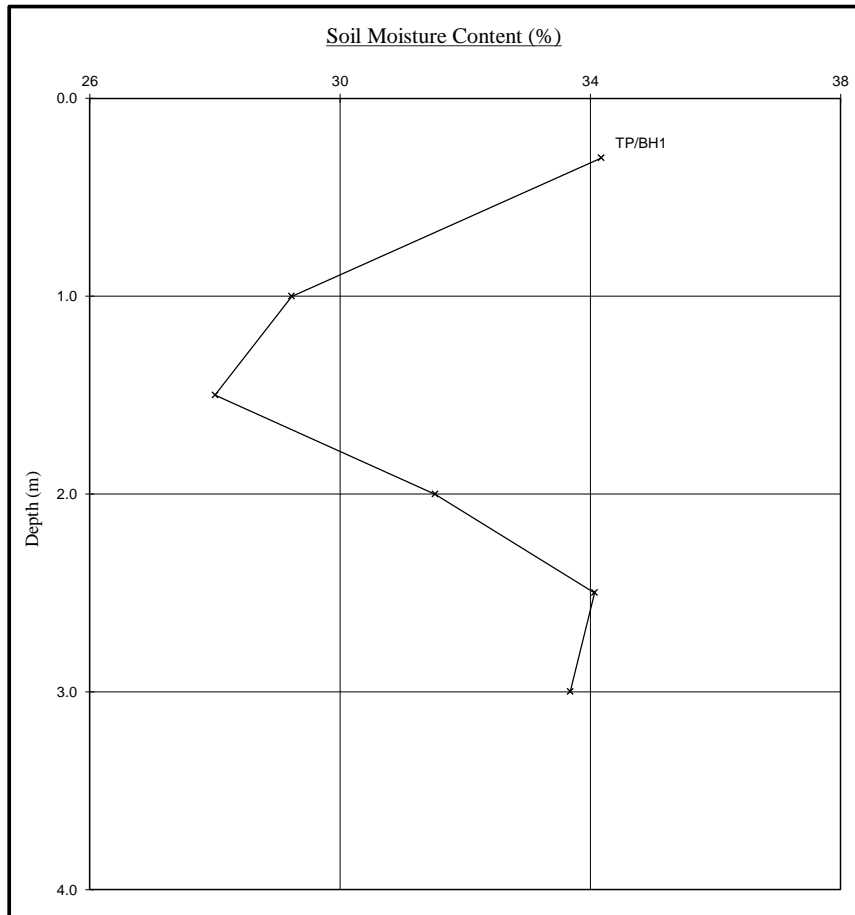
Note

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 130 kPa.
2. Unless specifically noted the profiles have not been related to a site datum.

Moisture Content Profiles

Our Ref : 408792
Location : 157 Gloucester Avenue, London
Work carried out for: Crawford Claims Management

Date Sampled : 02/03/17
Date Received : 06/03/17
Date Tested : 07/03/17
Date of Report : 15/03/17



Notes

1. If plotted, 0.4 LL and PL+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.

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.

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)	18 mm	Platanus spp. 4 roots	Positive
BH1 (to 1.7m)	1 mm	Platanus spp. 4 roots	Positive

Platanus spp. include London plane and Oriental plane.



MDM

Address for correspondence: EPSL, Intec, Parc Menai, Bangor, Gwynedd, North Wales, LL57 4FG

Telephone: 01248 672 652

e-mail: lab@innovation-environmental.co.uk

Head of Laboratory Services : *MD Mitchell B.Sc. (Hons), M.Phil.*

Plant Anatomist : *Dr G S Turner B.Sc. (Hons), M.Sc., Ph.D*

Plant Anatomist : *Dr D P Aebischer B.Sc. (Hons), M.Sc., Ph.D*

Consultant: *Dr M P Denne B.Sc. (Hons), M.Sc., Ph.D*

Registered in England. No 3256771, Registered Office: Yarmouth House, 1300 Parkway, Solent Business Park, Hampshire, PO15 7AE

To:
 Ftac: Matt Deller
 Site:

Crawford Claims Management

157 Gloucester Avenue

Client Ref: SU1604979
 Job No. 408792
 Claim No: 4500061492
 Date: 12-Apr-17

ESTIMATE

Item	Amount
1.0 Location Mh 1 upstream to Yg 1 - Run 1	£342.56
Shared System No	
Condition Grade B	
Drain Serviceability Unserviceable	
Work Spec Excavate and replace gully + pipework downstream to Mh 1.	
2.0 Location Mh 1 upstream to Rwwg 1 - Run 2	£495.27
Shared System Yes with flats	
Condition Grade B	
Drain Serviceability Unserviceable	
Work Spec Excavate and replace gully + pipework downstream to Mh 1.	
3.0 Location Mh 1 downstream - Run 3	£546.53
Shared System Yes with flats	
Condition Grade B	
Drain Serviceability Unserviceable	
Work Spec From Mh 1 excavate and replace pipework downstream to and including junction with Svp 1.	
4.0 Location Dswc downstream - Run 4	£594.97
Shared System No	
Condition Grade B	
Drain Serviceability Unserviceable	
Work Spec Remove wc (to be done by others) excavate and replace rest bend + 1 meter of pipework downstream. From excavation complete cctv and repair as necessary. If findings or repair exceptional then discuss with engineer before repair.	

A site visit with the Client and CET will be required to establish any enabling works and internal surfaces removal/replacement to be carried out by others

The DSWC will need to be removed and replaced by others before works can commence.

Notes

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

Total £1,979.33

Condition Grade

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

plus VAT @20% £395.87

Total + VAT £2,375.19

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.

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE		Client Ref	SU1604979		
Site:-	157 Gloucester Avenue	Job No.	408792		
Client :-	Crawford Claims Management	Claim No	4500061492		
		Date			
		Recommendation	1		
Description		Unit	Qty	Rate	Amount
Rate Code	Mh 1 upstream to Yg 1 - Run 1				
TITLE	Gullies / Rest Bend / Rodding Eye - 110mm Isolated repair or connections to lined drains				
SN0590	Gully, 150mm x 150mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .	nr	1	£120.44	£120.44
TITLE	110mm Pipework - Isolated repair of lengths up to 1.0m				
SN0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	1	£125.52	£125.52
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	1	£48.22	£48.22
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	1	£1.65	£1.65
SN2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	1	£44.01	£44.01
SN006	1 Litre of disinfectant.	nr	1	£2.72	£2.72
Total subject to VAT @ 20%					£342.56
Note: Subject to the attached Terms and Conditions					
Depths are taken to the base of excavations. Every effort will be made to match existing surfaces where disturbed although this cannot be guaranteed. All rates exclude VAT. Depths are taken to the base of excavations. The above rates are subject to re-measurement. Daywork rates do not include for materials that are charged at cost plus					
KEY: ne = not exceeding, eo = extra over rate, m = linear metre, nr = number, hr = hour					

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:- 157 Gloucester Avenue
 Client :-

Crawford Claims Management

Client Ref	SU1604979
Job No.	408792
Claim No	4500061492
Date	12-Apr-17
Recommendation	2

Description		Unit	Qty	Rate	Amount
Rate Code	Mh 1 upstream to Rwwg 1 - Run 2				
TITLE	Gullies / Rest Bend / Rodding Eye - 110mm Isolated repair or connections to lined drains				
SN0590	Gully, 150mm x 150mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .	nr	1	£120.44	£120.44
TITLE	110mm Pipework - Isolated repair of lengths up to 1.0m				
SN0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	1	£125.52	£125.52
TITLE	110mm Pipe Replacement - Bends / Junctions / etc				
SN0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	2	£30.25	£60.49
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	2	£48.22	£96.44
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	1	£1.65	£1.65
SN2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	2	£44.01	£88.01
SN006	1 Litre of disinfectant.	nr	1	£2.72	£2.72
Total subject to VAT @ 20%			2		£495.27

Note: Subject to the attached Terms and Conditions

Depths are taken to the base of excavations. Every effort will be made to match existing surfaces where disturbed although this cannot be guaranteed. All rates exclude VAT. Depths are taken to the base of excavations. The above rates are subject to re-measurement. Daywork rates do not include for materials that are charged at cost plus
 KEY: ne = not exceeding, eo = extra over rate, m = linear metre, nr = number, hr = hour

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:- 157 Gloucester Avenue
 Client :-

Crawford Claims Management

Client Ref	SU1604979
Job No.	408792
Claim No	4500061492
Date	12-Apr-17
Recommendation	3

Description		Unit	Qty	Rate	Amount
Rate Code	Mh 1 downstream - Run 3				
TITLE	110mm Pipework - Isolated repair of lengths up to 1.0m				
SN0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	1	£125.52	£125.52
TITLE	160mm Pipe Replacement in lengths in excess of 1.0m				
SN0905	Excavate & remove pipework. Replace with new 160mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	m	1	£89.55	£89.55
TITLE	160mm Pipe Replacement - Bends, junctions etc				
SN0945	Diameter Reducers. Remove existing item and replace with new 160mm PVCu.	nr	2	£20.72	£41.44
SN0960	Junction. Remove existing item and replace with new 160mm PVCu.	nr	2	£50.60	£101.20
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	2	£48.22	£96.44
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	1	£1.65	£1.65
SN2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	2	£44.01	£88.01
SN006	1 Litre of disinfectant.	nr	1	£2.72	£2.72
Total subject to VAT @ 20%			3		£546.53

Note: Subject to the attached Terms and Conditions

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 KEY: ne = not exceeding, eo = extra over rate, m = linear metre, nr = number, hr = hour

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:- 157 Gloucester Avenue

Client :- Crawford Claims Management

Client Ref SU1604979

Job No. 408792

Claim No 4500061492

Date 12-Apr-17

Recommendation 4

Description		Unit	Qty	Rate	Amount
Rate Code	Dswc downstream - Run 4				
TITLE	Survey				
SN0510	CCTV survey of underground drainage & report.	nr	1	£140.00	£140.00
TITLE	Gullies / Rest Bend / Rodding Eye - 110mm Isolated repair or connections to lined drains				
SN0650	Rest-bend. Remove existing and replace with new PVCu item. Bed, surround and backfill.	nr	1	£110.38	£110.38
TITLE	110mm Pipework - Isolated repair of lengths up to 1.0m				
SN0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	1	£125.52	£125.52
TITLE	110mm Pipe Replacement - Bends / Junctions / etc				
SN0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	1	£30.25	£30.25
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	2	£48.22	£96.44
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	1	£1.65	£1.65
SN2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	2	£44.01	£88.01
SN006	1 Litre of disinfectant.	nr	1	£2.72	£2.72
Total subject to VAT @ 20%			4		£594.97

Note: Subject to the attached Terms and Conditions

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 KEY: ne = not exceeding, eo = extra over rate, m = linear metre, nr = number, hr = hour

Coding Sheet	Sheet:		Site:	157 Gloucester Avenue
	Job No.:	408792		
	Date:	02/03/17	Client:	Crawford Claims Management

Run: 1									
From:	MH1		Invert Level:	350		Direction:	U/S		
To:	Yg 1		Invert Level:			Function:	S/W		
Pipe Material:	VC		Pipe Dia:	100					
Water/Pressure Test:			Drain Break-In:	No		Gully Condition:	Poor		
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run:	No	
							If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.20	FH						Reached Yg 1	Concrete	0.2

Comments:

Run: 2									
From:	MH1		Invert Level:	350		Direction:	U/S		
To:	Rwwg 1		Invert Level:			Function:	Comb		
Pipe Material:	VC		Pipe Dia:	100					
Water/Pressure Test:			Drain Break-In:	No		Gully Condition:	Poor		
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run:	Yes	
							If Shared How:	With flats	
0.00	ST						Remarks	Surface Material	Length (m)
0.00	LR						Line deviates right	Concrete + slabs	0.9
0.20	FC	6	12				Fracture circumferential		
0.80	WL				5		Water level		
0.90	FH						Reached Rwwg 1		

Comments:

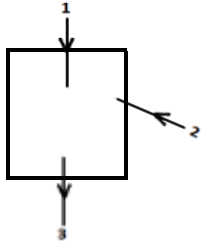
Run: 3									
From:	MH1		Invert Level:	350		Direction:	D/S		
To:	10m D/s		Invert Level:			Function:	Comb		
Pipe Material:	VC		Pipe Dia:	100					
Water/Pressure Test:			Drain Break-In:	No		Gully Condition:			
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run:	Yes	
							If Shared How:	With flats	
0.00	ST						Remarks	Surface Material	Length (m)
0.50	JN	9	3	150			Becomes 150mm	Concrete + slabs	2
0.60	LR						Line deviates right	Underhouse-laminate	8
0.90	JDM						Joint displaced medium		
1.30	CU						Camera under water		
1.40	DE				30		Debris		
1.50	JX	11					Svp 1		
3.80	JN	9		100			Dswc4		
10.00	FH						Reached 10m d/s		

Comments:

Run:	4							
From:	Ds/wc		Invert Level:		GI	Direction:		D/S
To:	Run 3		Invert Level:			Function:		F/W
Pipe Material:	PVC		Pipe Dia:		100			
Water/Pressure Test:			Drain Break-In:		Yes	Gully Condition:		
Distance (m)	Code	Clock Ref at to		Dia mm	Intrusion % mm	Shared Run: If Shared How:		No
0.00	ST					Remarks		Surface Material
0.00	LD					Line deviates down		underhouse-laminate
0.20	MC					Material Change		
0.50	GO					Line levels		
0.50	CC	12	12			Crack circumferential		
0.80	LL					Line deviates left		
1.10	JDL					Joint displaced large		
1.10	SA					Unable to pass JDL		
Comments:								

Manhole Details	Sheet:	1 of 1	Site:	157 Gloucester Avenue
	Job No.:	408792		
	Date:	02/03/17	Client:	Crawford Claims Management

MH:- Depth:- (mm)



Depths of run if different to invert level:-

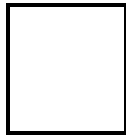
Run	Depth (mm)

Manhole Condition:-

Reasons for poor condition.

Chamber Dimension:- / (mm)

MH:- Depth:- (mm)



Depths of run if different to invert level:-

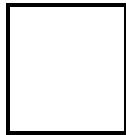
Run	Depth (mm)

Manhole Condition:-

Reasons for poor condition.

Chamber Dimension:- / (mm)

MH:- Depth:- (mm)



Depths of run if different to invert level:-

Run	Depth (mm)

Manhole Condition:-

Reasons for poor condition.

Chamber Dimension:- / (mm)

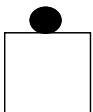
Key



Interceptor



Internal Back Drop.



External Back Drop.

Additional Comments for Poor Condition

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