



Geotechnical Survey Report

Issue Date:	November 2019
Risk Address:	30 Cardinal Drive Waterlooville Hampshire PO7 8LZ
Claim Ref:	104889

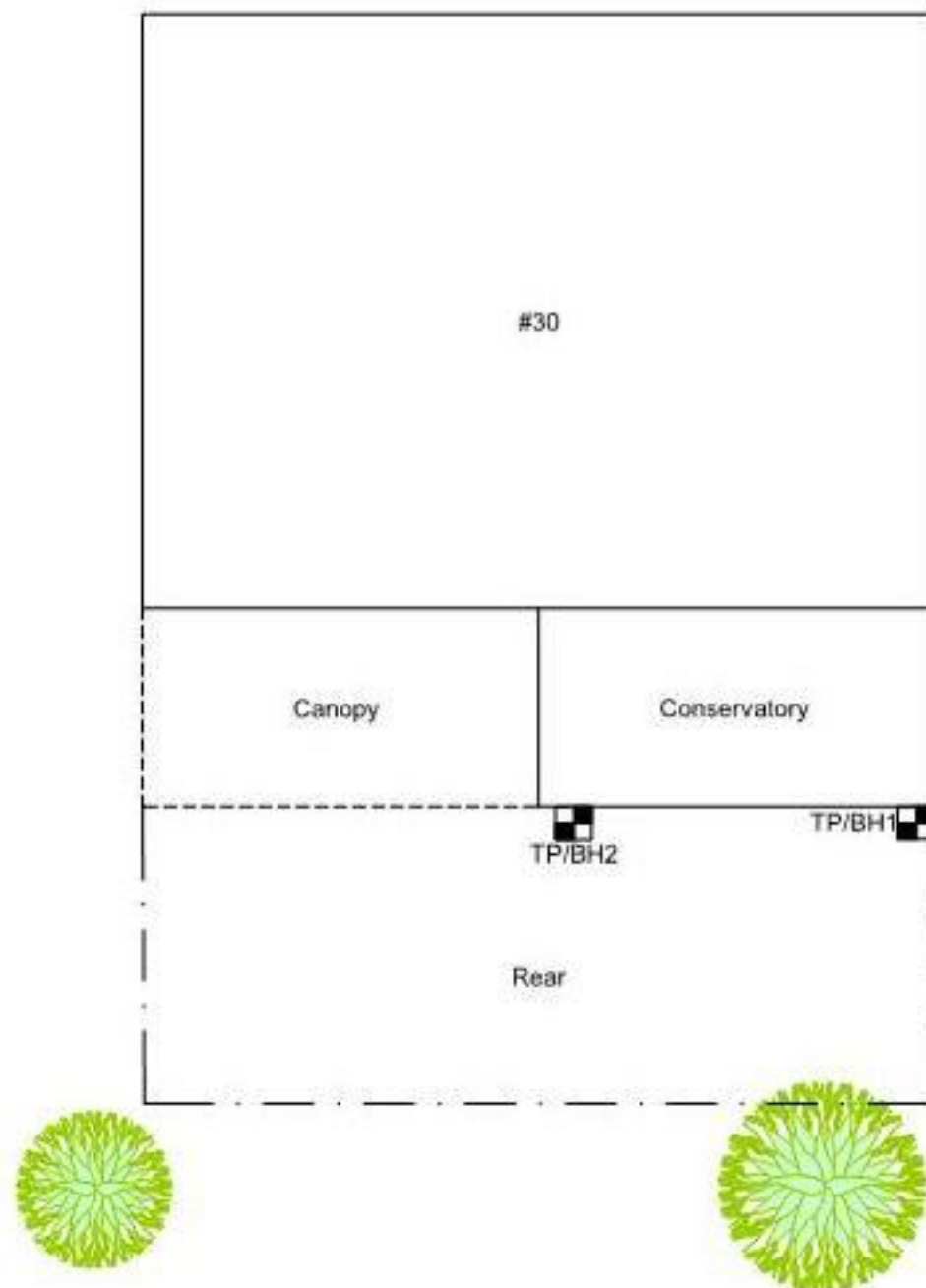
SITE PLAN

Property Address: 30 Cardinal Drive, Waterlooville, Hampshire, PO7 8LZ

Claim Ref: 104889

Survey date: 09/10/2019

Operative: SW1



Scale:
NTS

Drawn by:
SP

Key:

 Trial Pit

 Borehole



Manholes

 Rain Water Pipe

 Soil & Vent Pipe

 Surface Water Gully

 Foul Water Gully

 Shrub

 Tree (Conifer)

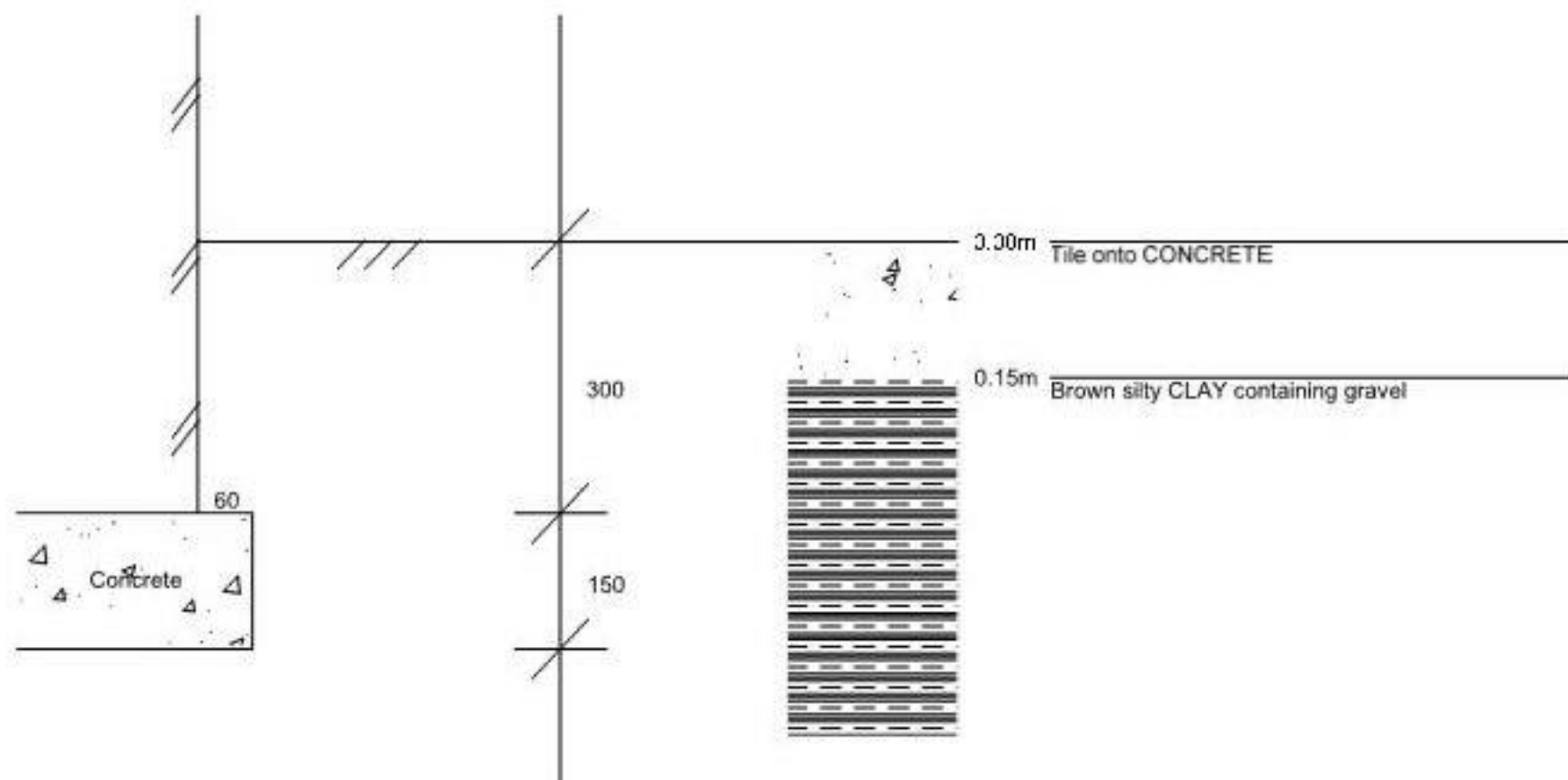
 Tree (Deciduous)

TRIAL PIT 1

Property Address: 30 Cardinal Drive, Waterlooville, Hampshire, PO7 8LZ

Claim Ref: 104889

Survey date: 09/10/2019

Operative: SW1


D1 @ F.L. (0.45m)

V = 72-90kPa

Founding strata: Brown silty CLAY containing gravel

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

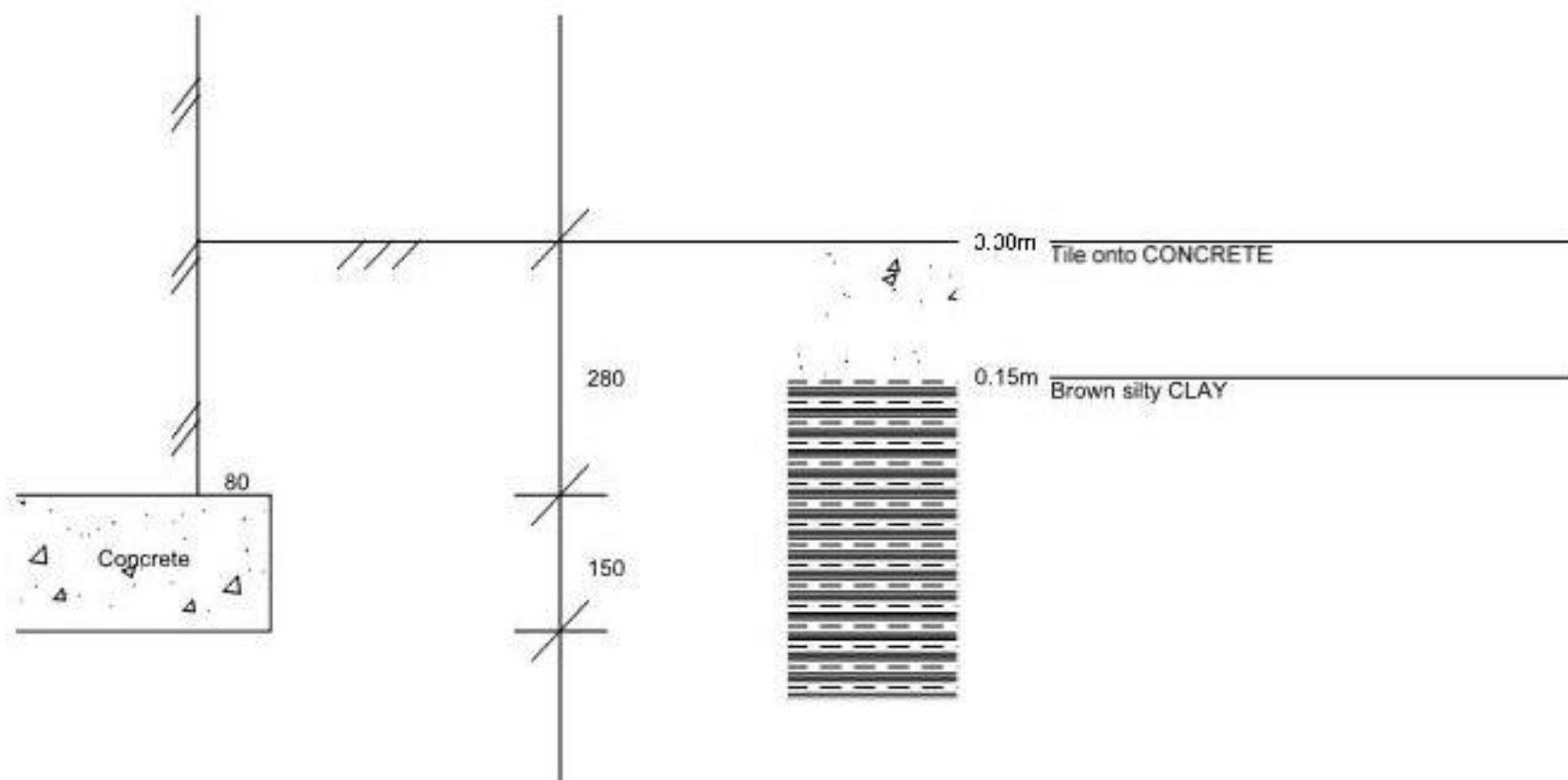
		Gatehead Business Park Delph New Road Oldham, OL3 5DE Registration No: 09166356		Borehole Log		Borehole No. BH1 Sheet 1 of 1	
Project Name: 104889			Project No. 20048		Site Date: 09/10/2019		Hole Type BH
Location:		30 Cardinal Drive, Waterloooville, Hampshire, PO7 8LZ					Scale 1:17
Client:		Catalyst Claims					Logged By SW1
Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.15		Tile onto CONCRETE Brown silty CLAY containing gravel <u>Foundation top - 0.30m (Concrete construct projecting 60mm with a thickness of 150mm)</u> <u>Foundation level - 0.45m</u> <u>Noted to contain hairlike-5mm roots at F/L</u>	
	0.45	D	V (kPa) = 72 V (kPa) = 90	0.80		Orange silty CLAY containing grey mottle <u>Noted to contain hairlike-2mm roots at 0.80m</u> <u>Noted to contain hairlike-2mm roots at 1.00m</u>	1
	1.00	D	V (kPa) = 90 V (kPa) = 96				
	1.50	D	V (kPa) = 102 V (kPa) = 96			<u>Noted to contain hairlike-1mm roots at 1.50m</u>	
	2.00	D	V (kPa) = 110 V (kPa) = 112	2.00		Brown silty CLAY <u>Noted to contain hairlike-1mm roots at 2.00m</u>	2
	2.50	D	V (kPa) = 112 V (kPa) = 140				
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m	3
Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test							
Remarks: Borehole closed at 3.00m. Borehole noted to be dry on completion.							

TRIAL PIT 2

Property Address: 30 Cardinal Drive, Waterloo, Hampshire, PO7 8LZ

Claim Ref: 104889

Survey date: 09/10/2019

Operative: SW1


D1 @ F.L. (0.43m)
V=48-54kPa
Founding strata: Brown silty CLAY

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

		Gatehead Business Park Delph New Road Oldham, OL3 5DE Registration No: 09166356		Borehole Log		Borehole No. BH2 Sheet 1 of 1	
Project Name: 104889		Project No. 20048		Site Date: 09/10/2019		Hole Type BH	
Location:		30 Cardinal Drive, Waterlooville, Hampshire, PO7 8LZ					Scale 1:17
Client:		Catalyst Claims					Logged By SW1
Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.15		Tile onto CONCRETE Brown silty CLAY <u>Foundation top - 0.28m (Concrete construct projecting 80mm with a thickness of 150mm)</u> <u>Foundation level - 0.43m</u> <u>Noted to contain hairlike-4mm roots at F/L</u>	
	0.43	D	V (kPa) = 48 V (kPa) = 54				
	1.00	D	V (kPa) = 44 V (kPa) = 54			<u>Noted to contain hairlike-2mm roots at 1.00m</u>	1
	1.50	D	V (kPa) = 66 V (kPa) = 84			<u>Noted to contain hairlike-1mm roots at 1.50m</u>	
	2.00	D	V (kPa) = 114 V (kPa) = 116				2
	2.50	D	V (kPa) = 122 V (kPa) = 130				
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m	3
Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test							
Remarks: Borehole closed at 3.00m. Borehole noted to be dry on completion.							



Gatehead Business Park

Tel: 0800 870870

Appendix No: 3

Delph New Road

Oldham, OL3 5DE.

Email: info@catalystclaims.com

Registered in England No: 09166356

Web: www.catalystclaims.com

LABORATORY RESULTS

Property Address: 30 Cardinal Drive, Waterlooville, Hampshire, PO7 8LZ
Client Claim Ref: 104889

SAMPLE DETAILS		ANALYSIS REQUESTED	
Investigation date:	11th October 2019	Moisture Content	☒ PSD
Sample details:	Bags as received	Liquid Limit	☒ Soil Suction —
Samples received:	14th October 2019	Plastic Limit	☒ Shear Strength —
Schedule recieved:	14th October 2019	Plasticity Index	☒ Contamination
Samples tested:	14th - 28th October 2019	Root ID	☒ Root/Tree DNA —
Results reported:	28th October 2019	Other (please state)	—

TEST DETAILS**General**

Sample descriptions were written in accordance with BS 5930:1999.

Samples were prepared in accordance with BS 1377: Part 1: 1990, section 7

Samples from this contract will be retained for 1 calendar month following the issue of this report unless otherwise notified

Written approval is required from Fastrack Site Investigations Limited to reproduce report in full. The results shown within this report only relate to the samples tested

Moisture Content

Samples were tested in accordance with BS 1377: Part 2: 1990, section 3.2 (Oven drying method)

In accordance with Note 1 to paragraph 3.2.4 of BS 1377 Part 2 1990; these moisture contents have been corrected to give the equivalent moisture content of the fraction passing the 425µm sieve, to enable comparison with the liquid & plastic limits. (If condition of test is 'natural' the retained percentage is an estimated value, if condition is 'washed' the percentage is a measured value).

Samples are dried at 105-110°C unless otherwise stated.

Atterberg Limits

Samples were tested in accordance with BS 1377: Part 2: 1990, section 4.3 (4 drop LL), 4.4 (1 drop LL), 5.3 (PL) and 5.4 (PI)

Test results on samples with a sand content, may show less accurate results. If condition of test is 'washed' results relate to the fraction passing the 425µm sieve only.

* Driscoll's rules deem the soil to be desiccated where the moisture content is less than the value calculated using driscoll's rule 1 and/or 2

Particle Size Distribution

Samples were tested in accordance with BS 1377: Part 2: 1990 section 9.2 (Wet sieving method)

Undrained Shear Strength

Samples were prepared in accordance with BS 1377: Part 7: 1990 section 8.3 and testing in accordance with BS 1377: Part 7: 1990: section 8.4 (undrained shear strength in triaxial compression without measurement of pore pressure (UU))

Soil Suction

Samples were prepared and tested based on the BRE digest No:IP4/93 (Corrected). 'A method of determining the state of desiccation in clay soils.' (Filter paper method).

Test results on samples with a sand or silt content, may show less accurate results. Deviation to standard procedure - Polythene bags are not used from weighing filter papers.

LABORATORY RESULTS

Property Address:

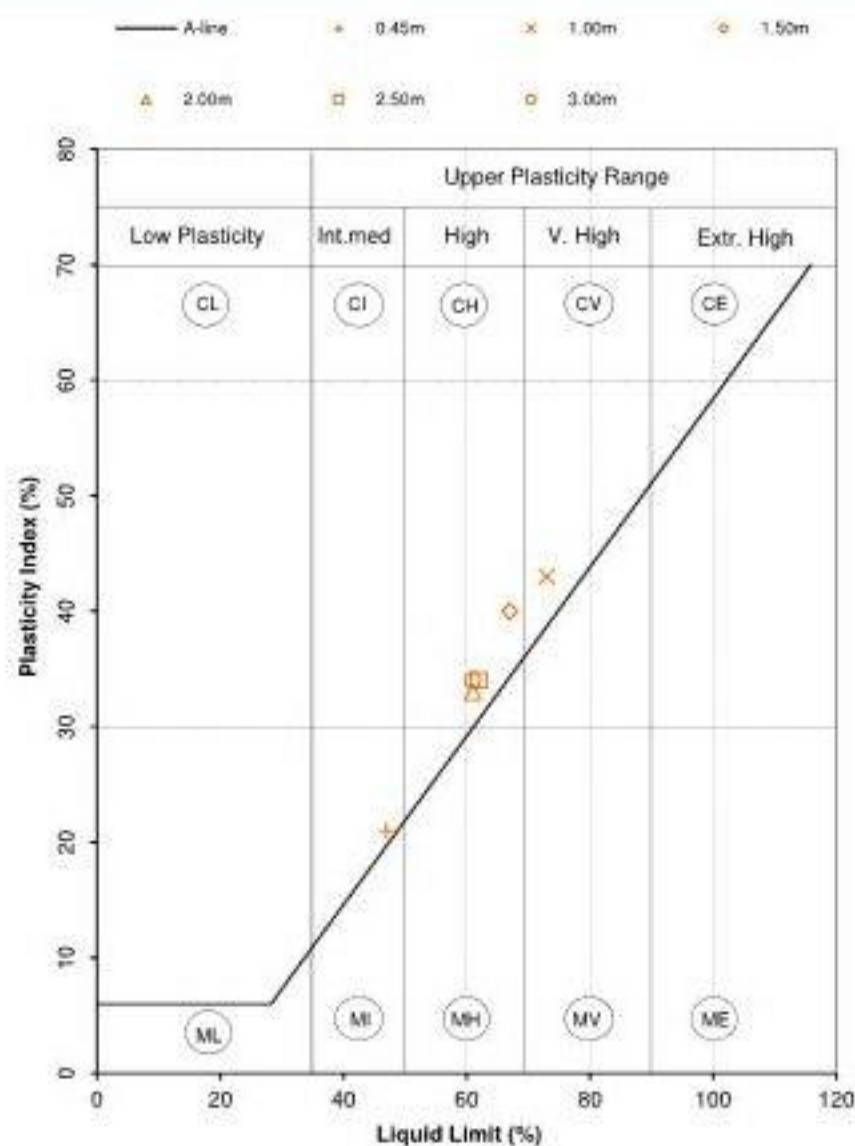
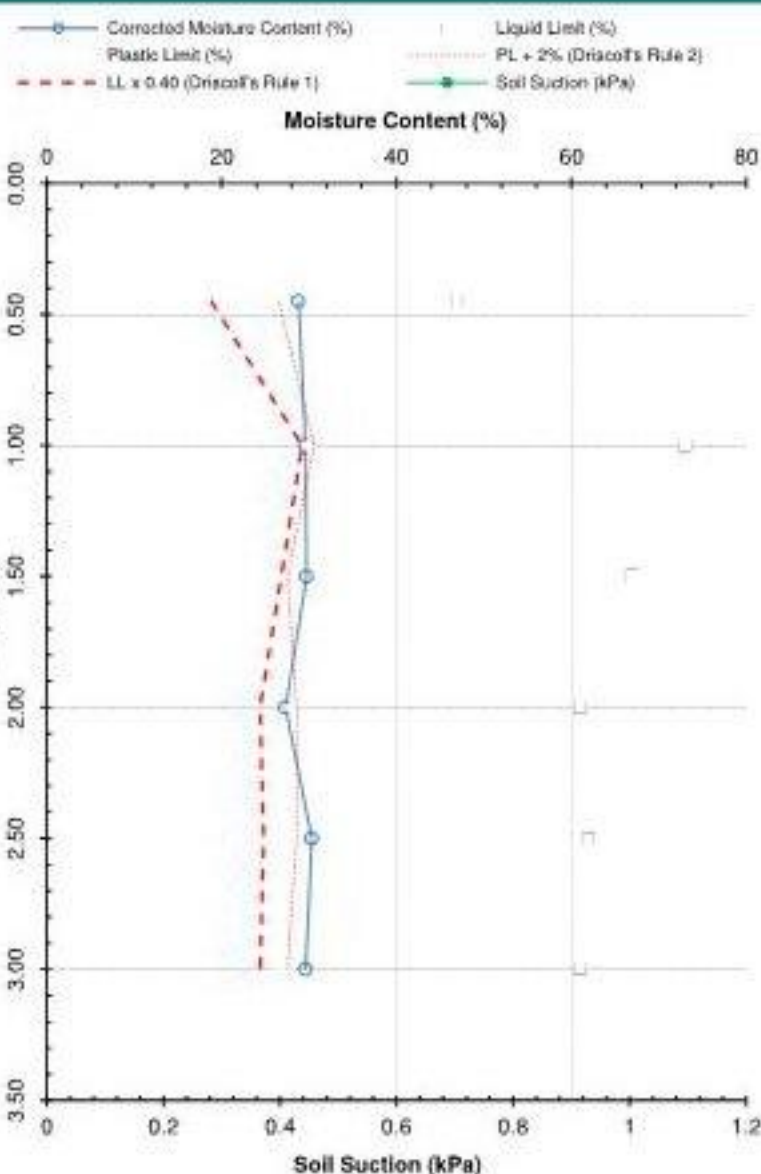
30 Cardinal Drive, Waterlooville, Hampshire, PO7 8LZ

Client Claim Ref:

104889

BOREHOLE 1

Depth (m)	MC (%)	Corr. MC (%)	LL (%)	PL (%)	PI (%)	Class	% Retained (425µm)	Soil Suction (kPa)	Condition of test	Soil Description
0.45	27.2	29.78	47	26	21	CI	5.5		Natural	Brown silty CLAY containing gravel
1.00	29.6	29.6	73	30	43	CV	0		Natural	Orange silty CLAY containing grey mottle
1.50	29.7	29.7	67	27	40	CH	0		Natural	Orange silty CLAY containing grey mottle
2.00	27.3	27.3	61	28	33	CH	0		Natural	Brown silty CLAY
2.50	30.3	30.3	62	28	34	CH	0		Natural	Brown silty CLAY
3.00	29.6	29.6	61	27	34	CH	0		Natural	Brown silty CLAY containing sand pockets



Comments:

LABORATORY RESULTS

Property Address:

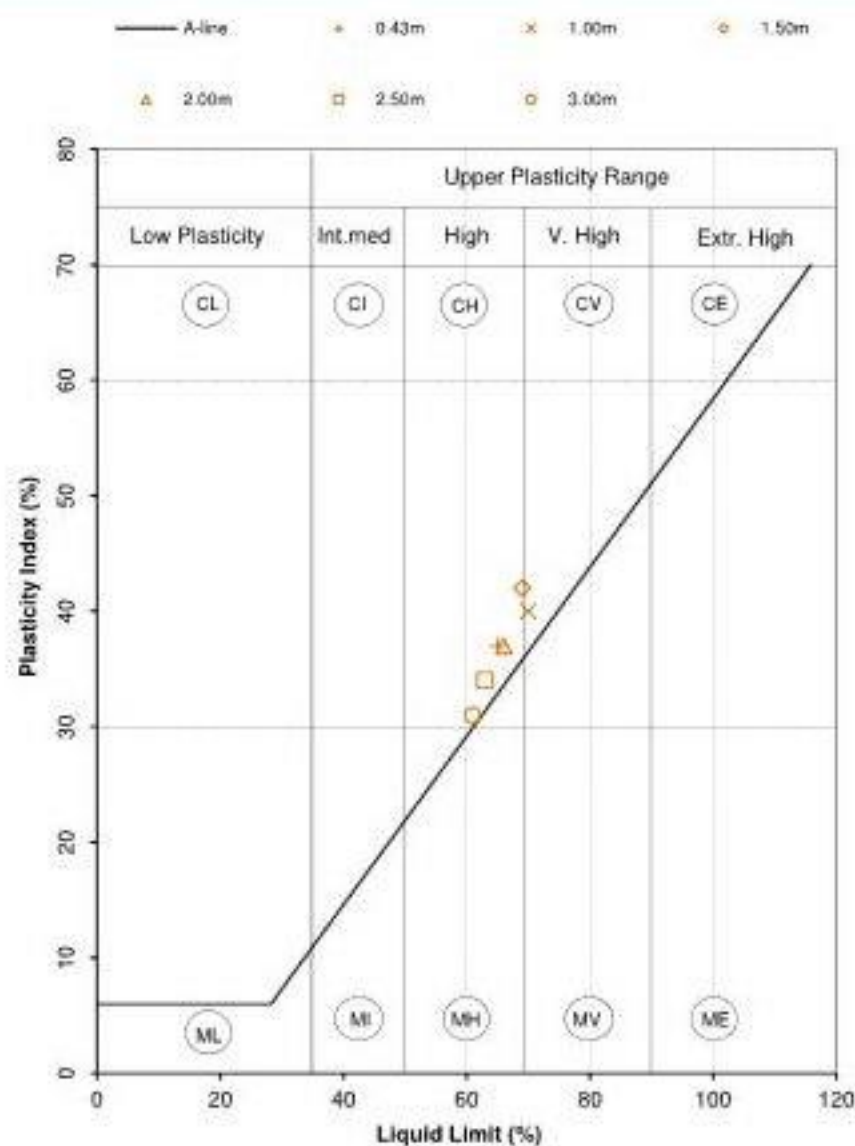
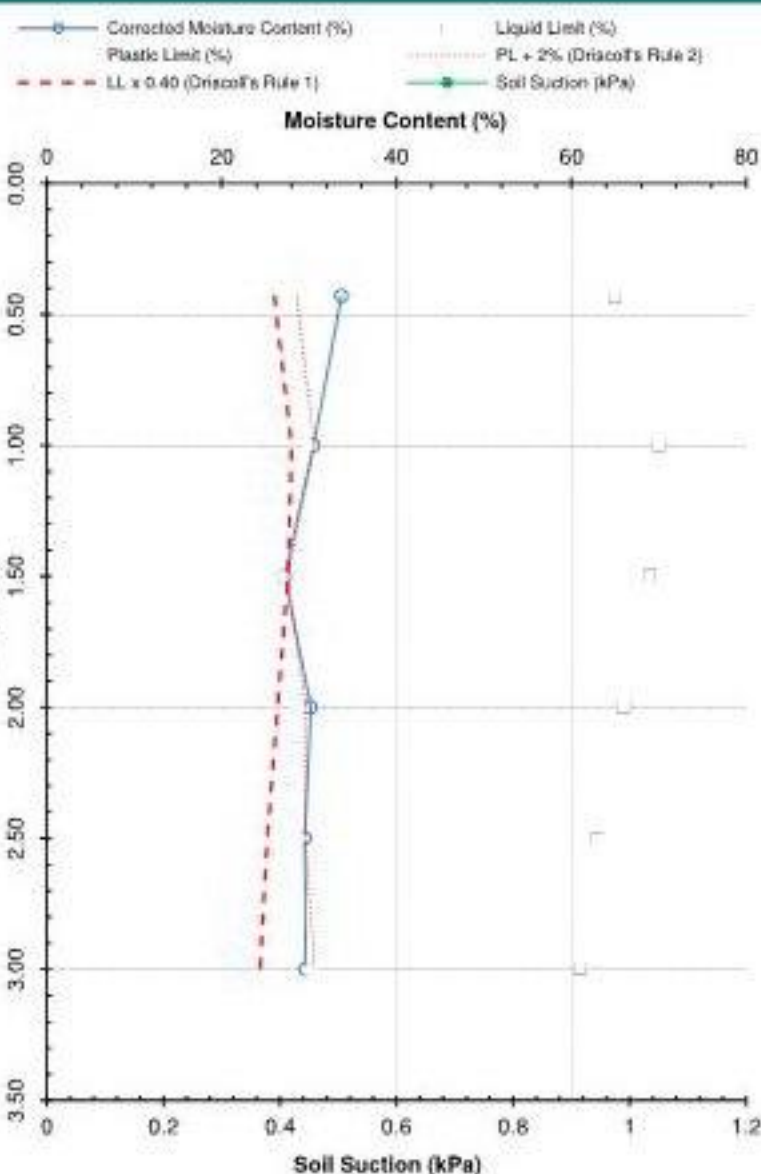
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Client Claim Ref:

104889

BOREHOLE 2

Depth (m)	MC (%)	Corr. MC (%)	LL (%)	PL (%)	PI (%)	Class	% Retained (425µm)	Soil Suction (kPa)	Condition of test	Soil Description
0.43	33.7	33.7	65	28	37	CH	0		Natural	Brown silty CLAY
1.00	30.5	30.5	70	30	40	CH/V	0		Natural	Brown silty CLAY
1.50	27.2	27.2	69	27	42	CH	0		Natural	Brown silty CLAY
2.00	30.2	30.2	66	29	37	CH	0		Natural	Brown silty CLAY
2.50	29.5	29.5	63	29	34	CH	0		Natural	Brown silty CLAY
3.00	29.6	29.6	61	30	31	CH	0		Natural	Brown silty CLAY



Comments:



Richardson's Botanical Identifications

Root identification
Vegetation surveys
Tree/Bulding investigations
Plant taxonomy

Dr Ian B K Richardson
BSc, MSc, PhD, MRSB, FLS
James Richardson
BSc (Hons. Biology)

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Reading
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Tel: (0118) 986 9552 (Direct line)
E-mail: richardsons@botanical.net
Web: www.botanical.net

28/10/2019

Your ref: **5000-20048**

Our ref: 78/8307

Dear Sirs

30 Cardinal Drive

The samples you sent in relation to the above have been examined. Their structures were referable as follows:

BH1, foundation level, 0.45m	
9 no.	Examined root: QUERCUS (Oak).
6 no.	All sections or pieces of BARK only - alas insufficient material for identification.
BH1, 0.80m	
8 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut).
1 no.	Microscopic examination showed insufficient cells for recognition.
BH1, 1.00m	
3 no.	Examined root: most referable to QUERCUS (Oak).
BH1, 1.50m	
2 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). This was a very IMMATURE sample.
3 no.	Unfortunately all with insufficient cells for identification.
BH1, 2.00m	
3 no.	Examined root: again, very THIN. Definitely NOT a conifer. Could well be QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut).
BH2, foundation level, 0.43m	
2 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut).

/ continued overleaf

1 no.	Examined root: a SHRUB, similar in some ways to PASSIFLORA (Passion Flower). Slightly tentative - this sample had POOR BARK.
BH2, 1.0m	
2 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). Also, very THIN.
BH2, 1.5m	
3 no.	Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). As above, a very immature sample.
2 no.	Both samples revealed too few cells for microscopic identification.

Click here for more information: [CASTANEA](#) [QUERCUS](#)

I trust this is of help. Please call us if you have any queries; our Invoice is enclosed.

Yours faithfully



Dr Ian B K Richardson

**** Try out our web site on www.botanical.net ****

PHOTOS

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Operative: SW1



Photo 1 (Showing the TP/BH locations)