

SITE INVESTIGATION FACTUAL REPORT

Report No: 311141
Client: Crawford Claims Management
Site: 40 Swakleleys Road, Ickenham

Client Ref: SU1505084-
Date of Visit: 19/01/2016



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

Investigation Layout Plan

Sheet: 1 of 1

Job No: 311141

Date: 19/01/2016

Site: 40 Swakeleys Road, Ickenham

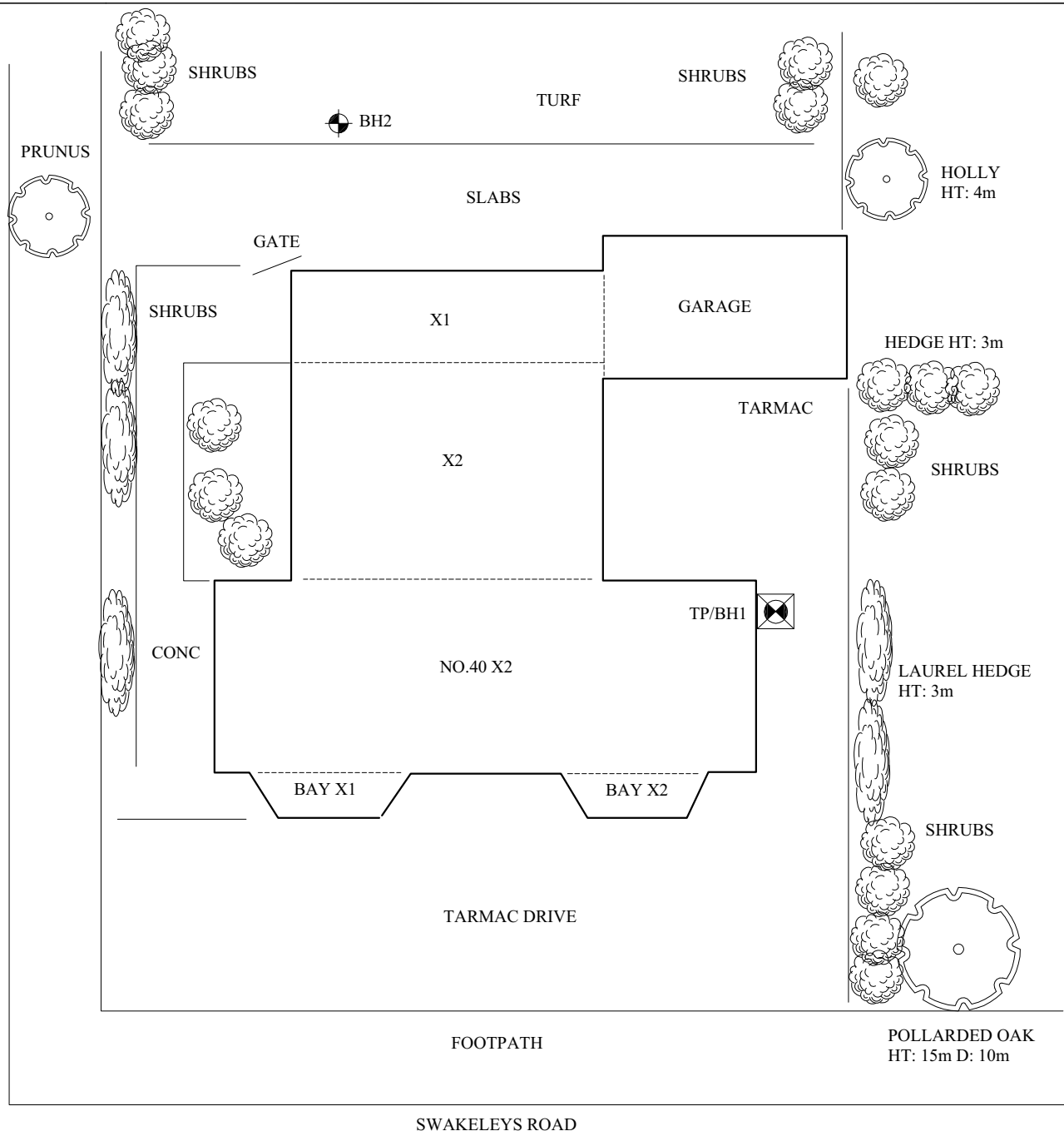
Work carried out for: Crawford Claims MGMT SUS

MH
(SI)

SA
(Checked)

AR
(Drawn)

Weather: Dry



Remarks:

Parking - onsite.
Water supply - outside tap.
Site access - good.
Power - internal / external.

Key:

Combined Gully	RWWG
Manhole	MH
Rain Water Pipe	RWP
Rain Water Gully	RWG
Soil Vent Pipe	SVP
Waste Gully	WG
Waste Pipe	WP

Surface Water Drain

Foul Water Drain

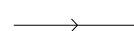
Tree / Bush

(approx. ht in m)

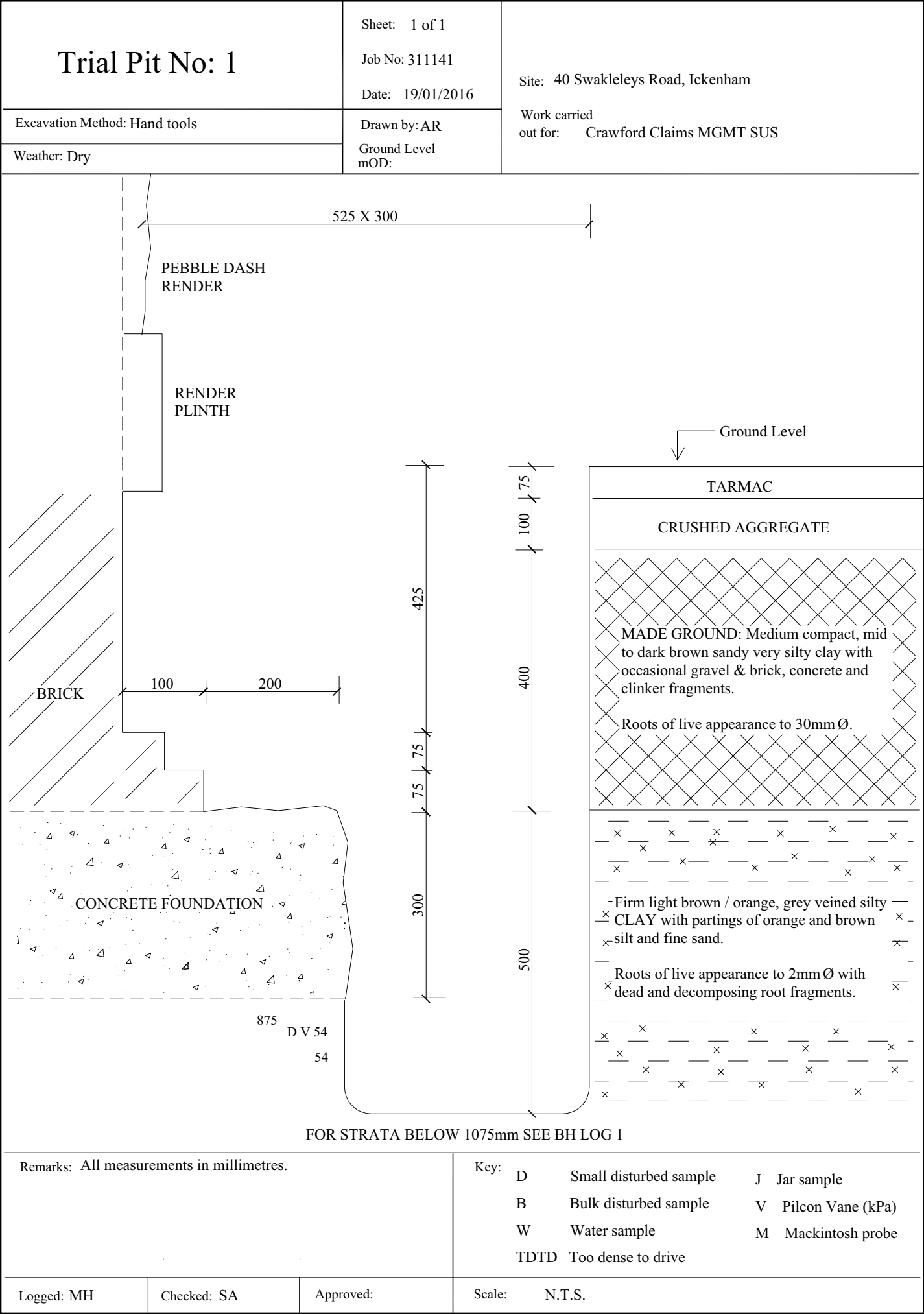
Trial Pit

Borehole

O/D - Open Discharge



Scale: N.T.S.



Borehole No: 1			Sheet: 1 of 2		Site: 40 Swakeleys Road				
Boring Method: CFA			Job No: 311141						
Diameter: 100mm			Coordinates:						
Ground Level mOD:			Work Carried out for: Crawford Claims Management Ltd						
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Result	Depth (m)	Field Records/Comments	Depth to water (m)
1.075	As Trial Pit 1	1.075							
1.20	Firm, light brown/orange, grey veined, silty CLAY with partings of orange & brown silt & fine sand.		___x ___					Roots of live appearance to 1.5mm diameter to 1.2m	
1.50	Stiff, as above	0.30	___x ___	D			1.50	Hair & fibrous roots of live appearance to 1.8m	
2.20	Very stiff, light brown, grey veined, silty CLAY with partings of orange, brown & red silt & fine sand & occasional clay-stone nodules.	0.70	___x ___ x___	D	V	140+ 140+	2.00	Dead & decomposing root fragments to 2.6m	
2.70	Very stiff, light to mid brown, grey veined, sandy, silty CLAY with partings of orange & brown silt & fine sand & occasional claystone nodules.	0.50	___x ___ x___	D			2.50		
3.10	Medium dense to dense, moist, light grey silty SAND with occasional clay lenses.	0.40	x x x x	D	M	44 50(40) 50(10)	3.00	Water strike at	3.10
			___x ___	D			3.50		
	Very stiff, reddish brown, grey veined, silty CLAY with partings of orange & brown silt & fine sand & occasional clay-stone nodules.	2.90	x___ ___ ___x ___ x___ ___ x___ ___	D	V	140+ 140+	4.00		
			___x ___	D			4.50		
Remarks:					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: MH	Checked: SA	Typed by: DVC		Scale: NTS		Weather: DRY			

Borehole No: 1			Sheet: 2 of 2			Site: 40 Swakeleys Road			
Boring Method: CFA			Job No: 311141						
Diameter: 100mm			Date: 19.01.16						
Coordinates:			Ground Level mOD:			Work Carried out for: Crawford Claims Management Ltd			
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Result	Depth (m)	Field Records/Comments	Depth to water (m)
6.00	Very stiff, reddish brown, grey veined, silty CLAY with partings of orange & brown silt & fine sand & occasional clay-stone nodules.	2.90	— — — x — — — — x — — —	D	V	140+ 140+	5.00		
				D	V	140+ 140+	6.00		
	Borehole ends at 6m								
Remarks: Borehole wet 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: MH	Checked: SA	Typed by: DVC			Scale: NTS		Weather: DRY		

Borehole No: 2			Sheet: 1 of 2			Site: 40 Swakeleys Road			
Boring Method: Hand Auger			Job No: 311141						
Diameter: 75mm			Date: 19.01.16						
Coordinates:			Ground Level mOD:			Work Carried out for: Crawford Claims Management Ltd			
Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
G.L	Turf over MADE GROUND: Medium compact, mid to dark brown, sandy, very silty clay with occasional gravel & brick, concrete & clinker fragments.	0.50							
0.50				D	V	40 42	0.50	Dead & decomposing root fragments to 3m	
1.20	Firm, light brown/orange, grey veined, silty CLAY with partings of orange & brown silt & fine sand.	0.70	___x ___ ___ x___ ___ ___	D	V	60 52	1.00		
1.50	Stiff, mid brown/orange, grey veined, silty CLAY with partings of orange & brown silt & fine sand & occasional claystone nodules.	0.30	___x___ ___ ___ ___	D	V	100 106	1.50		
2.20	Stiff, as above with partings of orange, brown & red silt & fine sand.	0.70	___x___ ___ ___ x___ ___ ___	D	V	130 138	2.00		
3.10	Very stiff, light to mid brown, grey veined sandy, silty CLAY with partings of orange & brown silt & fine sand & occasional claystone nodules.	0.90	___x___ ___ ___ x___ ___ ___ ___ ___ ___x.	D	V	140+ 140+	2.50		
			___x___ ___ ___ x___ ___ ___ ___ ___ ___x.	D	V	140+ 140+	3.00		
	Very stiff, reddish brown, grey veined, silty CLAY with partings of orange & Brown silt & fine sand & occasional clay-stone nodules.	2.90	___x___ ___ ___ x___ ___ ___ ___ ___ ___x. ___ ___ x___ x___	D	V	140+ 140+	3.50		
				D	V	140+ 140+	4.00		
Remarks:					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: MH	Checked: SA	Typed by: DVC			Scale: NTS		Weather: DRY		

Borehole No: 2			Sheet: 2 of 2			Site: 40 Swakeleys Road				
Boring Method: Hand Auger			Job No: 311141							
Diameter: 75mm			Date: 19.01.16							
Coordinates:			Ground Level mOD:			Work Carried out for: Crawford Claims Management Ltd				
Depth (m)	Description of Strata		Thick-ness (m)	Legend	Sample	Test Type	Result	Depth (m)	Field Records/Comments	Depth to water (m)
6.00	Very stiff, reddish brown, grey veined, silty CLAY with partings of orange & Brown silt & fine sand & occasional clay-stone nodules.		2.90	___x ___ ___ x___ ___ ___ ___x. ___ ___x x___ ___x. ___	D	V	140+ 140+	4.50		
				D	V	140+ 140+	5.00			
	Borehole ends at 6m				D	V	140+ 140+	6.00		
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:	MH	Checked:	SA	Typed by:	DVC	Scale:	NTS	Weather:	DRY	

Laboratory Summary Results

Our Ref : 311141
 Location : 40, Swakeleys Road, Ickenham
 Work carried out for: Crawford Claims Management

Date Sampled: 19/01/2016
 Date Received : 20/01/2016
 Date Tested : 20/01/2016
 Date of Report : 27/01/2016

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 0.875	D	42	<5	83	22	61	0.33	61	CV	168	66.2			54					
	1.5	D	27	<5							168	273								
	2.0	D	26	<5							168	378			> 140					
	2.5	D	10	<5	39	13	26	-0.11	26	CI	168	96.1								
	3.0	D	17	<5	Not suitable for further testing - ENP															
	4.0	D	23	<5							168	225			> 140					
	5.0	D	20	<5							168	698			> 140					
	6.0	D	23	<5	55	17	38	0.15	38	CH	168	175			> 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] 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

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



8618

Our Ref : 311141

Location : 40, Swakeleys Road, Ickenham

Work carried out for: Crawford Claims Management

Laboratory Testing Results

Date Sampled : 19/01/2016

Date Received : 20/01/2016

Date Tested : 20/01/2016

Date of Report : 27/01/2016

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)																	SO3 [14]			SO4 [15]	
BH2	0.5	D	30	<5	61	21	40	0.22	40	CH	168	42.5			41							
	1.0	D	37	<5							168	64.4			56							
	1.5	D	29	<5							168	124			103							
	2.0	D	30	<5							168	264			134							
	2.5	D	23	<5							168	65.7			> 140							
	3.0	D	23	<5	48	20	28	0.09	28	CI	168	77.2			> 140							
	4.0	D	19	<5							168	374			> 140							
	5.0	D	19	<5							168	928			> 140							
	6.0	D	19	<5	60	16	44	0.07	44	CH	168	961			> 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] In-house Test Procedure S1/a: 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

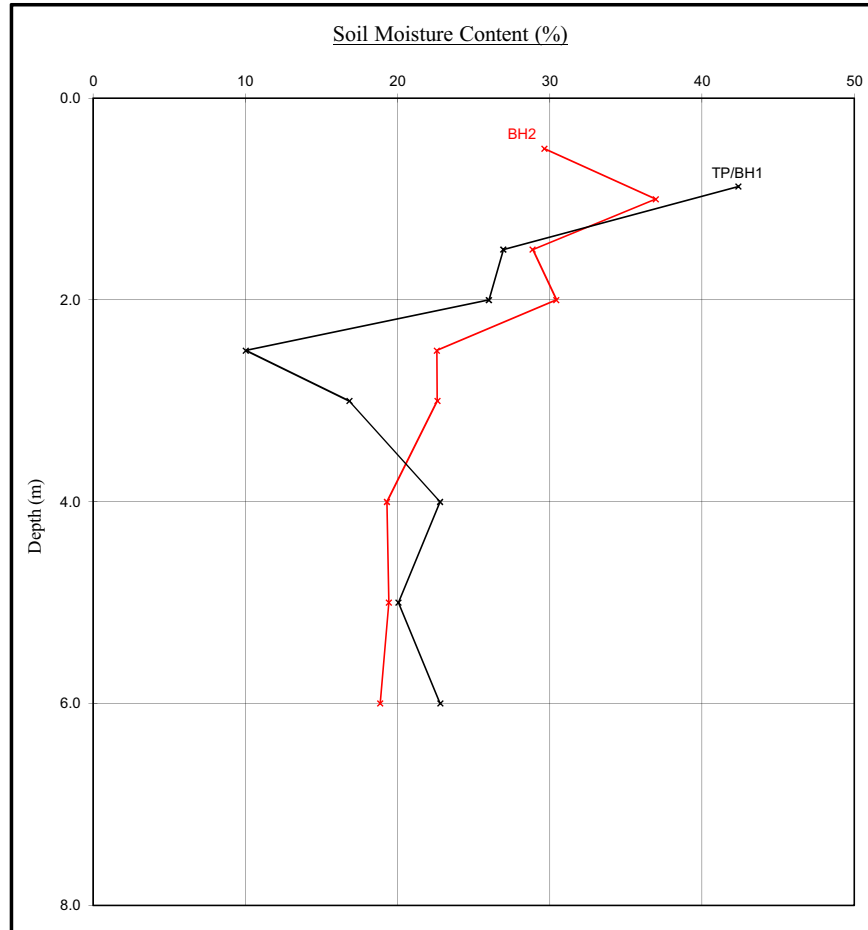
U/S Underside of Foundation

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



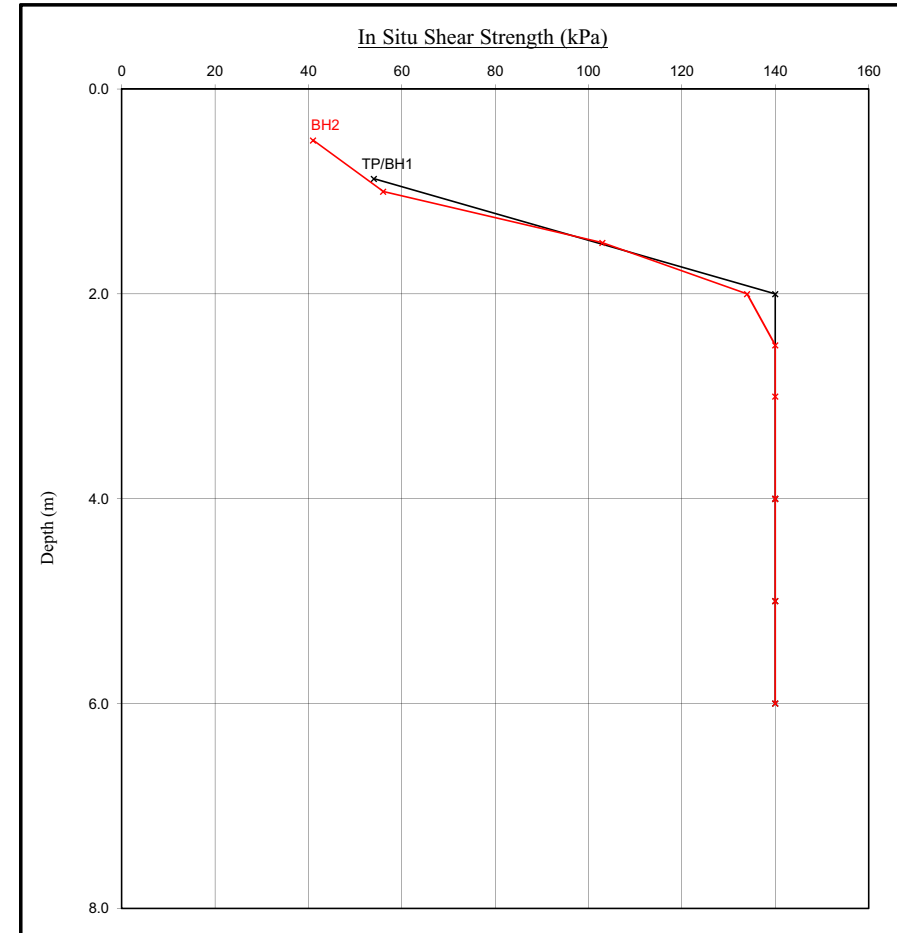
Moisture Content Profiles

Our Ref : 311141
 Location : 40, Swakeleys Road, Ickenham
 Work carried out for: Crawford Claims Management



Shear Strength Profiles

Date Sampled : 19/01/2016
 Date Received : 20/01/2016
 Date Tested : 20/01/2016
 Date of Report : 27/01/2016



Notes

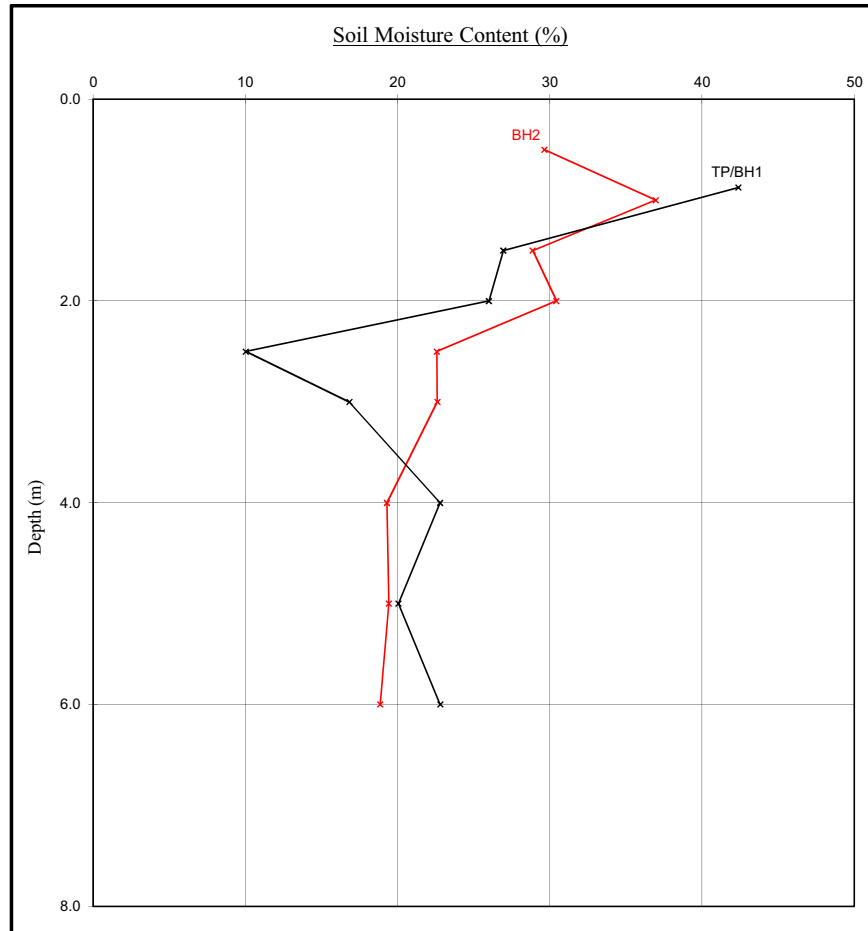
1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
2. Unless specifically noted the profiles have not been related to a site datum.

Note

1. Unless otherwise stated, values of Shear Strength were determined in situ by CET using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 140 kPa.
2. Unless specifically noted the profiles have not been related to a site datum.

Moisture Content Profiles

Our Ref : 311141
 Location : 40, Swakeleys Road, Ickenham
 Work carried out for: Crawford Claims Management

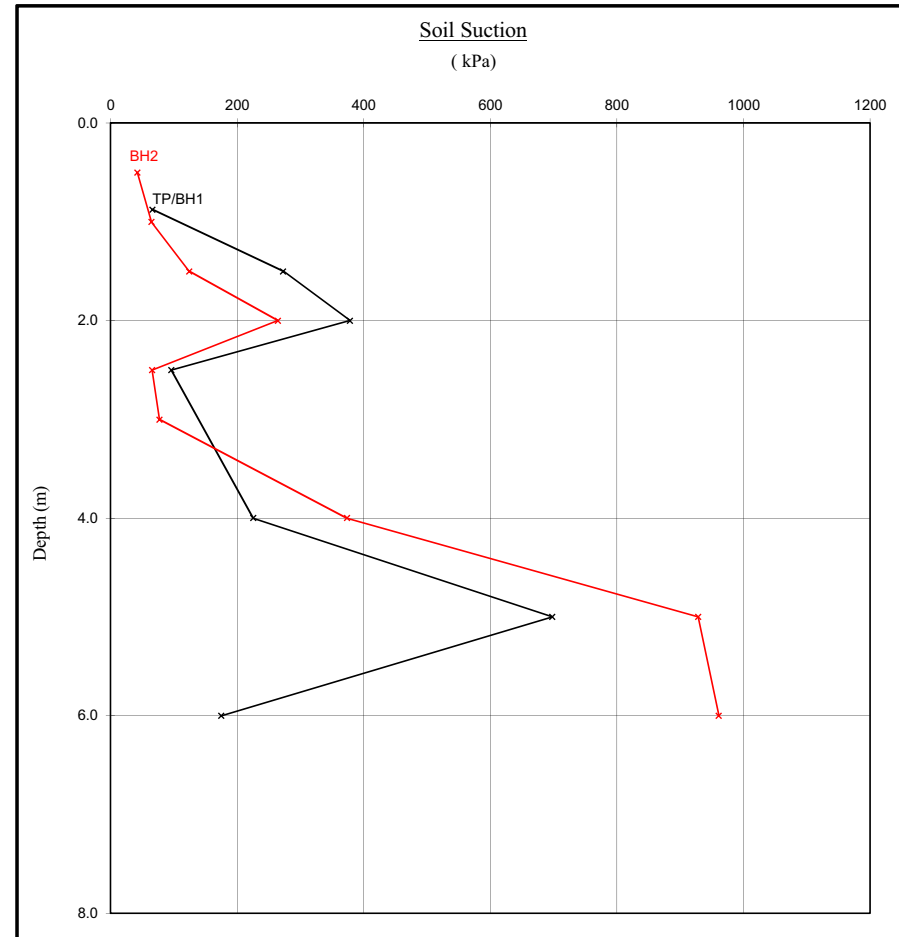


Notes

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.

Soil Suction Profiles

Date Sampled : 19/01/2016
 Date Received : 20/01/2016
 Date Tested : 20/01/2016
 Date of Report : 27/01/2016



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: **311141**Date: **21/01/2016**Order No: **779584**EPSL Ref: **R13354**Site: **40 Swakeleys Road, Ickenham,**Work carried
out for: **Crawford Claims MGMT SUS*****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 <u>number</u>	Root diameter (<u>mm</u>)	Tree, shrub or climber <u>from which root originates</u>	Result of <u>starch test</u>
TP1 (USF)	2 mm	Quercus spp. 4 roots	Positive
BH1 (1.075-1.8m)	1.5 mm	Quercus spp. 2 roots	Positive

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



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 : M D 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

Drainage Layout Plan

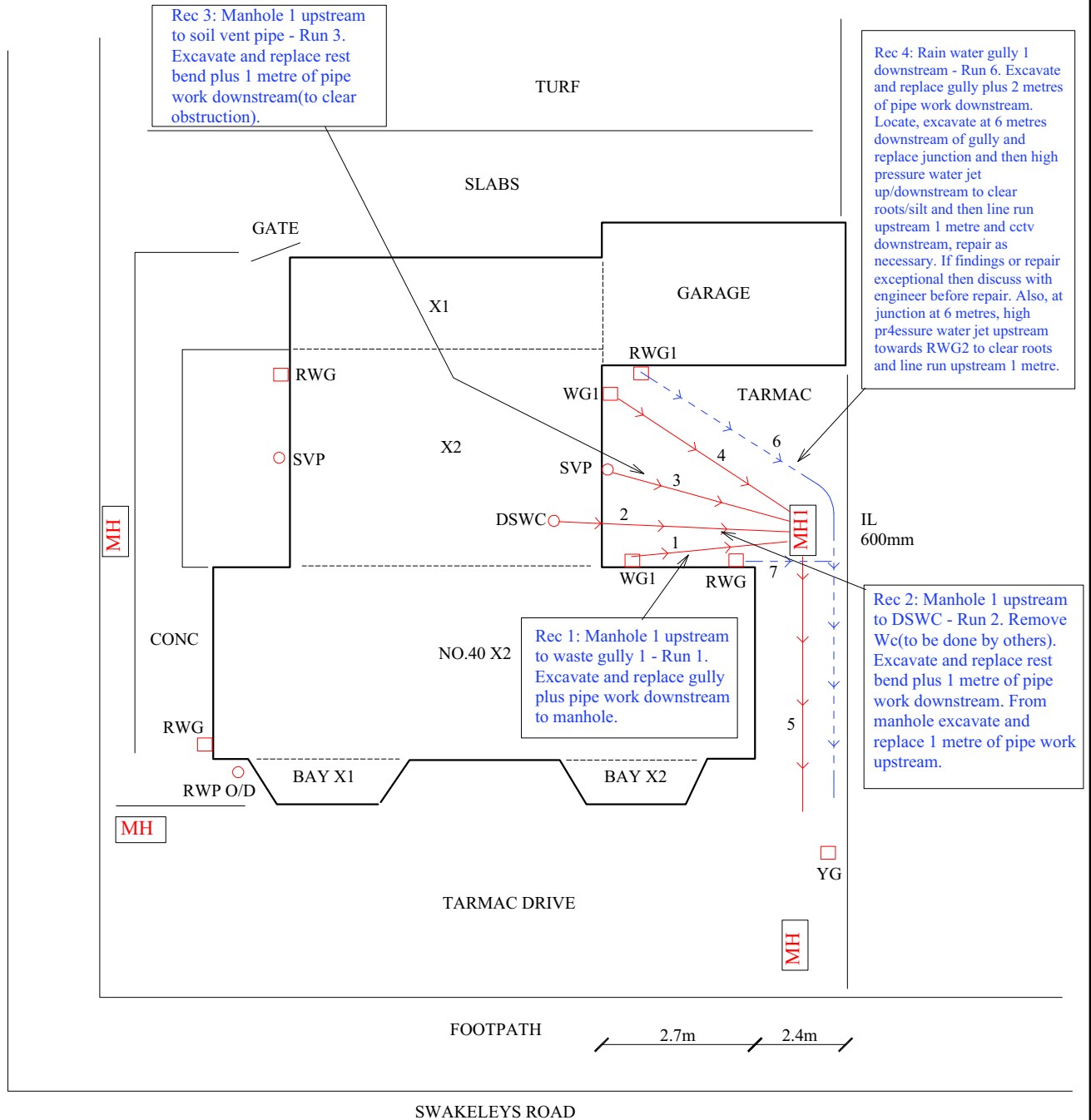
Sheet: 1 of 1
Job No: 311141
Date: 19/01/2016

Site: 40 Swakeleys Road, Ickenham

Work carried out for: Crawford Claims MGMT SUS

MH (SI) MD (Checked) AR (Drawn)

Weather: DRY



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Parking - onsite.
Water supply - outside tap.
Site access - good.
Power - internal / external.

Key:

Combined Gully	RWWG
Manhole	MH
Rain Water Pipe	RWP
Rain Water Gully	RWG
Soil Vent Pipe	SVP
Waste Gully	WG
Waste Pipe	WP

Surface Water Drain

Foul Water Drain

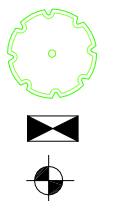
Tree / Bush

(approx. ht in m)

Tree Pit

Borehole

O/D - Open Discharge



Scale: N.T.S.

To:
Ftao: M Deller

Site:

Crawford Claims Management

40 Swakeleys Road

Client Ref: SU1505084
Job No. 3111141
Claim No:
Date: 25-Jan-16

ESTIMATE

Item	Amount
1.0 Location Shared System Condition Grade Drain Serviceability Work Spec	Manhole 1 upstream to waste gully 1 - Run 1. No C Unserviceable Excavate and replace gully plus pipe work downstream to manhole. £597.96
2.0 Location Shared System Condition Grade Drain Serviceability Work Spec	Manhole 1 upstream to DSWC - Run 2. No B Unserviceable Remove Wc(to be done by others). Excavate and replace rest bend plus 1 metre of pipe work downstream. From manhole excavate and replace 1 metre of pipe work upstream. £507.13
3.0 Location Shared System Condition Grade Drain Serviceability Work Spec	Manhole 1 upstream to soil vent pipe - Run 3. No A Unserviceable Excavate and replace rest bend plus 1 metre of pipe work downstream(to clear obstruction). £335.16
4.0 Location Shared System Condition Grade Drain Serviceability Work Spec	Rain water gully 1 downstream - Run 6. No B Unserviceable Excavate and replace gully plus 2 metres of pipe work downstream. Locate, excavate at 6 metres downstream of gully and replace junction and then high pressure water jet up/downstream to clear roots/silt and then line run upstream 1 metre and octv downstream, repair as necessary. If findings or repair exceptional then discuss with engineer before repair. Also, at junction at 6 metres, high pr4essure water jet upstream towards RWG2 to clear roots and line run upstream 1 metre. £1,253.76

Item 4 - Any further repair that may be required will be done on agreed rates, terms and conditions.

The Wc will need to be removed/replaced by others before work can commence.

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

Notes Repairs to shared runs and off boundary pipe-work may be the responsibility of the water authority.	Total	£2,694.02
Condition Grade A - Structurally sound with no leakage evident. B - Cracks and fractures observed. C - Structurally unsound	plus VAT @20%	£538.80
	Total + VAT	£3,232.83

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

Site:- 40 Swakeleys Road
Client :- Crawford Claims Management

Client Ref SU1505084

Job No. 311141

Claim No.

Date

Recommendation 1

Description					
Rate Code	Manhole 1 upstream to waste gully 1 - Run 1.	Unit	Qty	Rate	Amount
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 - Replacement of lengths in excess of 1.0m				
SN0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	m	2	£78.10	£156.20
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1055	Removal, disposal and reinstatement of tarmac path / hardstanding n.e 100mm thick.	m2	2	£50.89	£101.77
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	2	£1.65	£3.30
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%			1		£597.96

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

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

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:- 40 Swakeleys Road

Client :- Crawford Claims Management

Client Ref SU1505084

Job No. 311141

Claim No.

Date 25-Jan-16

Recommendation 2

Description					
Rate Code	Manhole 1 upstream to DSWC - Run 2.	Unit	Qty	Rate	Amount
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 - Replacement of lengths in excess of 1.0m				
SN0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	m	1	£78.10	£78.10
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
SN1055	Removal, disposal and reinstatement of tarmac path / hardstanding n.e 100mm thick.	m2	1	£50.89	£50.89
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	2	£1.65	£3.30
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		£507.13

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

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

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:- 40 Swakeleys Road

Client :- Crawford Claims Management

Client Ref SU1505084

Job No. 311141

Claim No.

Date 25-Jan-16

Recommendation 3

Description					
Rate Code	Manhole 1 upstream to soil vent pipe - Run 3.	Unit	Qty	Rate	Amount
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	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1055	Removal, disposal and reinstatement of tarmac path / hardstanding n.e 100mm thick.	m2	1	£50.89	£50.89
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%			3		£335.16

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:- 40 Swakeleys Road

Client :- Crawford Claims Management

Client Ref SU1505084

Job No. 311141

Claim No

Date 25-Jan-16

Recommendation 4

Description					
Rate Code	Rain water gully 1 downstream - Run 6.	Unit	Qty	Rate	Amount
TITLE	Survey				
SN0511	CCTV Survey of underground drainage & report - including up to 1 hr HP Water Jetting or other cleaning.	nr	1	£165.11	£165.11
SN0530	High Pressure Water Jetting - Additional 1/2 hours on site.	1/2hr	2	£23.86	£47.72
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 Pipework - Junctions - Isolated Repair or Connections to Lined Drains				
SN0660	Excavate & remove junction. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	1	£128.95	£128.95
TITLE	110mm Pipe Replacement - Replacement of lengths in excess of 1.0m				
SN0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	m	1	£78.10	£78.10
TITLE	Extra-Over Surfacing Costs for drainage Repair / Replacement				
SN1055	Removal, disposal and reinstatement of tarmac path / hardstanding n.e 100mm thick.	m2	2	£50.89	£101.77
TITLE	Preparations / General Groundworks / Reinstatements				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	2	£1.65	£3.30
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
TITLE	Drain Lining				
SN1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	1	£302.73	£302.73
TITLE	Survey Commercial - pipes >160mm <300mm				
SN10051	Drain Tracing - Electronic, with report plotting location & depth	nr	1	£89.39	£89.39
Total subject to VAT @ 20%			4		£1,253.76

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

Underground Drainage Report	Sheet: 1 of 4	Site: 40 Swakeleys Road
	Job No: 311141	
	Date: 19-Jan-16	
	Work carried out for: Crawford Claims Management	

MANHOLE DETAILS

Manhole	Depth to Invert	Condition
MH1	600mm	As built

CCTV Survey:-

1. Drainage Run:

From manhole 1 run 1 to waste gully 1 - 100mm clay foul water - upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
0.0	DEG	Debris grease 20%	
0.5	B	Broken pipe from 12 o'clock to 12 o'clock possibly collapsed	
0.5	RTJ	Roots tap at joint	
0.5	SA	Survey abandoned - unable to push	
Gully condition: Poor - blocked			

2 Drainage Run:

From manhole 1 run 2 to DSWC - 100mm lined foul water - upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
0.3	RM	Root mass 10%	
3.0			Inside
3.0	MC	Material changes to clay	
3.1	JDM	Joint displaced medium	
3.1	LU	Line up	
3.6	FH	Finish - reached DSWC	

Water Test Grade:

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

Underground Drainage Report	Sheet: 2 of 4	Site: 40 Swakeleys Road
	Job No: 311141	Work carried out for: Crawford Claims Management
	Date: 19-Jan-16	

3 Drainage Run:

From manhole 1 run 3 to soil vent pipe - 100mm lined foul water - upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
2.9	MC	Material changes to clay	
2.9	LU	Line up unknown object	
2.9	SA	Survey abandoned - unable to push due to obstruction	

4 Drainage Run:

From manhole 1 run 4 to waste gully 2 - 100mm lined foul water - upstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
3.0	MC	Material changes to clay	
3.0	LR	Line right	
3.2	LU	Line up	
3.8	FH	Finish - reached WG2	
Gully condition: As built			

5 Drainage Run:

From manhole 1 run 5 to downstream - 100mm lined foul water - downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
7.0	FH	Finish - reached D/S	

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
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Underground Drainage Report	Sheet: 3 of 4 Job No: 311141 Date: 19-Jan-16	Site: 40 Swakeleys Road Work carried out for: Crawford Claims Management
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6 Drainage Run:

Break in rain water gully 1 run 6 to downstream - 100mm clay surface water - downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
0.0	LR	Line right	
0.6	RTJ	Roots tap at joint	
1.1	RM	Root mass 10%	
4.2	LR	Line right	
5.0	RM	Root mass 10%	
6.0	JN	Junction at 3 o'clock	
6.4	RTJ	Roots tap at joint	
6.7	DES	Debris silt 15%	
7.3	DES	Debris silt 40%	
7.3	GO	General observation unable to see	
10.0	SA	Survey abandoned - unable to see	
Gully condition: As built			

7 Drainage Run:

Break in rain water gully 2 run 7 to run 6 - 100mm clay surface water - downstream (not shared)

Metres:	Code:	Observations:	Surface Material/ Condition:
0.0		Start	Tarmac
1.2	CC	Crack circumferential from 12 o'clock to 12 o'clock	
1.2	RTJ	Roots tap at joint	
1.3	RTJ	Roots tap at joint	
1.6	JDM	Joint displaced medium	
1.6	RTJ	Roots tap at joint	
1.6	FH	Finish - reached run 6	
Gully condition: As built			

Water Test Grade:

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

Underground Drainage Report	Sheet: 4 of 4	Site: 40 Swakeleys Road
	Job No: 311141	Work carried out for: Crawford Claims Management
	Date: 19-Jan-16	
- End of Survey - <i>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.</i>		
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	JN	Junction at...o'clock, diameter...mm
BR	Branch Major	JX	Junction defective at.. o'clock, diameter.. mm
CC	Crack circumferential from... to... o'clock	LC	Lining of sewer changes/starts/finishes at this point
CL	Crack longitudinal @... o'clock	LD	Line of sewer deviates down
CM	Cracks multiple from... to... o'clock	LL	Line of sewer deviates left
CN	Connection at... o'clock, diameter... mm	LN	Line defect at (or from.. to..) o'clock
CNI	Connection at... o'clock, diameter... mm, intrusion... r	LR	Line of sewer deviates right
CU	Camera under water	LU	Line of sewer deviates up
CX	Connection defective at... o'clock	MB	Missing bricks at.. (or from.. to..) o'clock
CXI	Connection defective at... o'clock, diameter... mm, intrusion... mm	MC	Material of sewer changes at this point
D	Deformed sewer... %	MH	Manhole/node
DB	Displaced bricks at (or from.. to..) o'clock	MM	Mortar missing medium at.. (or from.. to..) o'clock
DC	Dimension of sewer changes at this point	MS	Mortar missing surface at.. (or from.. to..) o'clock
DE	Debris (non silt/grease)... % cross-sectional loss	MT	Mortar missing total at.. (or from.. to..) o'clock
DEG	Debris grease... % cross-sectional area loss	OB	Obstruction... % height/diameter loss
DES	Debris silt... % cross-sectional area loss	OJL	Open joint large
DI	Dropped invert, gap... mm	OJM	Open joint medium
EHJ	Encrustation heavy from.. to.. o'clock % cross-sectional area loss (at joint)	PC	Length of pipe forming sewer changes at this point, new length...mm
ELJ	Encrustation light from.. to.. o'clock%	RFJ	Roots fine (at joint)
EMJ	Encrustation medium from.. to.. o'clock %, cross-sectional area loss (at joint)	RMJ	Roots mass... % cross-sectional area loss (at joint)
ESH	Scale heavy... % cross-sectional area loss from... to.. o'clock	RTJ	Roots tap (at joint)
ESL	Scale light from... to... o'clock	SA	Survey abandoned
ESM	Scale medium... % cross-sectional area loss from... to... o'clock	SC	Shape of sewer changes at this point
FC	Fracture circumferential from... to... o'clock	SSL	Surface damage, spalling large at (or from.. to..) o'clock
FL	Fracture longitudinal at... o'clock	SSM	Surface damage, spalling medium at (or from.. to..) o'clock
FM	Fractures multiple from... to... o'clock	SSS	Surface damage, spalling slight at (or from.. to..) o'clock
GO	General observation at this point	SWL	Surface damage, wear large at... (or from.. to..) o'clock
GP	General photograph number... taken at this point	SWM	Surface damage, wear medium at... (or from.. to..) o'clock
H	Hole in sewer at... o'clock	SWS	Surface damage, wear slight at.. (or from.. to..) o'clock
IDJ	Infiltration dripper at (or from... to...) o'clock (at joint)	V	Vermin (rats and mice)
IGJ	Infiltration gusher at (or from... to...) o'clock (at joint)	WL	Water level... % height/diameter
IRJ	Infiltration runner at (or from... to...) o'clock (at joint)	X	Sewer collapsed... % cross-sectional area loss
ISJ	Infiltration seeper at (or from... to...) o'clock (at joint)	FH	End of survey
JDM	Joint displaced medium		
JDL	Joint displaced large		

Contract: 311141

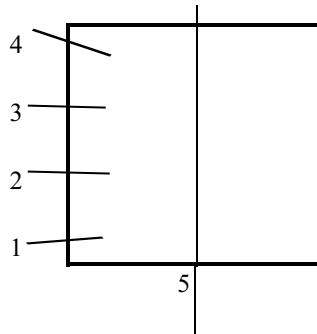
Date: 19-Jan-16

Operative Initial: IC

Site Address: 40 Swakeleys Road

Page: 1 of 1

M/H: 1 Depth: 600mm



Chamber Dimension (mm): 650 X 450

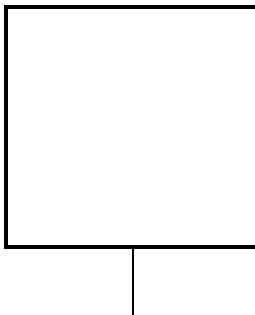
Depths of run if
different to invert level:-

Run _____

Manhole Condition

As built

M/H: Depth:



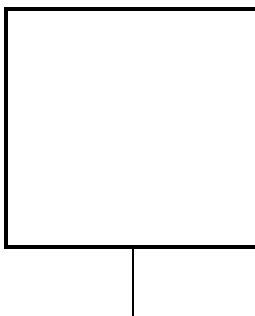
Chamber Dimension (mm):

Depths of run if
different to invert level:-

Run _____

Manhole Condition

M/H: Depth:



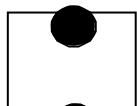
Chamber Dimension (mm):

Depths of run if
different to invert level:-

Run _____

Manhole Condition

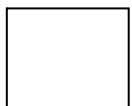
KEY....



Internal Back Drop



External Back Drop



Interceptor

Water Pressure Test Results

From:

To:

Pass / Fail