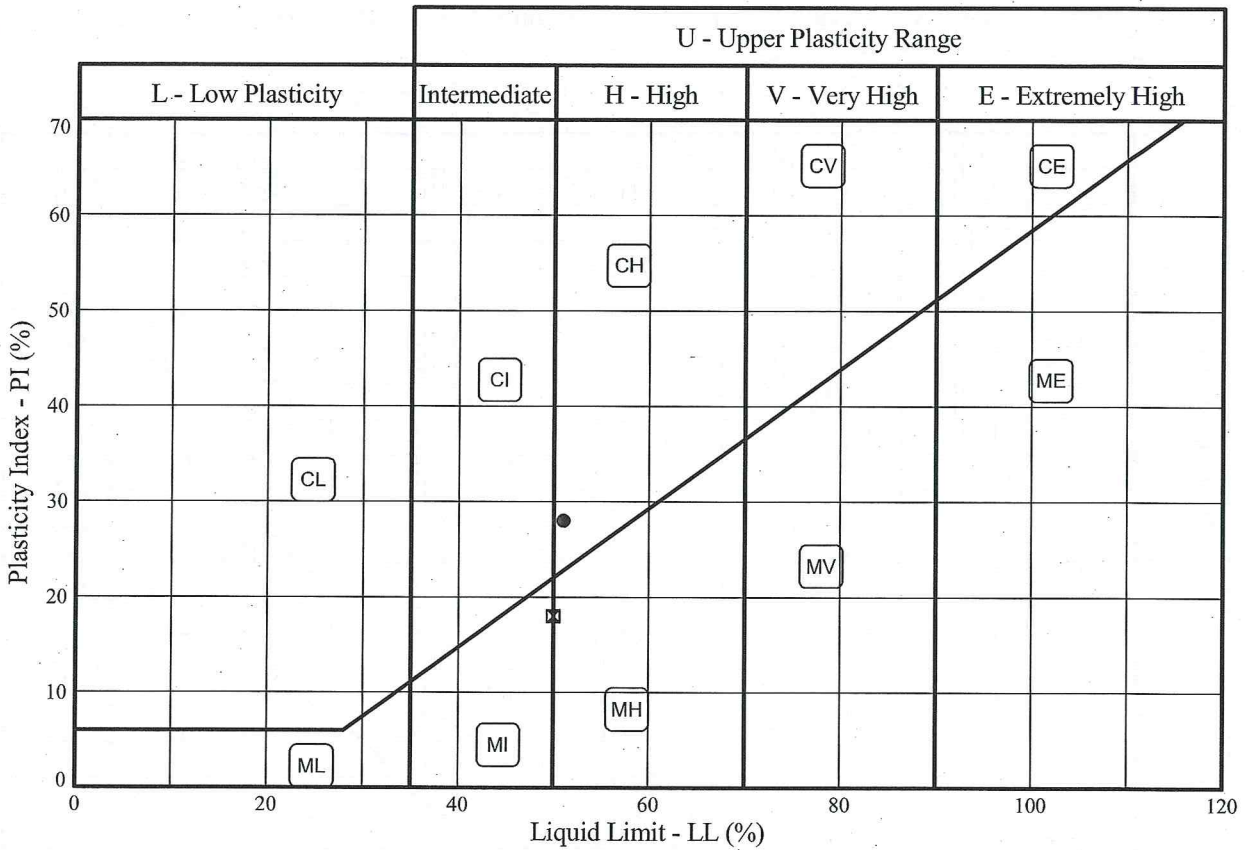


PLASTICITY CHART - PI Vs LL

In accordance with clause 42.3 of BS5930:1999
Testing in accordance with BS1377-2:1990



Sample Identification			BS Test Method #	Preparation Method +	MC %	LL %	PL %	PI %	<425um %	
Exploratory Position ID	Sample	Depth (m)								
●	BH2	D	2.40	3.2/4.4/5.3/5.4	4.2.4	31	51	23	28	61
☒	BH3	D	3.40	3.2/4.4/5.3/5.4	4.2.4	32	50	32	18	54

Tested in accordance with the following clauses of BS1377-2:1990.

- 3.2 - Moisture Content
- 4.3 - Cone Penetrometer Method
- 4.4 - One Point Cone Penetrometer Method
- 4.6 - One Point Casagrande Method
- 5.3 - Plastic Limit Method
- 5.4 - Plasticity Index

+ Tested in accordance with the following clauses of BS1377-2:1990.

- 4.2.3 - Natural State
- 4.2.4 - Wet Sieved

Key: * = Non standard test, NP = Non plastic.

Approved Signatories: D. TROWBRIDGE J. BARRETT A. FROST S. CAIRNS



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
JUSTIN BARRETT		28/08/14
Contract	Contract Ref:	
Mill Pond Site, Dartford	582899	

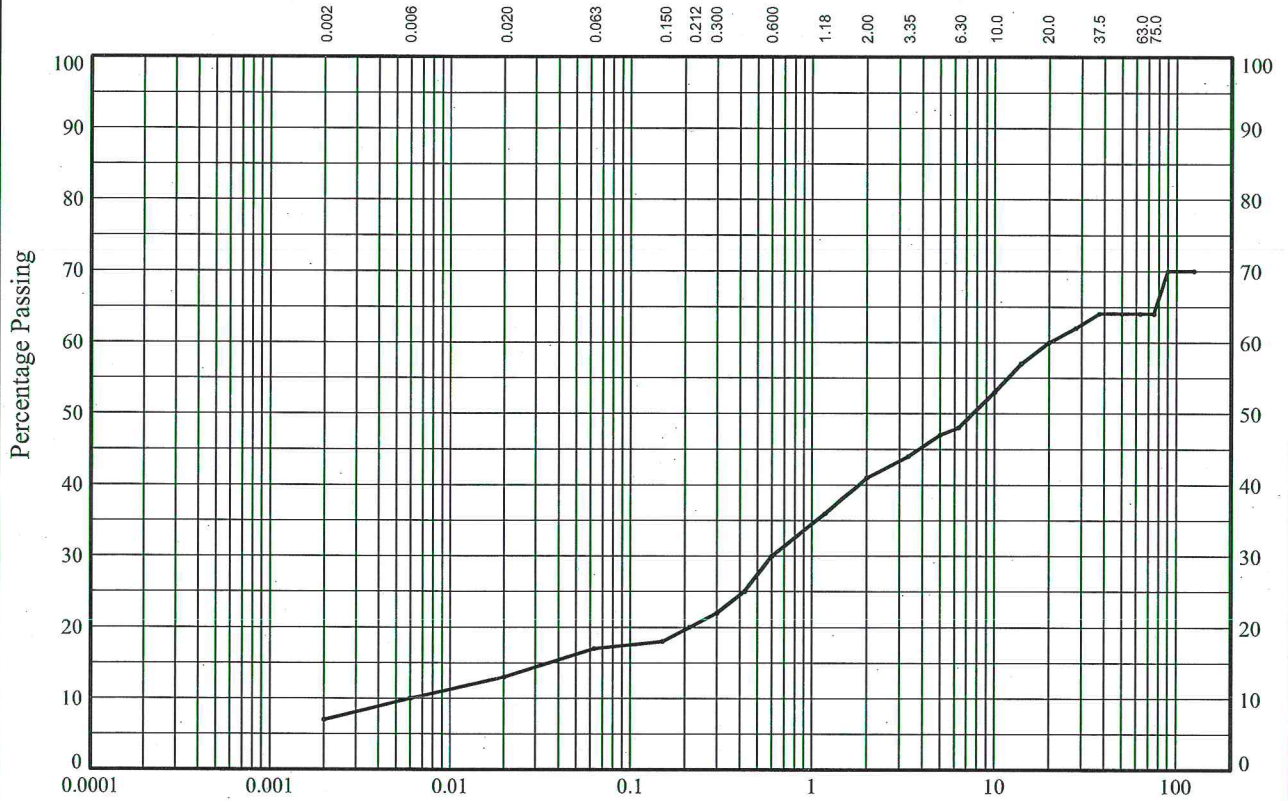


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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.4 of BS1377:Part 2:1990
NON STANDARD TEST

Borehole : **BH2** Sample Ref: Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125	70
90	70
75	64
63	64
50	64
37.5	64
28	62
20	60
14	57
10	53
6.3	48
5	47
3.35	44
2	41
1.18	36
0.6	30
0.425	25
0.3	22
0.212	20
0.15	18
0.063	17

Particle Diameter	Percentage Passing
0.02	13
0.006	10
0.002	7

Soil Fraction	Sieve Percentage
COBBLES	36
GRAVEL	23
SAND	24
SILT	10
CLAY	7

Soil Description:
Dark brown clayey silty sandy GRAVEL with a high cobble content. Made ground

Approved Signatories: D. TROWBRIDGE J. BARRETT A. FROST S. CAIRNS



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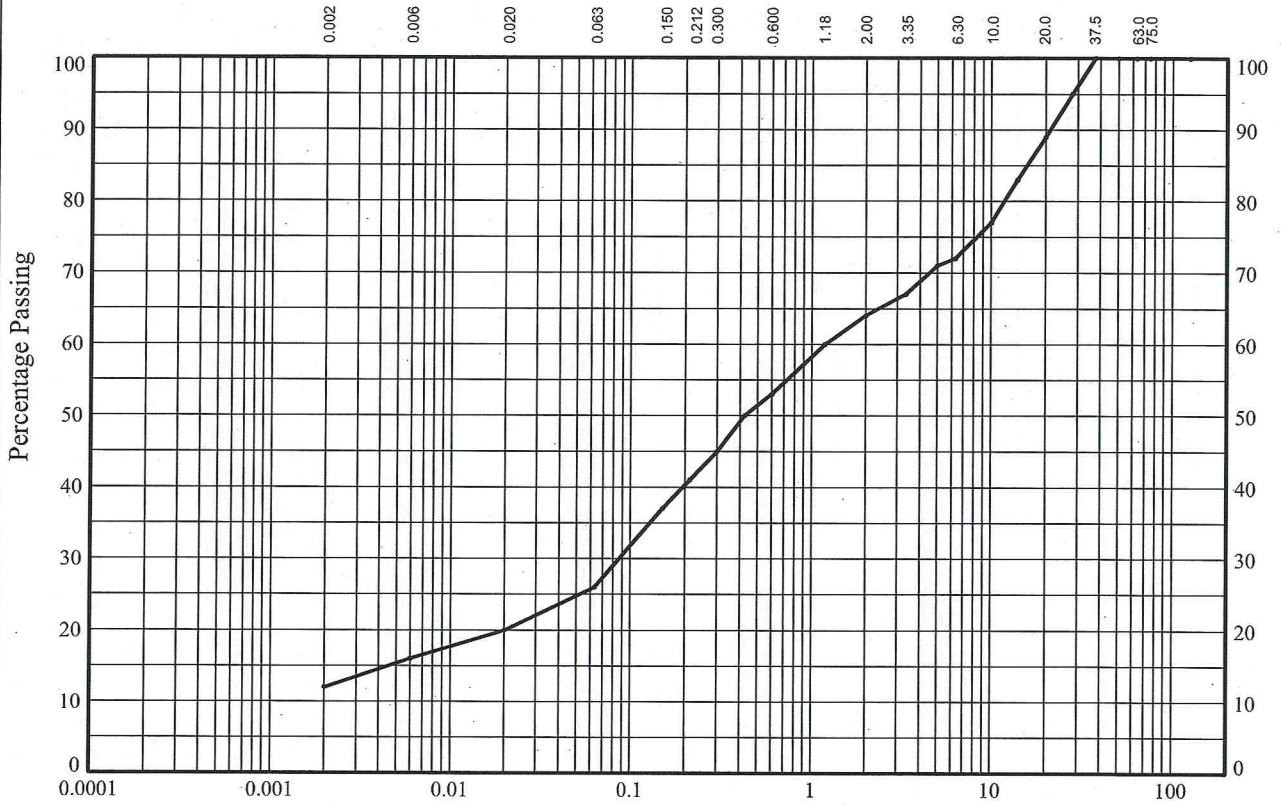
Compiled By		Date
<i>SC</i>		28/08/14
Contract		Contract Ref:
Mill Pond Site, Dartford		582899



PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.4 of BS1377:Part 2:1990

Borehole : **BH3** Sample Ref: Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	95
20	89
14	83
10	77
6.3	72
5	71
3.35	67
2	64
1.18	60
0.6	53
0.425	50
0.3	45
0.212	41
0.15	37
0.063	26

Particle Diameter	Percentage Passing
0.02	20
0.006	16
0.002	12

Soil Fraction	Sieve Percentage
GRAVEL	36
SAND	38
SILT	14
CLAY	12

Soil Description:
Very dark brown gravelly very clayey very silty SAND

Approved Signatories: D. TROWBRIDGE J. BARRETT A. FROST S. CAIRNS



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 18 Frogmore Road
 Hemel Hempstead
 Hertfordshire
 HP3 9RT

Compiled By		Date
<i>SC</i>		28/08/14
Contract Mill Pond Site, Dartford		Contract Ref: 582899



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 14/04324
Issue Number: 1
Date: 21 August, 2014

Client: Structural Soils Hemel Hempstead Lab
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: Sharon Cairnes / Paul Carroll / Justin Barrett
Project Name: Mill Pond Site, Dartford
Project Ref: 27265
Order No: N/A
Date Samples Received: 18/08/14
Date Instructions Received: 18/08/14
Date Analysis Completed: 20/08/14

Prepared by:


Gill Scott
Laboratory Manager

Approved by:


Iain Haslock
Analytical Consultant

Envirolab Job Number: 14/04324

Client Project Name: Mill Pond Site, Dartford

Client Project Ref: 27265

Lab Sample ID	14/04324/1	14/04324/2	14/04324/3	14/04324/4	14/04324/5	14/04324/6	14/04324/7			
Client Sample No	1	6	16	10	11	2	12			
Client Sample ID	BH1A	BH1A	BH1A	BH2A	BH3	BH4	BH4			
Depth to Top	0.00	5.40	19.50	14.90	13.40	1.40	13.90			
Depth To Bottom	0.40									
Date Sampled										
Sample Type	Solid	Solid	Solid	Soil - D	Solid	Soil - D	Solid			
MCERTS Sample Matrix Code	7	7	7	1A	7	4A	7		Units	Method ref
% Stones >10mm [#]	<0.1	<0.1	<0.1	24.9	<0.1	21.9	<0.1		% w/w	A-T-044
pH BRE _D ^{M#}	12.56	10.46	9.29	9.08	8.94	10.60	9.07		pH	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	<10	35	18	<10	<10	131	19		mg/l	A-T-026s

REPORT NOTES

Notes - Soil chemical analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations. If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified a being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed.

Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil-sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER.

Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

