

# SITE INVESTIGATION FACTUAL REPORT

Report No:	611711
Client:	Crawford Claims Management
Site:	4 Densley Close

Client Ref: SU1900914

Date of Visit: 31/05/19



### 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

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■ www.cet-uk.com

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#### TEST REPORT: **Trial Pit REPORT NUMBER:** C1024536 / 73347.1.1.1 TRIAL PIT REF: DATE: 04/06/2019 TP1 Crawford & Co CLIENT: SITE: 4 Densley Close AL8 7JX JOB NO: 611711 WEATHER: Dry EXCAVATION METHOD: Hand tools



Trial pit ends at 1000mm

### 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

### Remarks:

For and on behalf of CET Sophie Cahalane - Admin Assistant

Approved Signatory

Report Format:

DE74 2UD

0843 2272362 enquiries@cet-uk.com www.cet-uk.com 04-Jun-19

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Report version 1

# Laboratory Summary Results

Our Ref :

611711

Locatio Client: Addres	m : s:	4, Den Crawfe Cartwr	usley Close, ord Claims right House	Welwyn Gar Managemen e, Tottle Road	rden City t l, Riverside	e Business	Park, NG2	1RU								Date Reco Date Test Date of R	eived : ed : eport :		0 0 1	4/06/19 5/06/19 1/06/19
TP/BH No	ample Ref Depth ( m )	Туре	Moisture Content	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 (g SO3 [14]	Content * /1) 	* Class [16]
TP1	U/S 0.73	D	35	<5	88	27	61	0.12	61	CV					> 140					
Test Me [1] BS 137 [2] Estimat [3] BS 137 [4] BS 137 [5] BS 137 [6] BRE E [7] BS 597 of fine	thods / Notes 7 : Part 2 : 1990, Tes ed if <5%, otherwise 7 : Part 2 : 1990, Tes 7 : Part 2 : 1990, Tes 7 : Part 2 : 1990, Tes igest 240 : 1993 0 : 2018 : Figure 8 - soils	No 3.2 measured t No 4.4 t No 5.3 t No 5.4 Plasticity Ch	art for the classifie	cation	<ul> <li>[8] In-house mc</li> <li>[9] In-house Te</li> <li>[10] Estimated F</li> <li>[11] Values of si a Pilcon har</li> <li>[12] BS 1377 : P</li> <li>[13] BS 1377 : P</li> <li>[14] BS 1377 : P</li> <li>[15] SO<sub>4</sub> = 1.2 x</li> </ul>	thod S9a adaptec st Procedure S17: leave Potential (E hear strength wer id vane or Geono art 3 : 1990, Test art 2 : 1990, Test art 3 : 1990, Test SO <sub>3</sub>	I from BRE IP 4/92 a: One Dimensiona d) e determined in situ r vane (GV). No 4 No 9 No 5.6	i l Swell/Strain Te a by CET using	st	[16] BRE Sp. Note that if tl prudent to cc class respecti to prove othe * These test Full reports	ecial Digest One (C ne SO4 content fall: onsider the sample a vely unless water s erwise. ts are not UKAS ac can be provided up	oncrete in Aggree s into the DS-4 oi is falling into the oluble magnesiur credited ion request.	ssive Ground) Augu r DS-5 class, it woul DS-4M or DS-5M n testing is undertak	st 2005 d be en	Key D B U W ENP U/S	Disturbed samp Disturbed samp Undisturbed sar Groundwater sa Essentially Non Underside of Fc	le ( small ) le ( bulk ) nple mple -Plastic by insp pundation	pection		

8618

Version: 5BH V1.6 - 26.02.19

Date Sampled: 31/05/19

## Moisture Content Profiles

Our Ref : 611711 Location : 4, Densley Close, Welwyn Garden City Work carried out for: Crawford Claims Management



## **Shear Strength Profiles**

#### Date Sampled : 31/05/19 Date Received : 04/06/19 Date Tested : 05/06/19 Date of Report : 11/06/19



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.

		Sheet:	1 of 1									
				Site	4 Densley Close							
EPSL		Job No:	611711	Site.	4 Densie y Close,							
European Plant Science I	Laboratory	Date:	27/06/2019	Work carried	Crowford Cloims MCMT	CLIC						
		Order No:	1384399	out ior.	Crawlord Claims MGM1	505						
		EPSL Ref	R31385									
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/ R Borehole number		T <u>fro</u>	Result of starch test									
TP1 (USF)	2 mm			Quercus s 4 roots	spp. s	Positive						
						MPD						

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

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

To: Ftao:	Phil Doodson	Crawford Claims Management	Client Ref:         SU190           Job No.         6117           Claim No:         Claim No:	0914 11
Site:		4 Densley Close	Date: 03-Jur	n-19
		ESTIMATE		
Item				Amount
1.0	Location Shared System Condition Grade Drain Serviceability	Mh 1 upstream to Svp 1 - Run 1 No B Unserviceable		£413.09
	Work Spec	From Mh 1 Hpwj to clear and patch line at 2.8 meters upstream.		
2.0	Location Shared System Condition Grade Drain Serviceability	Mh 1 upstream to Wg 1 - Run 2 No B Unserviceable		£449.25
	Work Spec	Excavate and replace gully + pipework downstream to Mh 1.		
3.0	Location Shared System Condition Grade Drain Serviceability	Mh 1 downstream to Mh 2 - Run 4 No B Unserviceable		£1,043.25
	Work Spec	From Mh 1 Hpwj to clear roots and line downstream to Mh 2.		
4.0	Location Shared System Condition Grade Drain Serviceability	Rwp 1 downstream - Run 5 No B Unserviceable		£594.72
	Work Spec	Excavate and replace rest bend + 3 meters of pipework downstream. From excavation Hpwj to clear, complete	e cctv downstream	
	Notes Repairs to shared r	runs and off boundary pipe-work may be the responsibility of the water authority.	Total	£2,500.32
	A - Structurally sou	nd with no leakage evident.	pius VAT @20%	£500.06
	в - Cracks and frac C - Structurally uns	:tures observed. :ound	Total + VAT	£3,000.38
		Quotation is binding only if accepted within 28 days from date of issue and is subject to our The price qualification notes, stated on the drainage solutions schedule of rates, CET Structures Ltd undertakes to return to site free of charge to carry out remedial work to the period of 2 months from the date of this invoice. The company standard charge rates will a requested be unrelated to the said repairs.	r Standard Terms and Conditions apply to this quotation. e drainage repairs set out above for a apply to the visit should the work	

ESTIMATIN	G & COSTING SHEET - DOMESTIC DRAINAGE		Client Ref	SU19	00914		
Site:-	4 Densley Close		Job No.	611711			
Client :-	Crawford Claims Management	Crawford Claims Management Claim No					
			Date				
		Re	commendat	ion	1		
	Description						
Rate Code	Mh 1 upstream to Svp 1 - Run 1	Unit	Qty	Rate	Amount		
TITLE	Drain Lining						
SN1133	Van pack HPWJ & CCTV in preparation of lining	nr	1	£133.05	£133.05		
SN1180	Patch Lining. Up to 2 m x 100mm diameter	nr	1	£280.04	£280.04		
	Total subject to VAT @ 20%				£413.09		
Note: Subject	t to the attached Terms and Condtions						
Depths are ta	ken to the base of excavations. Every effort will be made to match existing surfaces where disturbed although thi	s canno	t be guarant	eed. All rates	exclude		
VAT. Depths KEY: ne = no	are taken to the base of excavations. The above rates are subject to re-measurement. Daywork rates do not inclub t exceeding, eq = extra over rate, $m = linear metre, nr = number, hr = hour$	ide for m	naterials that	t are charged	at cost plus		

ESTIMATIN	Client Ref	SU19	00914			
Site:-	4 Densley Close		Job No.	611	711	
Client :-	Crawford Claims Management		Claim No			
			Date	03-Jı	Jun-19	
		Re	ecommendat	on 2		
	Description					
Rate Code	Mh 1 upstream to Wg 1 - Run 2	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 - 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					
SN1045	Removal, set aside and reinstatement of concrete slab paving n.e 100mm thick.	m2	2	£25.21	£50.42	
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		£449.25	
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	3 & COSTING SHEET - DOMESTIC DRAINAGE		Client Ref	SU19	00914
Site:-	4 Densley Close		Job No.	611	1711
Client :-	Crawford Claims Management		Claim No		
			Date	03-J	un-19
		Re	ecommendat	on 3	
	Description				
Rate Code	Mh 1 downstream to Mh 2 - Run 4	Unit	Qty	Rate	Amount
TITLE	Drain Lining				
SN1133	Van pack HPWJ & CCTV in preparation of lining	nr	1	£133.05	£133.05
SN1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	1	£302.73	£302.73
SN1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall thickness.	m	10	£56.35	£563.47
	Epoxy resin	nr	2	£22.00	£44.00
	Total subject to VAT @ 20%		3		£1,043.25
Noto: Subject	to the attached Terms and Conditions				

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

ESTIMATINO	G & COSTING SHEET - DOMESTIC DRAINAGE		Client Ref	SU19	00914
Site:-	4 Densley Close		Job No.	611	711
Client :-	Crawford Claims Management		Claim No		
			Date	03-Ji	un-19
		Re	commendat	ion	4
	Description				
Rate Code	Rwp 1 downstream - Run 5	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	2	£78.10	£156.20
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				
SN1040	Removal, set aside and reinstatement of block paving n.e 100mm thick.	m2	2	£39.18	£78.35
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%		4		£594.72
Note: Subject	to the attached Terms and Condtions				
Depths are ta	ken to the base of excavations. Every effort will be made to match existing surfaces where disturbed although	this canno	t be guarant	leed. All rates	s exclude

VAT. Depths are taken to the base of excavations. Every enort will be made to made NET to made to mad

				Sheet:		Site:	4 Densley Close		
Co	ding	Sheet		Job No.:	611711				
				Date:	31/05/19	Client:	Crawford Claims Manageme	nt	
Run:	1			_			_		
From:		М	H1	Invert Level:		550	Direction:	U/S	
То:		SV	′P1	Invert Lev	/el:		Function:	F/W	
Pipe Mater	ial:	V	/C	Pipe Dia:		100			
Water/Pres	sure Te	st:		Drain Bre	ak-In:	No	Gully Condition:		
Distance	Code	Cloc	k Ref	Dia	Intro	usion	Shared Run:	No	
(m)		at	to	mm	%	mm	If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.30	WL				10		Water level	slabs	0.5
2.80	JDM						Joint displaced medium	under house	3
2.90	LL						slight	slabs	0.3
3.50	LU						Line deviates up		
3.80	FH						reached SVP1		
Comments:									
Run:	2			7		r	-		
From:		M	H1	Invert Lev	/el:	550	Direction:	U/S	
То:		W	G1	Invert Lev	/el:		Function:	F/W	
Pipe Material: VC		/C	Pipe Dia:		100	4			
Water/Pres	sure Te	st:		Drain Bre	ak-In:	No	Gully Condition:	Poor	
Distance	Code	Cloc	k Ref	Dia	Intro	usion	Shared Run:	No	
(m)		at	to	mm	%	mm	If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.20	JDM						Joint displaced medium	slabs	0.7
0.40	LU						Line deviates up		
0.50	CC	12	12				Crack circumferential		
0.70	FH						reached WG1		
Comments:									
Run:	3			٦			<b>Т</b>	11/2	
From:		IVI Caila	HI	Invert Lev	/el:	550	Direction:	U/S	
10:		Solis	баск	Invert Lev	/el:		Function:	F/W	
Pipe Mater	ial:	. V		Pipe Dia:		100			
water/Pres	sure le	st:		Drain Bre	ak-in:	NO	Guily Condition:	N.	
Distance	Code	Cloc	ккет	Dia	Intro	usion	Shared Run:	NO	
(m)	CT.	at	to	mm	%	mm	If Shared How:	C (car Mataia)	1 11. ( )
0.00							Kemarks	Surface Material	Length (m)
0.20							Lino doviatos riakt		3
2.70		10		100				under outbuilding	1.0
3.50	NI.	12		100					
4.30	LU						Line deviates up		
4.60	⊦H			<u> </u>		<u> </u>	reached Solistack		
comments:									

Run:	4								
From:		М	H1	Invert Lev	vel:	550	Direction:	D/S	
То:		М	H2	Invert Lev	vel:		Function:		
Pipe Mater	ial:	V	′C	Pipe Dia:		100	1		
Water/Pres	sure Te	st:		Drain Bre	ak-In:	No	Gully Condition:		
Distance	Code	Cloc	k Ref	Dia	Intro	usion	Shared Run:		
(m)		at	to	mm	%	mm	If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.60	CC	12	12				Crack circumferential	under lean-too	2.8
0.60	RMJ				5		Roots mass	crazy paving	10
1.90	WL				10		Water level		
2.40	RFJ						Roots fine at joint		
2.50	WL				15		Water level		
3.70	WL				0		Water level		
4.80	RMJ				10		Roots mass		
5.50	CC	12	12				Crack circumferential		
7.20	RMJ				20		Roots mass		
7.80	RMJ				20		Roots mass		
9.10	RMJ				15		Roots mass		
10.30	RMJ				15		Roots mass		
10.30	FL	5					Fracture longitudinal		
10.40	CC	12	12				Crack circumferential		
10.40	RMJ						Roots mass		
10.90	RMJ				20		Roots mass		
11.20	CC	12	12				Crack circumferential		
12.70	MH						Manhole		
12.80	FH						reached MH2		
Comments:				-		-			-
Run:	5			-			_		
From:		RW	/P1	Invert Lev	vel:		Direction:	D/S	
То:		D	/S	Invert Lev	vel:		Function:	S/W	
Pipe Mater	ial:	V	′C	Pipe Dia:		100			
Water/Pres	sure Te	st:		Drain Bre	ak-In:	No	Gully Condition:		
Distance	Code	Cloc	k Ref	Dia	Intro	usion	Shared Run:	No	
(m)		at	to	mm	%	mm	If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.00	LD						Line deviates down	crazy paving	0.9
0.40	GO						General observation		
0.90	LR						Line deviates right		
0.90	DES				90		Debris silt		
0.90	FH						unable to push further		
Comments:									

	Sheet:	1 of 1	Site:	4 Densley Close
Manhole Details	Job No.:	611711		
	Date:	31/05/19	Client:	Crawford Claims Management
MH:- MH1 Depth:- 550	(mm)	Depths of r different to	un if o invert level:-	Manhole Condition:- Good
	ŝ			Reasons for poor condition.
Chamber Dimension:- 850	/ 450	(mm)		
MH:- MH2 Depth:- 1050	) (mm)	Depths of r different to Run	run if o invert level:- Depth (mm	Manhole Condition:- Good
4 -> -				Reasons for poor condition.
Chamber Dimension:- 1000	) / 600	(mm)		
MH:- Depth:-	(mm)	Depths of r different to Run	un if Depth (mm	Manhole Condition:- Reasons for poor condition.
Chamber Dimension:-	/	(mm)		
<u>Кеу</u>		Additional Com	ments for Poor (	Condition
Interceptor				
I Internal Back Drop.				
External Back Drop.				