SITE INVESTIGATION
FACTUAL REPORT

Report No: 614082

Client: Crawford Claims Management

Site: 42 Stonegate, Cowbit

Client Ref: SU1807857

Date of Visit: 23/08/2019

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

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✉ enquiries@cet-uk.com
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CET is the trading name of CET Structures Ltd
Registered in England No. 02527130

Investigation Layout Plan

Sheet: 1 of 1

Job No: 614082

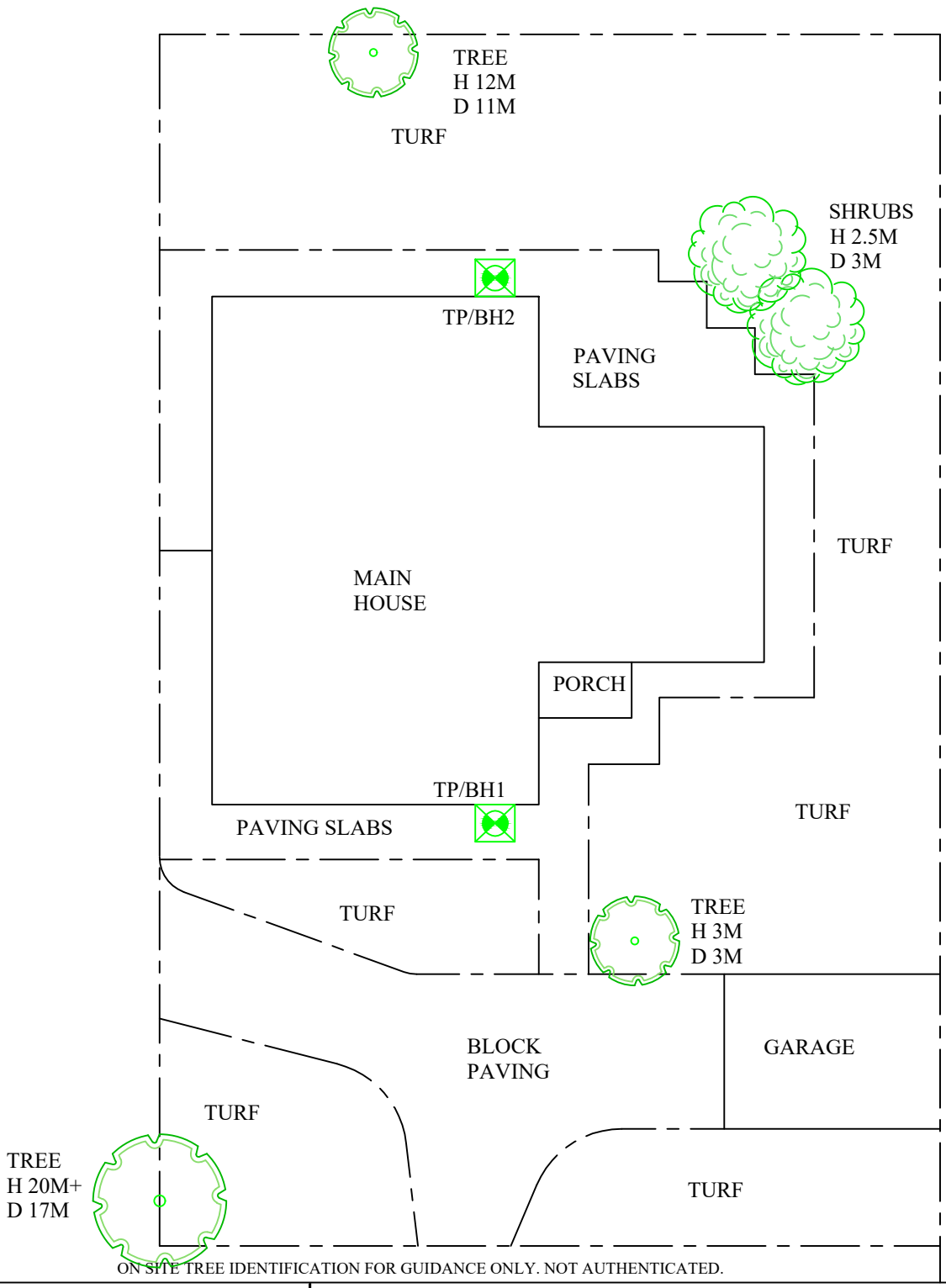
Date: 23/08/2019

Site: 42 Stonegate

Work carried out for: Crawford Claims Management

Weather: DRY

PB (SI) (Checked) CFT (Drawn)



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Scale: N.T.S.

Key:

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

Surface Water Drain

Foul Water Drain

Tree / Bush (approx. ht in m)

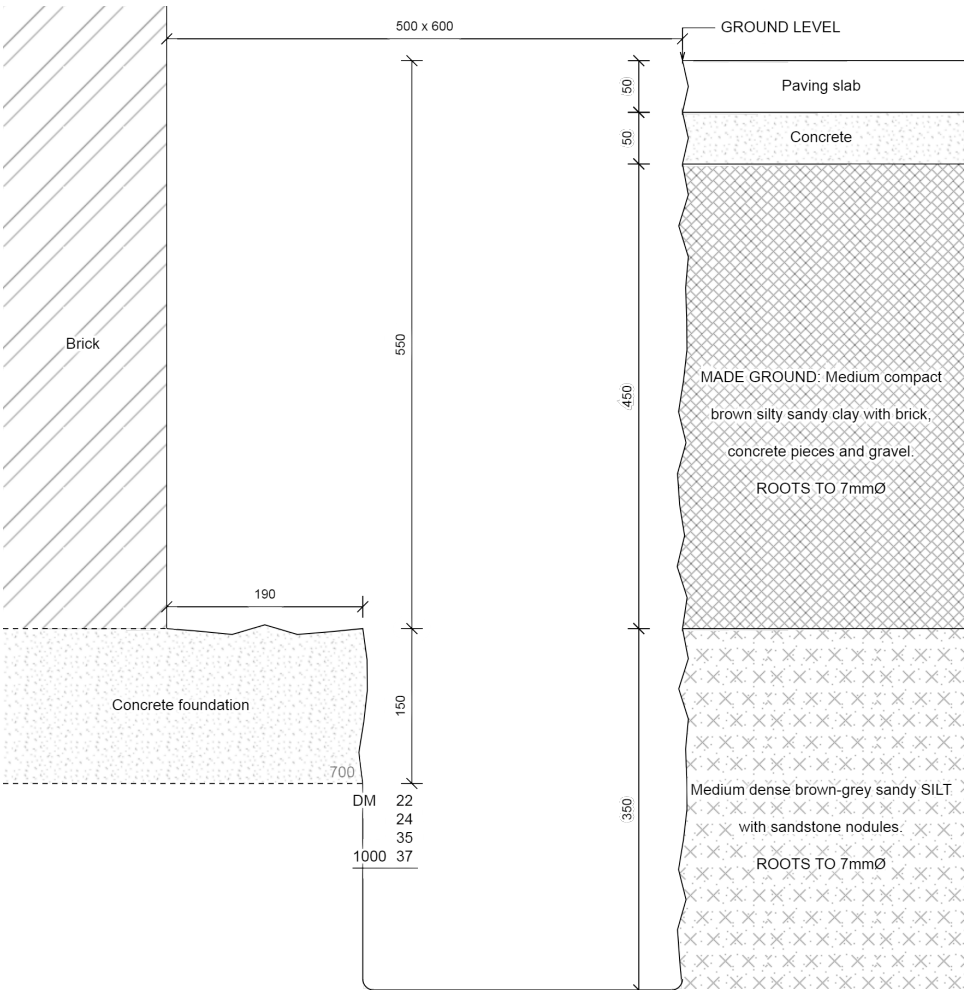
Trial Pit

Borehole

O/D - Open Discharge

TEST REPORT: **Trial Pit**

REPORT NUMBER:	C1037945 / 80518.1.1.1		
TRIAL PIT REF:	Tp1 1of1	DATE:	23/08/2019
CLIENT:	Crawford & Co	SITE:	42 Stonegate
JOB NO:	614082	WEATHER:	Dry
EXCAVATION METHOD:	Hand tools		



For Strata below 900mm see Bore Hole log

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:
Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CET
Kerry Bone - Lab Technician

Approved Signatory
27-Aug-19

Report Format:

DE74 2UD

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Borehole	1		Sheet:	1 of 1	Site:	42 Stonegate
			Job No:	614082		
			Date:	23/08/2019		
Boring Method:	Rotary Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	100	Weather:	dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
0.00	See Trial Pit	0.90				
0.90	Stiff brown silty sandy CLAY with sandstone nodules	0.60		1.00	DV	102
						104
1.50	Very soft brown moist silty sandy CLAY	1.50		1.50	D	
				2.00	DV	18
						20
				2.50	D	
3.00	End of BH			3.00	DV	18
						18

Remarks:
BH ends at 3.0m. Required depth reached. Water strike at 1.7m. BH collapsing to 2.0m on completion.

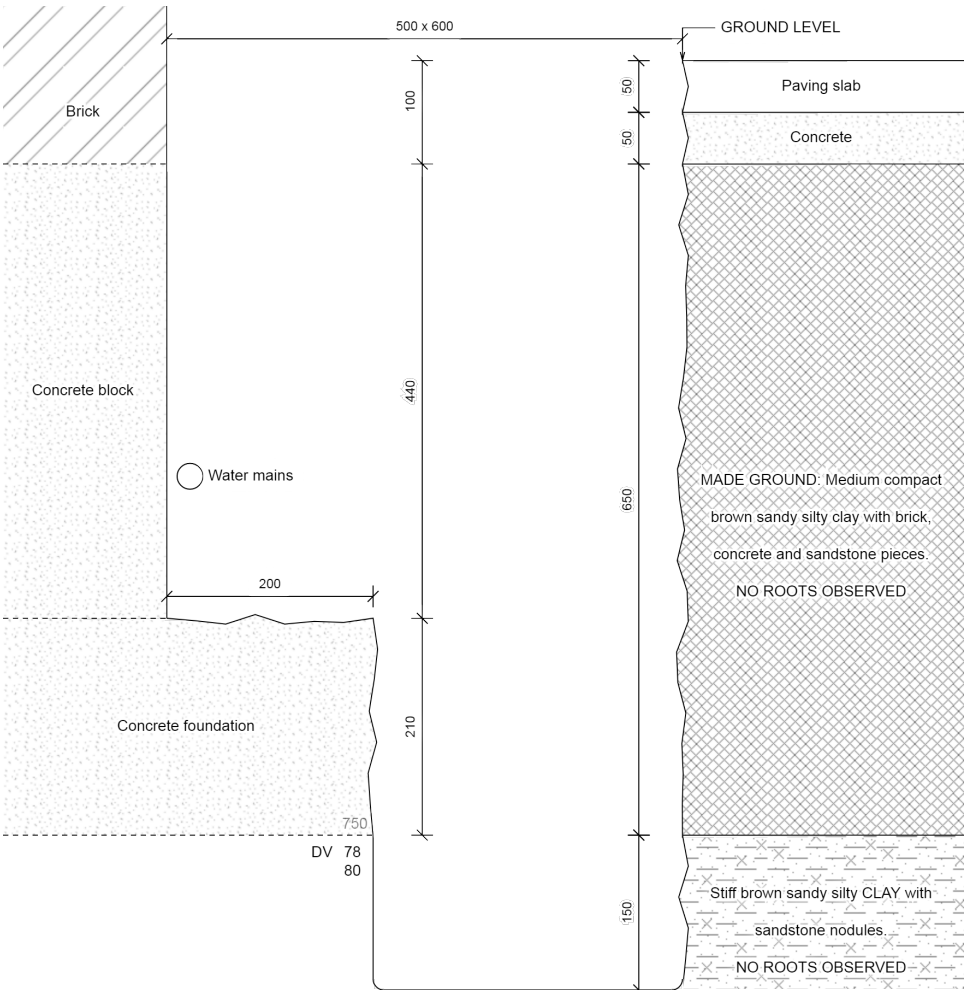
Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	2.00	4
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)	1.70	
TDTD - Too Dense To Drive			

Logged:	PB	LM	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

TEST REPORT: **Trial Pit**

REPORT NUMBER:	C1037945 / 80518.1.1.2		
TRIAL PIT REF:	TP2 1 of 1	DATE:	23/08/2019
CLIENT:	Crawford & Co	SITE:	42 Stonegate
JOB NO:	614082	WEATHER:	Dry
EXCAVATION METHOD:	Hand tools		



For Strata below 1000mm see Bore Hole log

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:
Test results reported relate only to the items tested.
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27-Aug-19

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Borehole	2		Sheet:	1 of 1	Site:	42 Stonegate
			Job No:	614082		
			Date:	23/08/2019		
Boring Method:	Rotary Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	100	Weather:	dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
0.00	See Trial Pit	1.00				
1.00	Very soft moist brown silty sandy CLAY with sandstone nodules	3.00		1.00	DV	24
						22
				1.50	D	
				2.00	DV	18
						16
				2.50	D	
				3.00	DV	18
						22
				3.50	D	
4.00	End of BH			4.00	DV	18
						18

Remarks:
BH ends at 4.0m. Unable to extract sample. Water strike at 1.4m. BH collapsing to 2.1m on completion. Unsuitable for Datum instillation. No roots observed.

Key:

		To Depth (m)	Max Dia (mm)
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)	1.60	

TDTD - Too Dense To Drive

Logged:	PB	LM	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Laboratory Summary Results

Our Ref : 614082

Location : 42 Stonegate

Client: Crawford Claims Management

Address: Cartwright House, Tottle Road, Riverside Business Park, NG2 1RU

Date Sampled: 23/08/2019

Date Received : 27/08/2019

Date Tested : 27/08/2019

Date of Report : 29/08/2019

Sample Ref TP/BH No	Depth (m)	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) SO_3 [14]	Sulphate Content * (g / l) SO_4 [15]	* Class [16]
1	U/S 0.70	D	29	<5	33	25	8	0.54	8	ML										
	1.0	D	49	<5											103					
	1.5	D	50	<5	56	27	29	0.79	29	CH										
	2.0	D	51	<5											19					
	2.5	D	47	<5																
	3.0	D	52	<5	48	24	24	1.16	24	CI					18					

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 : 2018 : Figure 8 - 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] $SO_4 = 1.2 \times SO_3$

[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

UKAS TESTING

4161

Version: 5BH V1.6 - 26.02.19

Our Ref : 614082

Laboratory Testing Results

Date Sampled : 23/08/2019

Location : 42 Stonegate

Date Received : 27/08/2019

Client: Crawford Claims Management

Date Tested : 27/08/2019

Address: Cartwright House, Tottle Road, Riverside Business Park, NG2 1RU

Date of Report : 29/08/2019

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	Oedometer Strain	Estimated Heave Potential (Dd)	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)	(kPa) [8]	*[9]*	*(mm)[10]*	(kPa) *[11]*	(%)*[12]*	*[13]*	SO_3 *[14]*	SO_4 *[15]*	*[16]*
2	U/S 0.75	D	25	<5	34	25	9	0.01	9	ML					79					
	1.0	D	34	<5											23					
	1.5	D	35	<5																
	2.0	D	39	<5	49	27	22	0.57	22	CI					17					
	2.5	D	53	<5																
	3.0	D	45	<5											20					
	3.5	D																		
	4.0	D	49	<5	45	25	20	1.18	20	CI					18					

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] $SO_4 = 1.2 \times SO_3$

[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 soluable 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)
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UKAS TESTING

4161

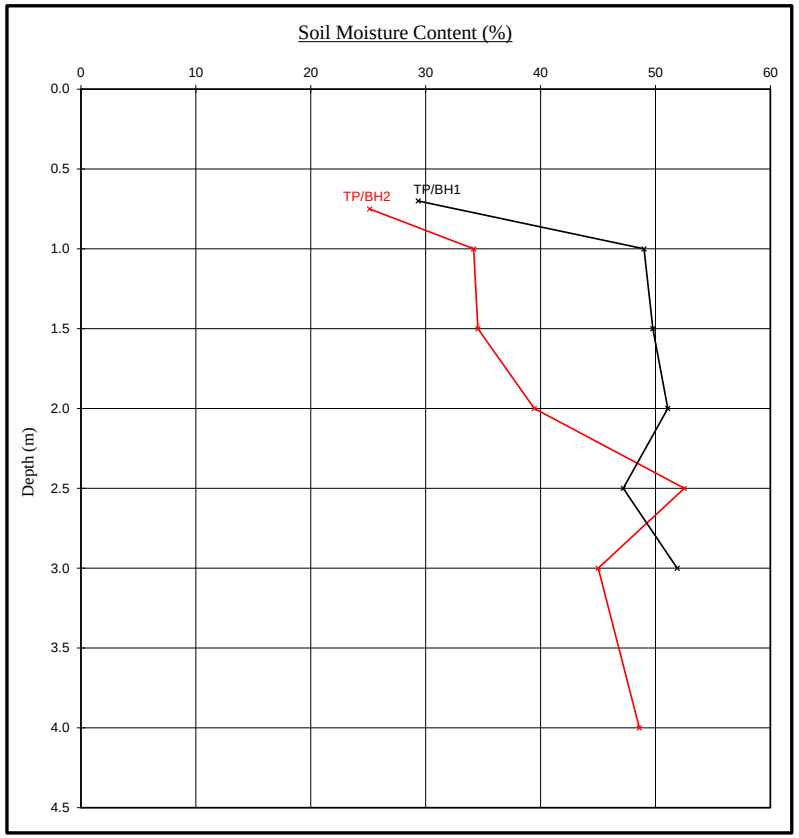
Version: 5BH V1.5 - 26.06.18

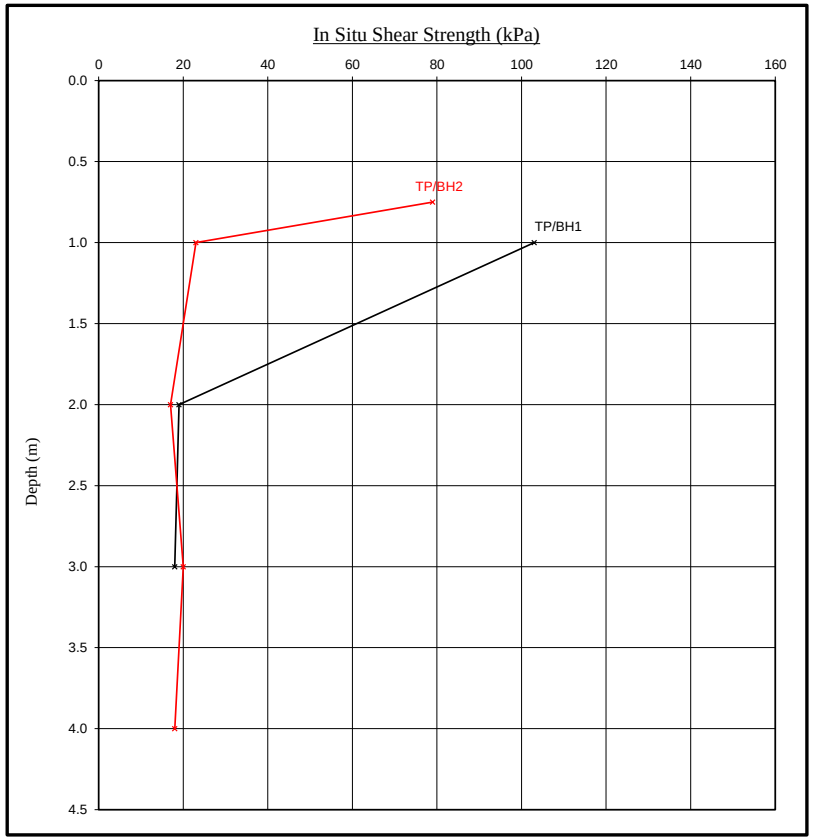
Moisture Content Profiles

Shear Strength Profiles

Our Ref : 614082
Location : 42 Stonegate
Work carried out for: Crawford Claims Management

Date Sampled : 23/08/2019
Date Received : 27/08/2019
Date Tested : 27/08/2019
Date of Report : 29/08/2019





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.

EPSL ***European Plant Science Laboratory***	Sheet: 1 of 1 Job No: **614082** Date: **29/08/2019** Order No: **5427** EPSL Ref: **R32599**	Site: **42 Stonegate,** 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 number	Root diameter (mm)	Tree, shrub or climber from which root originates	Result of starch test
TP1 (USF)	4 mm	Prunus spp. 3 roots	Positive
TP1 (USF)	2 mm	probably Quercus spp. but possibly Castanea spp.	Positive
BH1 (to 2m)	3 mm	Prunus spp.	Positive
BH1 (to 2m)	<1 mm	broadleaved species, too juvenile for positive identification * 2 roots	Positive

* Possibly Quercus/Castanea spp.

Prunus spp. include blackthorn, cherry, cherry-laurel, Portuguese laurel, peach, plum, and related species.
Quercus spp. are oaks. Castanea spp. include sweet chestnut.



MDM

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