

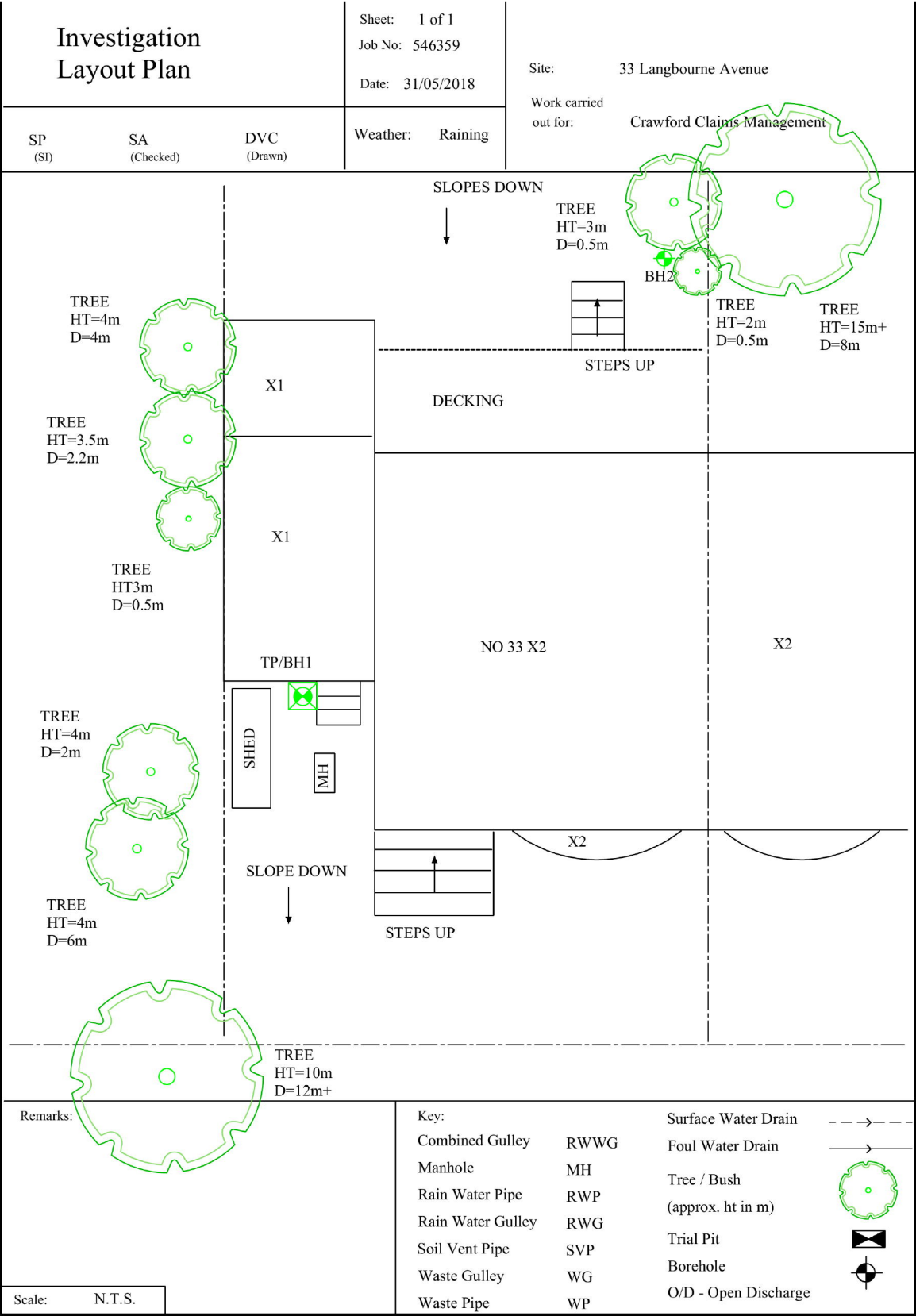
SITE INVESTIGATION FACTUAL REPORT

Report No: 546359
Client: Crawford Claims Management
Site: 33 Langbourne Avenue
Client Ref: [REDACTED]
Date of Visit: 12/11/18



Home Emergency Response - Subsidence Investigation - Drainage Services – Crack & Level Monitoring – Property Video Surveys





TEST REPORT: Trial Pit

REPORT NUMBER: C948472 / 54464.1.1.1

TRIAL PIT REF: TP1

DATE: 12/11/2018

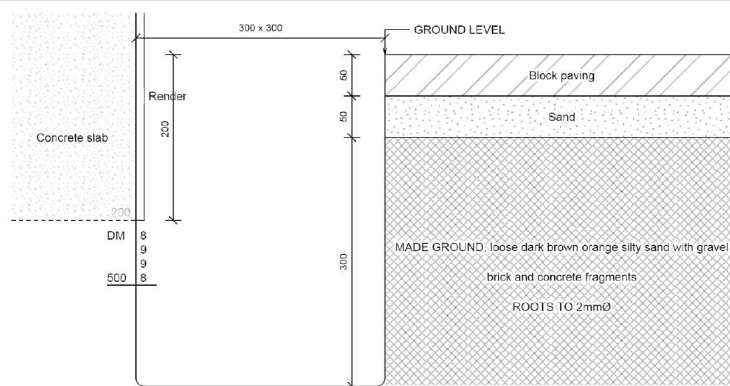
CLIENT: Crawford & Co

SITE: 33 Langbourne Avenue, N6 6PS

JOB NO: 546359

WEATHER: Dry

EXCAVATION METHOD: Hand tools



For Strata below 400mm 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:
Amended report. This test report supersedes test report version 1


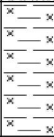
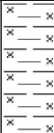
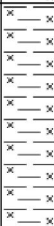

For and on behalf of CET
Steve Lumley - Regional Manager

Report Format:

Approved Signatory
22-Nov-18



[illegible]

Borehole		2	Sheet: 1 of 1		Site: 33 Langbourne Avenue						
			Job No: 546359								
			Date: 12/11/2018								
Boring Method:	Hand Auger		Ground Level:		Client: Crawford Claims Management						
Diameter (mm):	75	Weather: dry									
Depth (m)	Soil Description				Thickness	Legend	Samples and Tests				
0.00	MADEGROUND medium compact brown silty sandy clay with ocassional gravel and brick fragments				0.80		Depth	Type	Result		
							0.50	DM	30		
									31		
								24			
0.80	Stiff orange-brown silty CLAY				0.60				28		
							1.00	DV	80		
									78		
1.40	Very stiff orange-brown silty CLAY				0.60						
							1.50	DV	140+		
									140+		
2.00	Stiff orange-brown silty CLAY				1.00				108		
									110		
							2.50	DV	104		
									108		
3.00	End of BH						3.00	DV	116		
									116		
Remarks: BH ends at 3m.BH dry and 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 Depth (m)	Max Dia (mm)
					Version V1.0 28/01/16 N.T.S.						
Logged:	SP	SA	Checked:	Approved:							

Laboratory Summary Results

Our Ref: 546359

Location: 33, Langbourne Avenue, London

Client: Crawford Claims Management

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

Date Sampled: 12/11/18

Date Received: 13/11/18

Date Tested: 13/11/18

Date of Report: 21/11/18

Sample Ref		Type	Moisture Content	Soil Fraction > 0.425mm (%) [2]	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity * Index	Modified * Plasticity Index	Soil * Class	Filter Paper Contact Time (h)	Soil Sample Suction (kPa) [8]	Oedometer Strain	Estimated Heave Potential (Dd) (mm) [10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content	pH * Value	Sulphate Content * (g/l)		* Class
TP/PH No	Depth (m)																	SO3 [14]	SO4 [15]	
1	U/S 0.20	D	12	92	Not suitable for further testing - ENP															
	0.5	D	21	35	Insufficient sample for further testing															
	1.0	D	34	<5							168	126			100					
	1.5	D	29	<5	80	23	57	0.10	57	CV	168	292			> 140					
	2.0	D	35	<5							168	179			> 140					
	2.5	D	36	<5							168	157			> 140					
	3.0	D	35	<5	85	25	60	0.16	60	CV	168	184			> 140					

Test Methods / Notes

[1] BS 1377: Part 3: 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: 1991, Figure 31 - Plasticity Chart for the classification of fine soils

[8] In-house method S9a adapted from BRE LP 493

[9] In-house Test Procedure S17c: One Dimensional Swell/Shrink Test

[10] Estimated Heave Potential (Dd)

[11] Values of shear strength were determined in situ by CPT using

a P-wave hand vane or (where vane (CV).

[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 D5-4 or D5-5 class, it would be prudent to consider the sample as falling into the D5-4M or D5-5M

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
FNP Presumably Non-Plastic by inspection
US Underside of Foundation



Version: SBH V1.5 - 26.06.18

8618

Our Ref: 546359

Laboratory Testing Results

Date Sampled: 12/11/18

Location: 33, Langbourne Avenue, London

Date Received: 13/11/18

Client: Crawford Claims Management

Date Tested: 13/11/18

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

Date of Report: 21/11/18

Sample Ref.		Type	Moisture Content	Soil Fraction > 0.425mm (%) [2]	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity * Index	Modified * Plasticity Index (%) [6]	Soil * Class	Filter Paper Contact Time (h)	Soil Sample Suction (kPa) [8]	Oedometer Strain	Estimated Heave Potential (Dd) (mm) [10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content (%) [12]	pH * Value	Sulphate Content *			* Class			
TP/BH No.	Depth (m)																	(g/l)						
			(%) [1]	(%) [2]	(%) [3]	(%) [4]	(%) [5]	[5]	[6]	[7]								SO3 [14]	SO4 [15]	[16]				
BH2	0.5	D	20	16	65	24	41	-0.10	35	CH	Not suitable for suction testing-made ground													
	1.0	D	34	<5							168	135			79									
	1.5	D	25	<5	75	25	50	0.00	50	CV	168	351			> 140									
	2.0	D	32	<5							168	229			109									
	2.5	D	35	<5							168	157			106									
	3.0	D	38	<5	87	29	58	0.16	58	CV	168	175			116									

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] BS 5930: 1981: Figure 31 - Plasticity Chart for the classification of fine soils

[9] In-house Test Procedure S17a: One Dimensional Swell/Shrink Test

[10] Estimated Heave Potential (Dd)

[11] Values of shear strength were determined in situ by CET using a Picon hand vane or Geotest 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] SO₃ = 1.2 x SO₄

[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

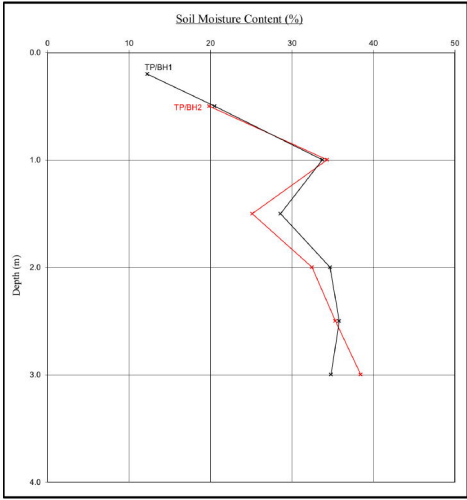
Key

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



Moisture Content Profiles

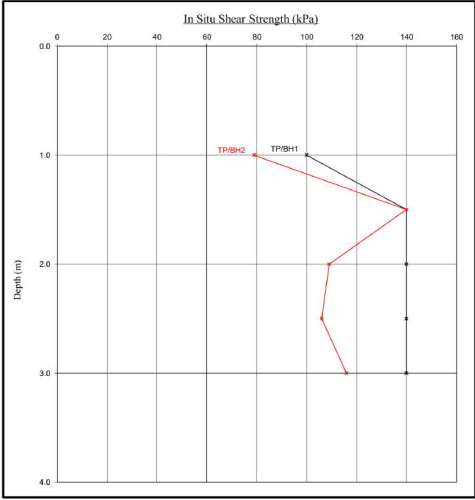
Our Ref: 546359
Location: 33, Langbourne Avenue, London
Work carried out for: Crawford Claims Management



Notes
1. If plotted, $0.4LL$ 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.

Shear Strength Profiles

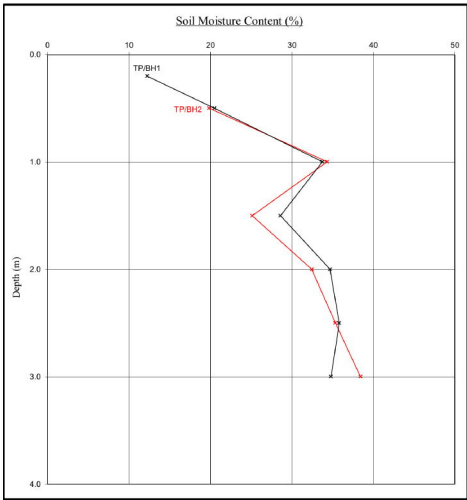
Date Sampled: 12/11/18
Date Received: 13/11/18
Date Tested: 13/11/18
Date of Report: 21/11/18



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

Moisture Content Profiles

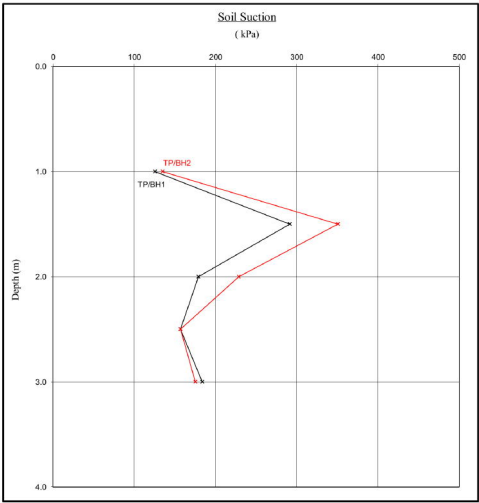
Our Ref: 546359
Location : 33, Langhouse Avenue, London
Work carried out for: Crawford Claims Management



Notes
1. If plotted, $0.4LL$ 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 : 12/11/18
Date Received : 13/11/18
Date Tested : 13/11/18
Date of Report : 21/11/18



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 dependent 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	Site: 33 Langbourne Avenue,
	Job No: 546359	Work carried
	Date: 16/11/2018	out for: Crawford Claims MGMT SUS
	Order No: 1239080	
EPPL Ref: R26018		

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	Syringa spp. or related shrub species 4 roots	Positive
BH1 (to 2m)	1.5 mm	Quercus spp. 3 roots	Positive
BH2 (1-1.7m)	1 mm	Probably Ceanothus spp. *	Negative
BH2 (1-1.7m)	1 mm	broadleaved species, too decayed for positive identification	Negative
BH2 (1-1.7m)	<1 mm	broadleaved species, too juvenile for positive identification † 2 roots	Positive

* In poor condition.

Syringa spp. are lilacs. Related species include privet, jasmines and forsythia.
Quercus spp. are oaks (both deciduous and evergreen).
Ceanothus spp. are common garden shrubs (Californian lilacs).

† It may be possible to include/discount species from the list of possibilities. Please contact the laboratory with a list of species on site if this would be useful.


MDM

Address for correspondence: EPPL, 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 R J Shaw B.Sc. (Hons), 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