SITE INVESTIGATION
FACTUAL REPORT

Report No: [redacted]

Client: Crawford Claims Management

Site: 37 Lancaster Grove

Client Ref: [redacted]

Date of Visit: 16/05/19

ISO 9001 REGISTERED FIRM | ISO 14001 REGISTERED FIRM | OHSAS 18001 REGISTERED FIRM

[redacted]

[redacted]

Drainage Layout Plan

Sheet: 1 of 1

[redacted]

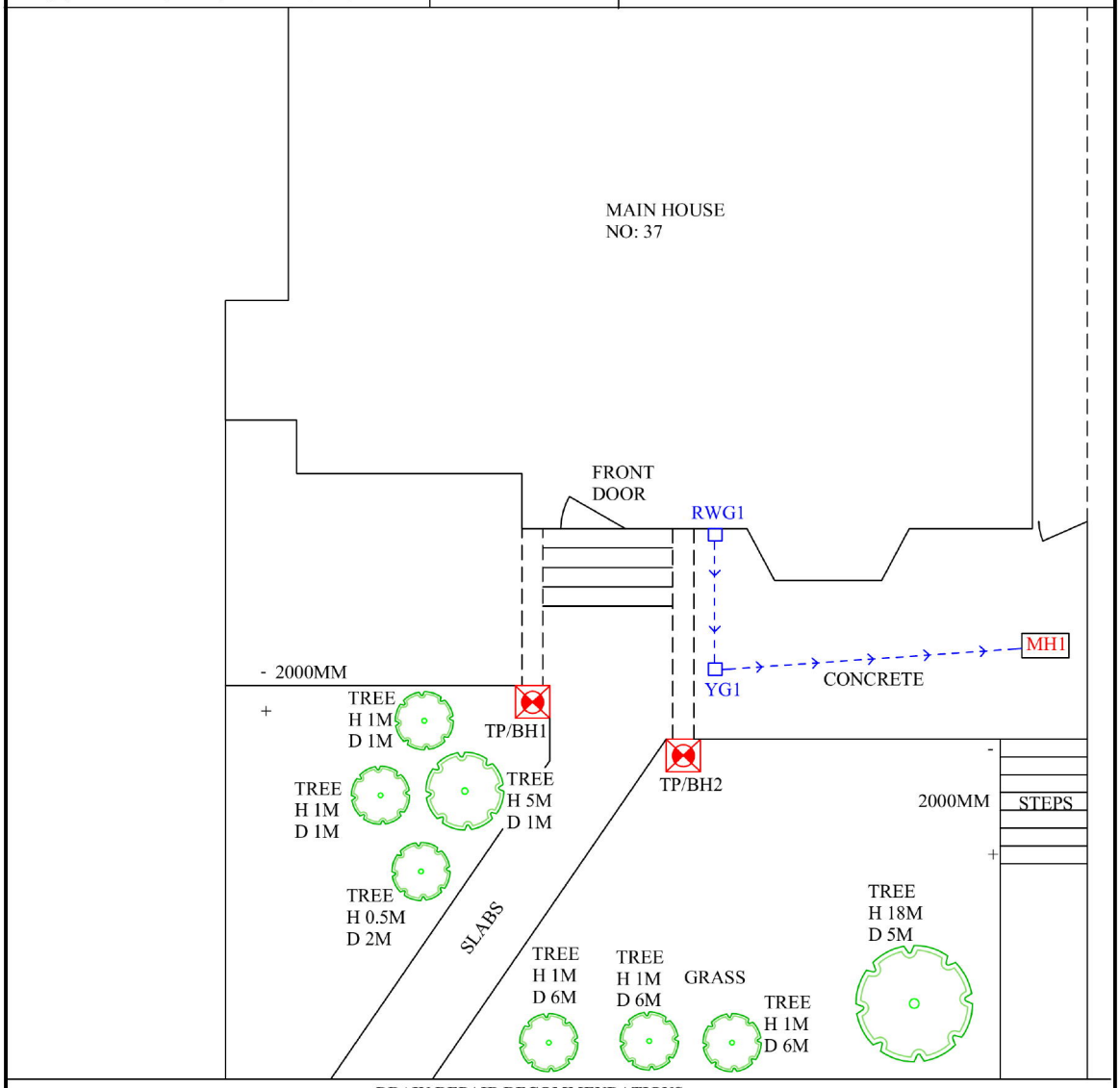
Date: 16/05/2019

Site: 37 Lancaster Grove, NW3

Work carried out for: Crawford Claims MGMT SUS

(SI) (Checked) CFT (Drawn)

Weather: DRY



DRAIN REPAIR RECOMMENDATIONS

No recommendations required to the private drainage surveyed.

Surface Water Drain

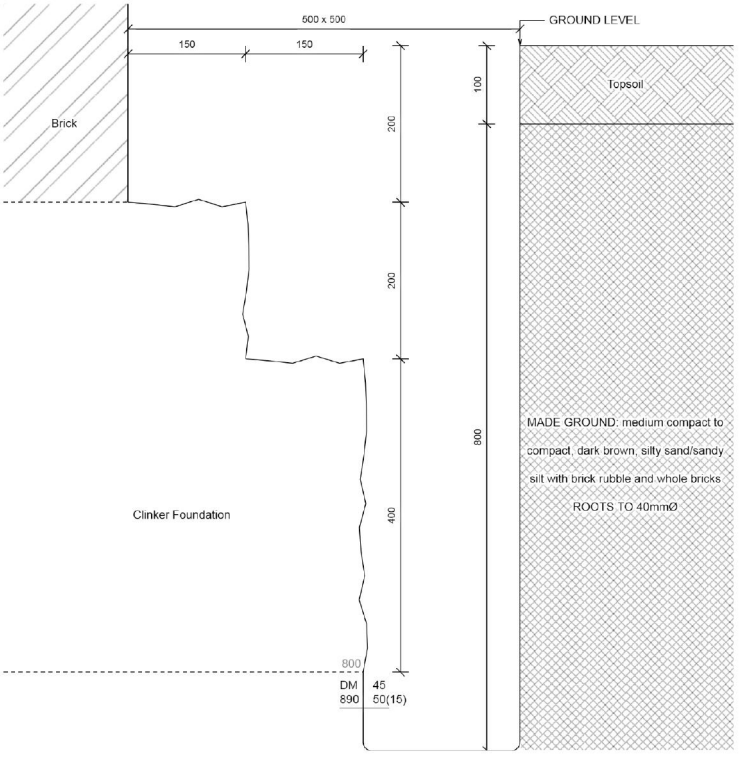
Foul Water Drain

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

PROPERTY ASSURANCE
Giving our all

TEST REPORT: **Trial Pit**

REPORT NUMBER:	[redacted]		
TRIAL PIT REF:		DATE:	23/05/2019
CLIENT:	Crawford & Co	SITE:	37 Lancaster Grove, NW3 4HB
JOB NO:	[redacted]	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:

For and on behalf of CET
Sophie Cahalane - Admin Assistant

Approved Signatory
23-May-19

Report Format: [redacted] [redacted] [redacted]

Borehole	1		Sheet:	1 of 1	Site:	37 Lancaster Grove
			Job No:	[redacted]		
			Date:	16/05/2019		
Boring Method:	Hand Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	75	Weather:	dry			

Depth	Soil Description			Samples and Tests		
(m)		Thickness	Legend	Depth	Type	Result
0.00	See Trial Pit	0.90				
0.90	MADEGROUND medium compact to compact orange-brown silty sand	0.70		1.00	DM	50(5)
						TCTD
1.20	End of BH					

Remarks:
BH ends at 1.2m, too compact to hand auger. BH dry and open on completion.No roots observed below 1.2m.

Key:

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
J - Jar Sample
V - Pilcon Shear Vane (kPa
M - Mackintosh Probe
TDTD - Too Dense To Drive

Roots
Roots
Roots
Depth to Water (m)

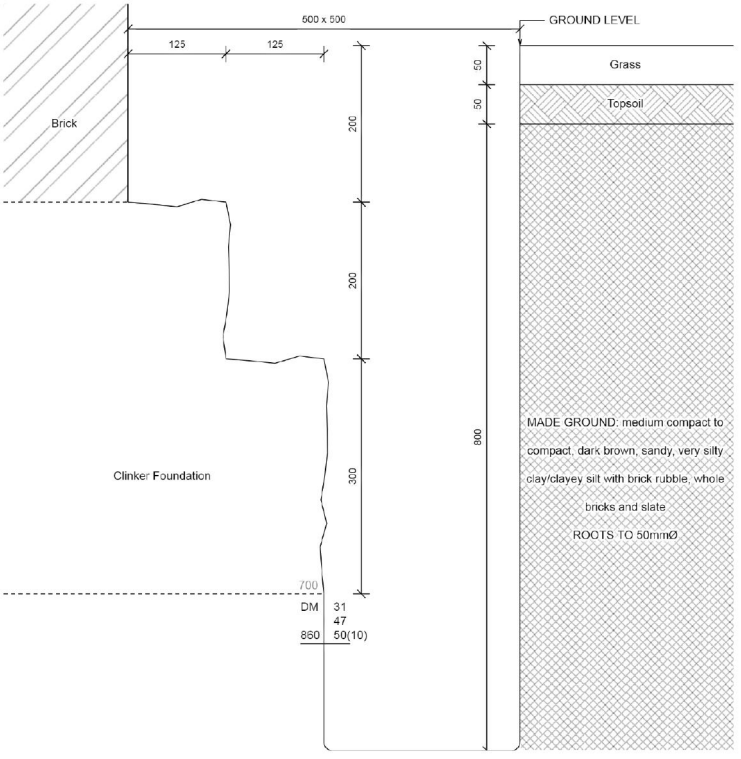
	To Depth (m)	Max Dia (mm)
Roots	1.20	2
Roots		
Roots		
Depth to Water (m)		

Logged:	DP	PS	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

PROPERTY ASSURANCE
Giving our all

TEST REPORT: **Trial Pit**

REPORT NUMBER:	[redacted]		
TRIAL PIT REF:		DATE:	23/05/2019
CLIENT:	Crawford & Co	SITE:	37 Lancaster Grove, NW3 4HB
JOB NO:	[redacted]	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:

For and on behalf of CET
Sophie Cahalane - Admin Assistant

Approved Signatory
23-May-19

Report Format: [redacted]

[redacted]

[redacted]

Borehole	2		Sheet:	1 of 1	Site:	37 Lancaster Grove
			Job No:	[redacted]		
			Date:	16/05/2019		
Boring Method:	Hand Auger		Ground Level:		Client:	Crawford Claims Management
Diameter (mm):	75	Weather:	DRY			

Depth	Soil Description			Samples and Tests		
(m)		Thickness	Legend	Depth	Type	Result
0.00	See Trial Pit	0.90				
0.90	MADEGROUND medium compact to compact orange-brown sandy silty clay with gravel and brick fragments	0.80		1.00	DM	49
						50(5)
						TCTD
1.20	End of BH					

Remarks:
BH ends at 1.2m, too compact to hand auger. BH dry and open on completion. No roots observed below 1.2m.

Key:		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	1.20	3
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)		
TDTD - Too Dense To Drive			

Logged:	DP	PS	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Laboratory Summary Results

Our Ref : [redacted]

Date Sampled: 16/05/19

Location : 37 Lancaster Grove, NW3

Date Received : 21/05/19

Client: Crawford Claims Management

Date Tested : 22/05/19

Address: [redacted]

Date of Report : 31/05/19

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 0.80	D	22	52	Not suitable for further testing - Made Ground															
	1.0	D	19	53	Not suitable for further testing - Made Ground															

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

[9] 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

[redacted]

Version: 5BH V1.6 - 26.02.19

8618

Our Ref : [redacted]

Laboratory Testing Results

Date Sampled : 16/05/19

Location : 37 Lancaster Grove, NW3

Date Received : 21/05/19

Client: Crawford Claims Management

Date Tested : 22/05/19

Address: [redacted]

Date of Report : 31/05/19

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]*
2	U/S 0.70	D	15	49	41	21	20	-0.30	10	CI	Not suitable for further testing - Made Ground									
	1.0	D	17	40	Not suitable for further testing - Made Ground															

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 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
UFS	Underside of Foundation

[redacted]

Version: 5BH V1.5 - 26.06.18

UKAS TESTING

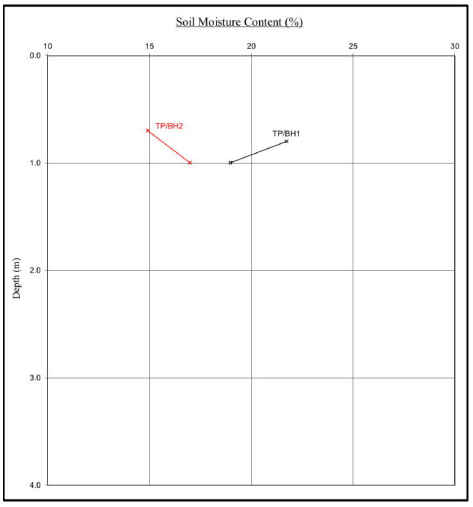
8618

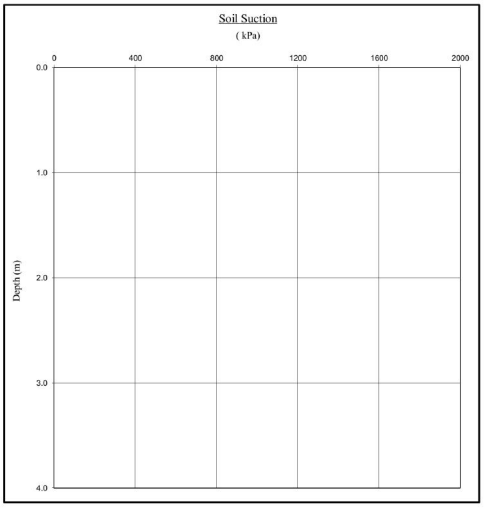
Moisture Content Profiles

Soil Suction Profiles

Our Ref : [redacted]
Location : 37 Lancaster Grove, NW3
Work carried out for: Crawford Claims Management

Date Sampled : 16/05/19
Date Received : 21/05/19
Date Tested : 22/05/19
Date of Report : 31/05/19





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
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

[redacted]

Date: **18/06/2019**

[redacted]

Site: **37 Lancaster Grove,**

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)	2 mm	Monocotyledon spp. 3 roots	Positive
BH1 (1.2m)	1.5 mm	Monocotyledon spp.	Negative
BH1 (1.2m)	1 mm	Osmanthus/Phillyrea spp. or related shrub species 2 roots	Positive
TP2 (USF)	10 mm	Fagus spp. 4 roots	Positive
BH2 (1.2m)	2 mm	Fagus spp. 3 roots	Positive

Monocotyledon spp. include palms, grasses, bamboos and lilies.
Osmanthus/Phillyrea spp. are evergreen shrubs with white or cream fragrant flowers.
Fagus spp. include common beech and copper beech.

[redacted]

MDM

[redacted]

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 R J Shaw B.Sc. (Hons), Ph.D
Consultant: Dr M P Denne B.Sc. (Hons), M.Sc., Ph.D

[redacted]

To: **Crawford Claims Management**
Ftao: Matt Deller

[redacted]

Site: **37 Lancaster Grove** Date: 04-Jun-19

ESTIMATE

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.

[redacted]

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.

Coding Sheet	Sheet:		Site:	37 Lancaster Grove
	Job No.:	[redacted]		
	Date:	16/05/19	Client:	Crawford Claims Management

Run:	**1**								
From:		MH1		Invert Level:		550	Direction:	U/S	
To:		YG/1		Invert Level:			Function:	S/W	
Pipe Material:		VC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:			Gully Condition:	As Built	
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run: / If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
0.10	DES				30		Silt and leaves	slabs	
5.70	JN		3				RWG/1		
5.70	FH						REACEHD YARD GULLY		
Comments:									

Run:	**2**								
From:		RWG/1		Invert Level:			Direction:	D/S	
To:		RUN 1		Invert Level:			Function:	F/W	
Pipe Material:		VC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:		No	Gully Condition:	As Built	
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)
0.10	DES				15		SILT AND LEAVES	SLABS	
1.00	FH						REACEHD RUN 1		
Comments:									
Aco channels run over run 2.									