RichardJackson
Engineering Consultants

Appendix C

Geotechnical Test Results

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : 07/10/16 **PAGE 1 of 16 Pages**

Contract **Serial No.**

4 Keats Grove, Hampstead, London S30504

UKAS TESTING 0998

CLIENT:

Richard Jackson Ltd
847 The Crescent
Colchester Business Park
Colchester
ESSEX
CO4 9YQ

Soil Property Testing Ltd.

15,16 & 18 Halcyon Court, St Margarets Way,
Stukeley Meadows, Huntingdon,
Cambs. PE29 6DG.

Telephone (01480) 455579 Fax (01480) 453619
Email enquiries@soilpropertytesting.com

SAMPLES SUBMITTED BY:

Richard Jackson Ltd

APPROVED SIGNATORIES:

☑ **J.C.GARNER B.Eng (Hons.) FGS**
Technical Director

☐ **S.P.TOWNEND FGS**
Quality Manager

☐ **W.JOHNSTONE**
Materials Lab Manager

SAMPLES LABELLED:

4 Keats Grove, Hampstead, London

DATE RECEIVED: 19/09/16 **SAMPLES TESTED BETWEEN** 19/09/16 **and** 07/10/16

REMARKS: For the attention of Mr J Warner
Your reference 51659
BRE SD1 Suite subcontracted to Chemtest - results included as Appendix A to this Test Report

NOTES:

1 All remaining samples or remnants from this contract will be disposed of after 21 days from today, unless we are notified to the contrary.

2 (a) UKAS - United Kingdom Accreditation Service.
(b) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

3 Tests marked "NOT UKAS ACCREDITED" in this test report are not included in the UKAS Accreditation Schedule for this testing laboratory.

4 This test report may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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Contract
4 Keats Grove, Hampstead, London

Serial No.
S30504

SCHEDULE OF LABORATORY TESTS

Bh./ Tp No.	Sample Ref	Depth (from)	1:Moisture Content Determination	3:Liquid /plastic Limit 4 point	700:Sulphate Test (2:1 Water Soil)	702:ph value of Soil or Water	711:BRE SD1 Suite	Remarks
TH1	D1	0.50	*					
	D2	1.00	*	*				
	D3	1.50	*		*	*		
	D4	2.00	*					
	D5	2.50	*		*	*		
	D6	3.00	*	*				
WLS1	D1	0.50	*					
	D2	1.00	*					
	D3	1.50	*					
	D4	2.00	*					
	D5	2.50	*	*				
	D6	3.00	*				*	
	D7	3.50	*					
	D8	4.00	*					
	D9	4.50	*					
	D10	5.00	*	*				
	D11	5.50	*		*	*		
	D12	6.00	*					
WLS2	D1	0.50	*					
	D2	1.00	*					
	D3	1.50	*					
	D4	2.00	*					
	D5	2.50	*		*	*		
	D6	3.00	*					
	D7	3.50	*					
	D8	4.00	*					
	D9	4.50	*		*	*		
	D10	5.00	*				*	
	D11	5.50	*					
	D12	6.00	*	*				

Scheduled by: Richard Jackson Ltd

Target Date: 03/10/16

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

DATE OF ISSUE : As page 1 **PAGE** 3 **of** 16

Contract
4 Keats Grove, Hampstead,
London

Serial No.
S30504

SCHEDULE OF LABORATORY TESTS

Bh./ Tp No.	Sample Ref	Depth (from)	1:Moisture Content Determination	3:Liquid /Plastic Limit 4 point	700:Sulphate Test (2:1 Water Soil	702:ph value of Soil or Water	711:BRE SD1 Suite	Remarks
-	-	-	30	5	5	5	2	<— Total Number of Tests ——

Scheduled by: Richard Jackson Ltd

Target Date: 03/10/16

SPTSCHED

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : As page 1 **PAGE** 4 of 16

Contract
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Serial No.
S30504

UKAS TESTING
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DETERMINATION OF MOISTURE CONTENT

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
TH1	0.50	D1	21	Olive grey gravelly clayey silty fine and medium SAND with occasional brick and cinder fragments. Gravel is fine and medium angular and subangular flint	
TH1	1.00	D2	32	Firm orangish brown CLAY with occasional light grey mottling	
TH1	1.50	D3	31	Firm yellowish brown CLAY with occasional orange and light grey mottling	
TH1	2.00	D4	30	Firm dark yellowish brown CLAY with occasional bluish grey mottling, recently active and decayed roots and rare calcareous aggregations	
TH1	2.50	D5	33	Firm dark yellowish brown CLAY with occasional bluish grey mottling and decayed roots	
TH1	3.00	D6	30	Firm dark yellowish brown CLAY with occasional bluish grey mottling, selenite crystals and rare decayed roots	Oven dried at a maximum of 80°C due to the presence of selenite
WLS1	0.50	D1	13	Dark greyish brown slightly gravelly slightly sandy silty CLAY (loose dry & powdery with occasional very stiff friable lumps) with occasional decayed roots and rare glass, brick and coal fragments. Gravel is fine and medium rounded to subangular flint and chalk	
WLS1	1.00	D2	12	Greyish brown slightly gravelly slightly sandy silty CLAY (loose dry & powdery) with rare decayed roots and glass and brick fragments. Gravel is fine and medium rounded to subangular flint and chalk	
WLS1	1.50	D3	13	Greyish brown slightly gravelly slightly sandy silty CLAY (loose dry & powdery) with rare decayed roots and glass, brick and mortar fragments. Gravel is fine and medium rounded to subangular flint and chalk	
WLS1	2.00	D4	22	Very stiff dark grey and yellowish brown silty CLAY with occasional dark greyish brown mottling and pockets of slightly sandy silty clay with rare brick fragments	

METHOD OF PREPARATION: BS 1377:PART 1:1990:7.3

METHOD OF TEST : BS 1377:PART 2:1990:3.2

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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UKAS TESTING
0998

DETERMINATION OF MOISTURE CONTENT

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
WLS1	2.50	D5	24	Stiff mottled light grey, pale brown and orangish brown slightly sandy CLAY with rare fine and medium flint gravel	
WLS1	3.00	D6	27	Stiff yellowish brown CLAY with rare orange and light grey mottling, fine and medium flint and decayed roots	
WLS1	3.50	D7	33	Firm yellowish brown CLAY with occasional brown mottling and rare fine sand/silt pockets	
WLS1	4.00	D8	34	Firm yellowish brown CLAY with rare grey veins, orange fine sand pockets and decayed roots	
WLS1	4.50	D9	33	Firm brown CLAY with occasional light orangish brown and yellowish brown mottling and selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS1	5.00	D10	35	Firm yellowish brown CLAY	
WLS1	5.50	D11	34	Firm dark yellowish brown CLAY with occasional bluish grey mottling, rare selenite crystals and decayed roots	Oven dried at a maximum of 80°C due to the presence of selenite
WLS1	6.00	D12	33	Firm yellowish brown CLAY with occasional light orangish brown mottling and rare selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	0.50	D1	7.9	Brown slightly gravelly slightly sandy silty CLAY (dry & powdery) with occasional concrete, brick and cinder fragments and recently active roots. Gravel is fine to coarse angular to subrounded	
WLS2	1.00	D2	16	Brown slightly gravelly slightly sandy silty CLAY (dry & powdery) with occasional recently active roots and rare brick fragments. Gravel is fine to coarse angular to subrounded	
WLS2	1.50	D3	15	Very stiff brown friable sandy silty CLAY with occasional recently active roots and rare fine and medium flint gravel	

METHOD OF PREPARATION: BS 1377:PART 1:1990:7.3

METHOD OF TEST : BS 1377:PART 2:1990:3.2

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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DETERMINATION OF MOISTURE CONTENT

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
WLS2	2.00	D4	25	Very stiff mottled grey and orangish brown CLAY with occasional recently active and decayed roots, rare fine and medium flint gravel and weathered selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	2.50	D5	32	Firm yellowish brown CLAY with occasional bluish grey mottling and recently active and decayed roots	
WLS2	3.00	D6	32	Firm dark yellowish brown CLAY with occasional bluish grey mottling and recently active and decayed roots	
WLS2	3.50	D7	33	Firm closely fissured dark yellowish brown CLAY with occasional bluish grey mottling and decayed roots	
WLS2	4.00	D8	31	Stiff closely fissured dark yellowish brown CLAY with occasional bluish grey mottling, decayed roots and rare selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	4.50	D9	31	Stiff dark yellowish brown CLAY with rare bluish grey mottling, recently active and decayed roots and selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	5.00	D10	31	Stiff closely fissured dark yellowish brown CLAY with occasional selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	5.50	D11	32	Firm dark yellowish brown CLAY with occasional bluish grey mottling and rare decayed roots and selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite
WLS2	6.00	D12	33	Stiff closely fissured dark yellowish brown CLAY with occasional bluish grey mottling, decayed roots and rare selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite

METHOD OF PREPARATION: BS 1377:PART 1:1990:7.3

METHOD OF TEST : BS 1377:PART 2:1990:3.2

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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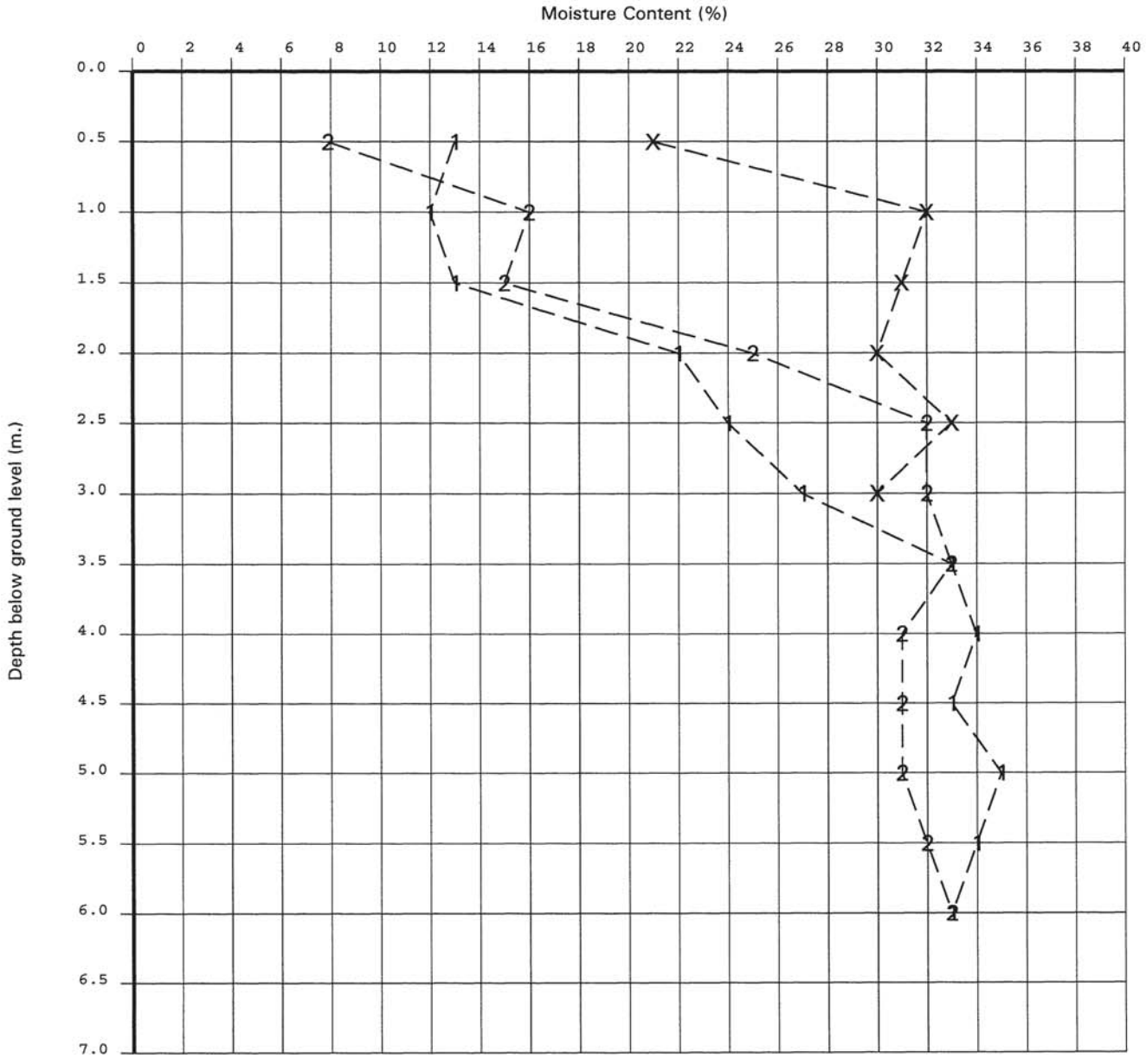
Moisture Content (%) vs Depth below ground level (m.).



Key to Data Points	X : TH1	1 : WLS1	2 : WLS2					

SPTPLOT

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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SUMMARY OF MOISTURE CONTENT, LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)	SAMPLE PREPARATION				Description	CLASS
								Method S/N	Ret'd 0.425mm (%)	Corr'd M/C <0.425mm	Curing Time (hrs.)		
TH1	1.00	D2	32	54	19	35	0.37	N	0(A)		25	Firm orangish brown CLAY with occasional light grey mottling	CH
TH1	3.00	D6	30	81	25	56	0.09	N	0(A)			Firm dark yellowish brown CLAY with occasional bluish grey mottling, selenite crystals and rare decayed roots	CV
WLS1	2.50	D5	24	58	21	37	0.08	N	0(A)		26	Stiff mottled light grey, pale brown and orangish brown slightly sandy CLAY with rare fine and medium flint gravel	CH
WLS1	5.00	D10	35	81	26	55	0.16	N	0(A)		24	Firm yellowish brown CLAY	CV
WLS2	6.00	D12	33	80	25	55	0.15	N	0(A)		25	Stiff closely fissured dark yellowish brown CLAY with occasional bluish grey mottling, decayed roots and rare selenite crystals	CV

METHOD OF PREPARATION : BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2 S = Wet Sieved Specimen
N = prepared from Natural

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3, 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter. A = Assumed, M = Measured

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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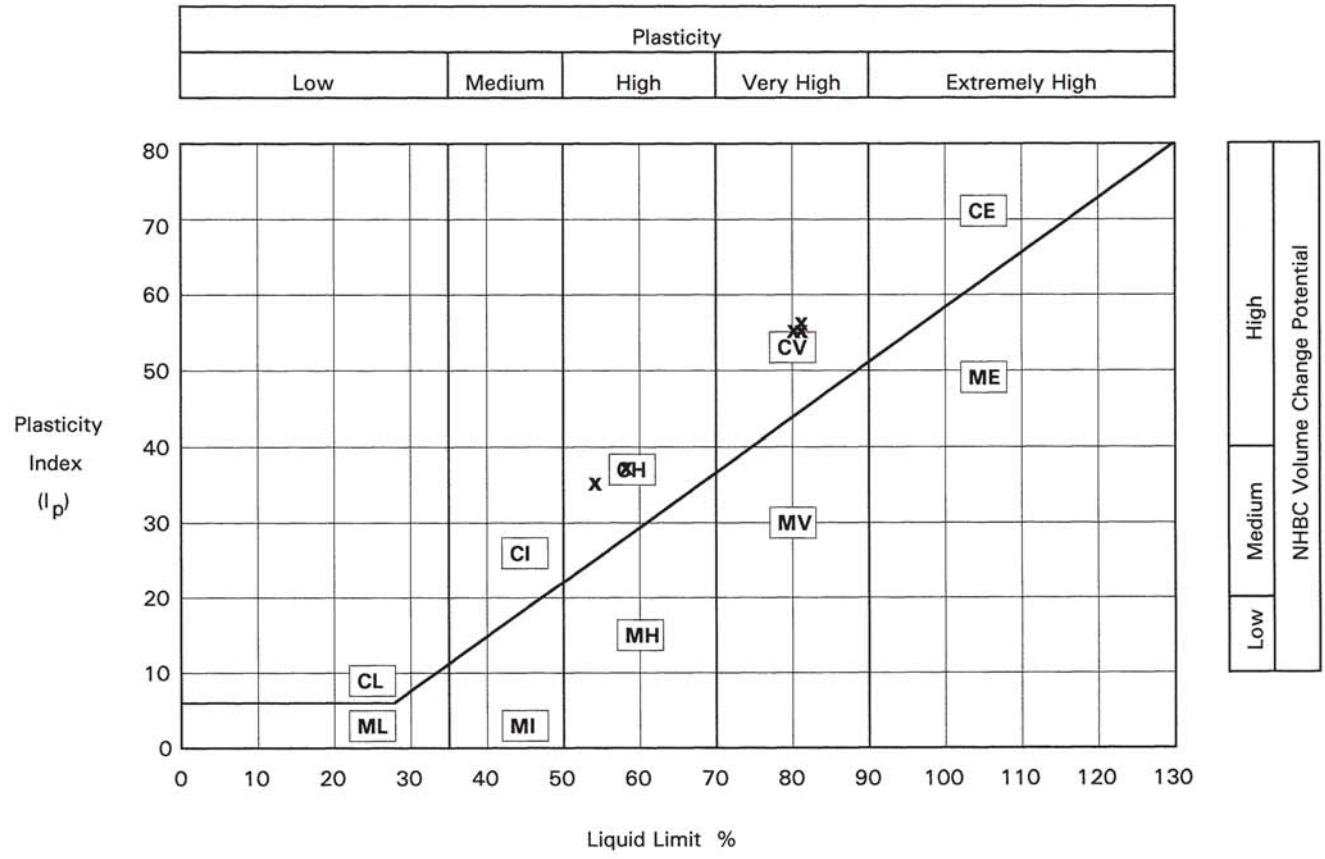
PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT USING CASAGRANDE CLASSIFICATION CHART



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3, 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index PLASTICITY CHART BS5930:1999:Figure 18

TEST REPORT.

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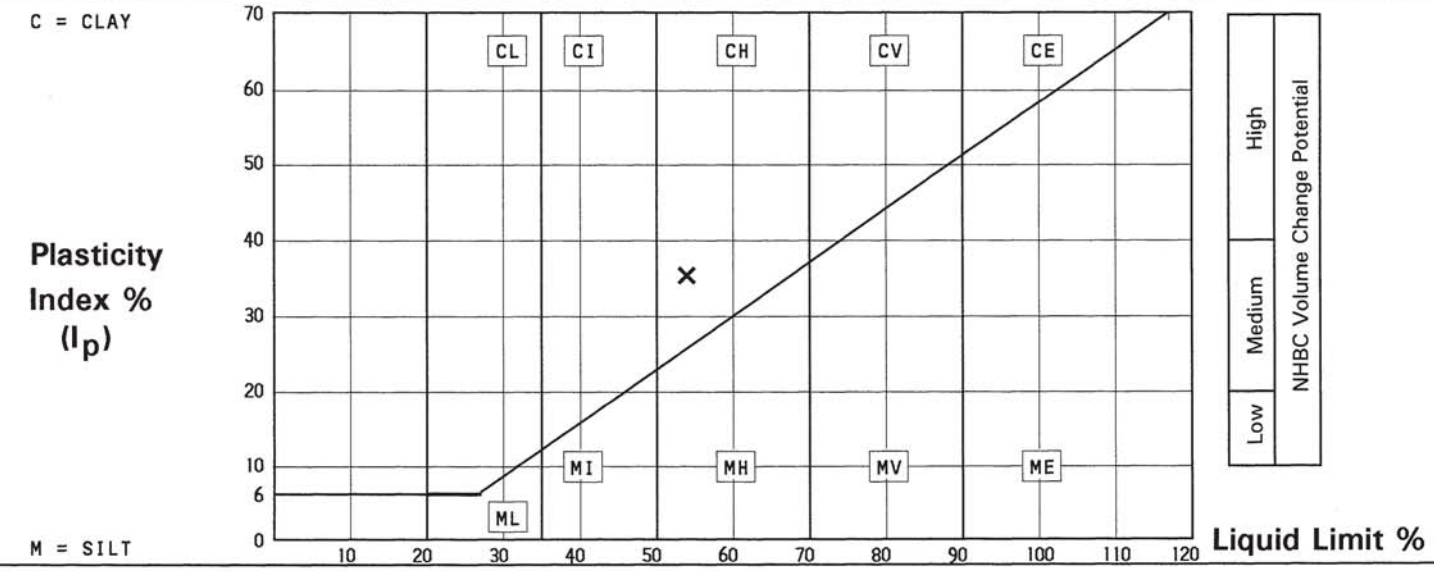
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
TH1	1.00	D2	32	Firm orangish brown CLAY with occasional light grey mottling	

PREPARATION

Method of Preparation	Specimen from Natural Soil		
Sample retained 0.425 sieve	(Assumed)	0	%
Corrected moisture content for material passing 0.425mm			%
Curing Time		25 Hours	

Liquid Limit	54	%
Plastic Limit	19	%
Plasticity Index	35	%
Liquidity Index	0.37	
Clay Content	Not analysed.	%
Derived Activity (PI/CC)	Not analysed.	



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3 , 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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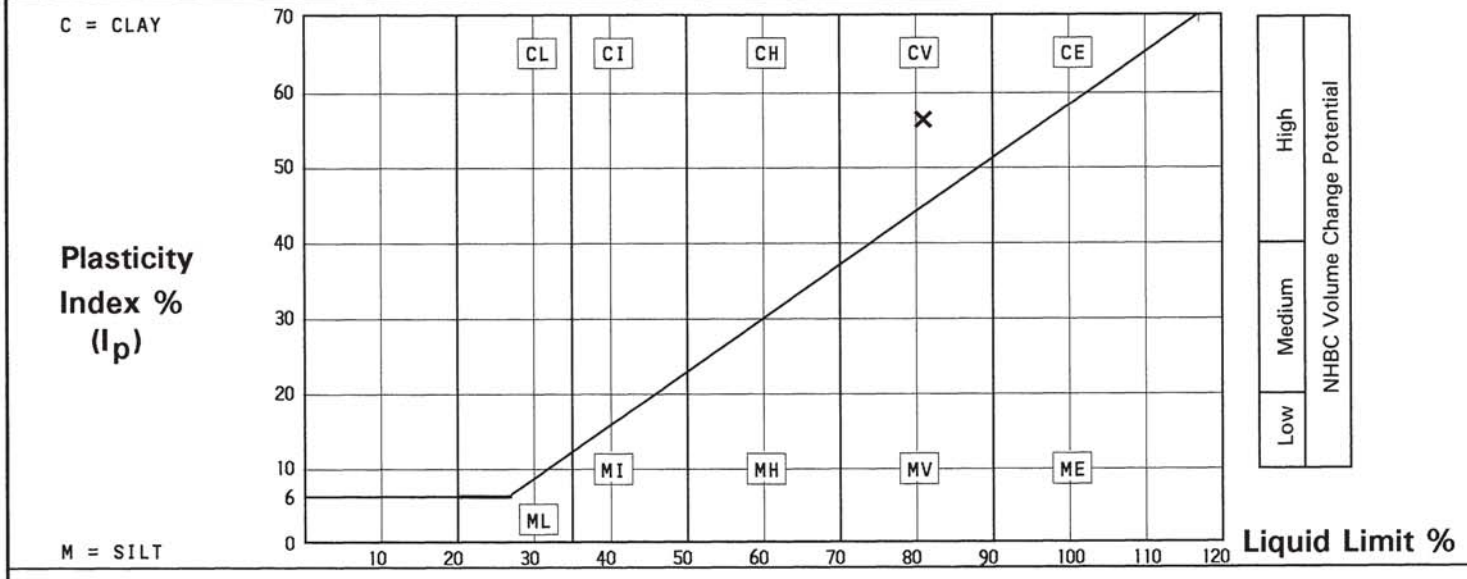
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
TH1	3.00	D6	30	Firm dark yellowish brown CLAY with occasional bluish grey mottling, selenite crystals and rare decayed roots	Oven dried at a maximum of 80°C due to the presence of selenite

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	

Liquid Limit	81 %
Plastic Limit	25 %
Plasticity Index	56 %
Liquidity Index	0.09
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3 , 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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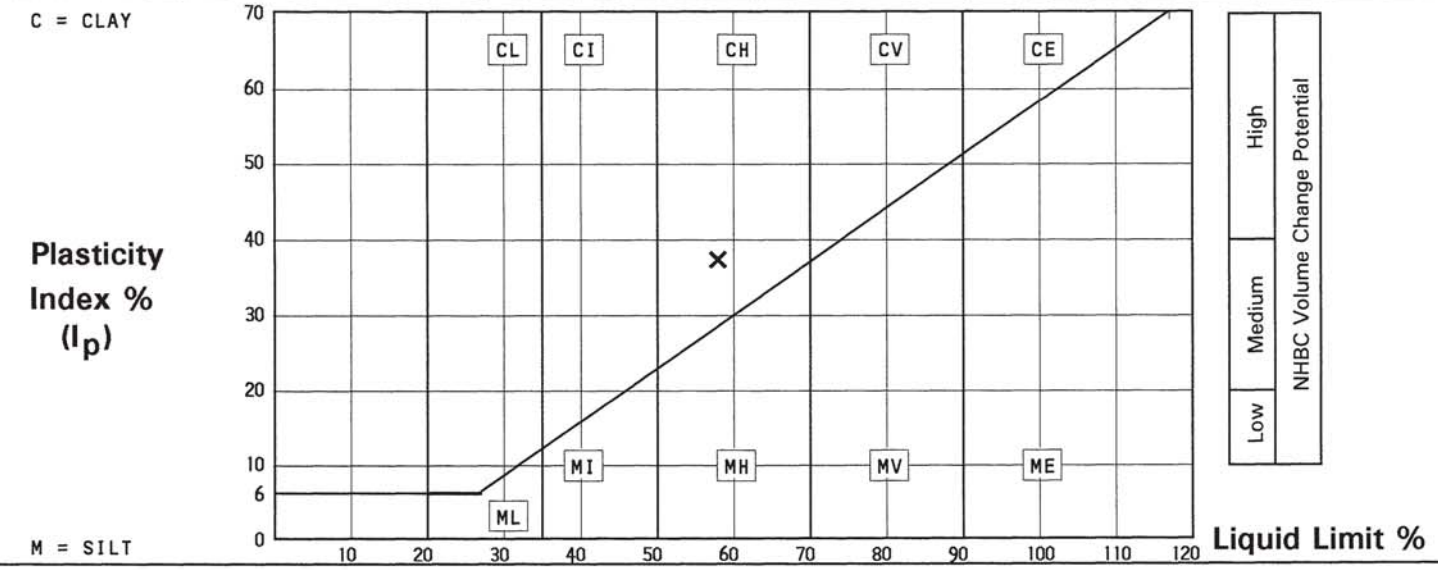
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
WLS1	2.50	D5	24	Stiff mottled light grey, pale brown and orangish brown slightly sandy CLAY with rare fine and medium flint gravel	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	26 Hours

Liquid Limit	58 %
Plastic Limit	21 %
Plasticity Index	37 %
Liquidity Index	0.08
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3 , 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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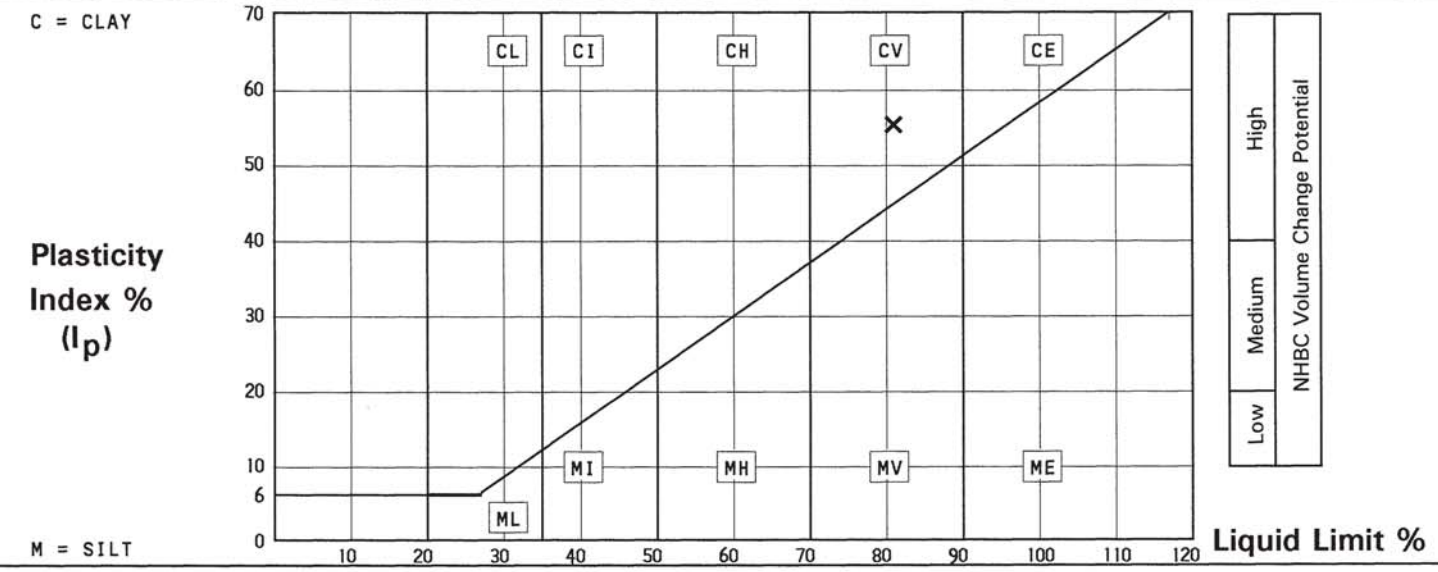
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
WLS1	5.00	D10	35	Firm yellowish brown CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	24 Hours

Liquid Limit	81 %
Plastic Limit	26 %
Plasticity Index	55 %
Liquidity Index	0.16
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3 , 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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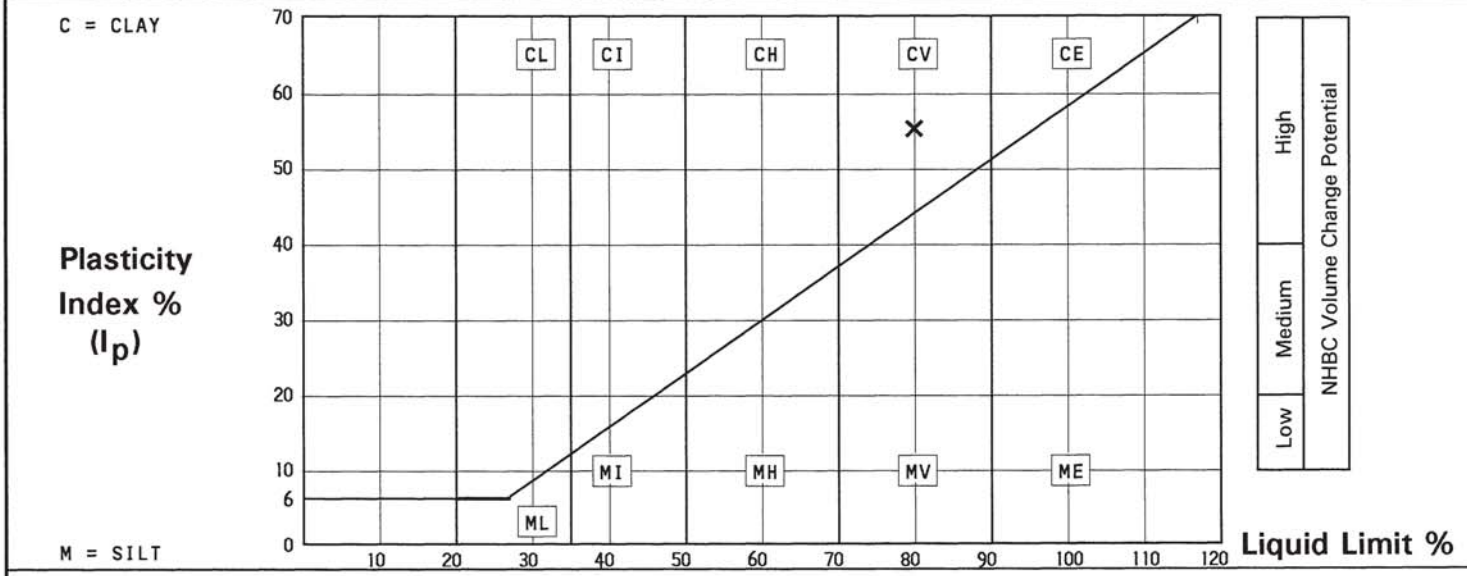
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
WLS2	6.00	D12	33	Stiff closely fissured dark yellowish brown CLAY with occasional bluish grey mottling, decayed roots and rare selenite crystals	Oven dried at a maximum of 80°C due to the presence of selenite

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	25 Hours

Liquid Limit	80 %
Plastic Limit	25 %
Plasticity Index	55 %
Liquidity Index	0.15
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377:PART 2:1990:3.2, 4.3 , 5.3, 5.4

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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DETERMINATION OF THE SULPHATE CONTENT OF SOIL AND GROUNDWATER

Borehole/ Pit No.	Depth m.	Sample	Concentration of Soluble Sulphate			% of sample passing 2mm sieve	Description	Remarks
			Soil		Groundwater			
			Acid Soluble SO3 %	Water Soluble 2:1 SO3 g/l	g/l			
TH1	1.50	D3		0.03		100	Firm yellowish brown CLAY with occasional orange and light grey mottling	
TH1	2.50	D5		0.23		100	Firm dark yellowish brown CLAY with occasional bluish grey mottling and decayed roots	
WLS1	5.50	D11		2.94		100	Firm dark yellowish brown CLAY with occasional bluish grey mottling, rare selenite crystals and decayed roots	
WLS2	2.50	D5		0.26		100	Firm yellowish brown CLAY with occasional bluish grey mottling and recently active and decayed roots	
WLS2	4.50	D9		2.99		100	Stiff dark yellowish brown CLAY with rare bluish grey mottling, recently active and decayed roots and selenite crystals	

METHOD OF PREPARATION: BS 1377:PART 1:1990:7.5 BS1377:PART 3:1990:5.2 Acid Soluble, 5.3 Soil/Water Extract :5.4 Groundwater

METHOD OF TEST : BS 1377:PART 3:1990:5.5

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Test not UKAS accredited.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : As page 1 **PAGE** 16 **of** 16

Contract
4 Keats Grove, Hampstead, London

Serial No.
S30504

DETERMINATION OF THE pH VALUE

Borehole/ Pit No.	Depth m.	Sample	pH Value	Description	Remarks
TH1	1.50	D3	7.4	Firm yellowish brown CLAY with occasional orange and light grey mottling	
TH1	2.50	D5	7.9	Firm dark yellowish brown CLAY with occasional bluish grey mottling and decayed roots	
WLS1	5.50	D11	7.5	Firm dark yellowish brown CLAY with occasional bluish grey mottling, rare selenite crystals and decayed roots	
WLS2	2.50	D5	7.8	Firm yellowish brown CLAY with occasional bluish grey mottling and recently active and decayed roots	
WLS2	4.50	D9	7.6	Stiff dark yellowish brown CLAY with rare bluish grey mottling, recently active and decayed roots and selenite crystals	

METHOD OF PREPARATION: BS 1377:PART 1:1990:7 BS 1377:PART 3:1990:9.4

METHOD OF TEST : BS 1377:PART 3:1990:9.5

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Test not UKAS accredited.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.co.uk

UKAS TESTING
2183

Amended Report

Report No.:	16-23770-2		
Initial Date of Issue:	07-Oct-2016	**Date of Re-Issue:**	10-Oct-2016
Client	Soil Property Testing		
Client Address:	18 Halycon Court St Margarets Way Stukeley Meadows Huntingdon Cambridgeshire PE29 6DG		
Contact(s):	Jon Garner		
Project	S30504 4 Keats Grove, Hampstead, London		
Quotation No.:		**Date Received:**	03-Oct-2016
Order No.:	S30504	**Date Instructed:**	03-Oct-2016
No. of Samples:	2		
Turnaround (Wkdays):	5	**Results Due:**	07-Oct-2016
Date Approved:	07-Oct-2016		

Approved By:

Details: Martin Dyer, Laboratory Manager

Chemtest
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Results - Soil

Project: S30504 4 Keats Grove, Hampstead, London

Client: Soil Property Testing					Chemtest Job No.:	16-23770	16-23770
Quotation No.:					Chemtest Sample ID.:	359417	359418
Order No.: S30504					Client Sample Ref.:	D6	D10
					Client Sample ID.:	WLS1	WLS2
					Sample Type:	SOIL	SOIL
					Top Depth (m):	3.00	5.00
					Date Sampled:	12-Sep-2016	12-Sep-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020		24	24
pH	U	2010		N/A		7.7	7.5
Magnesium (Water Soluble)	N	2120	g/l	0.010		0.072	0.21
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		0.52	1.7
Total Sulphur	U	2175	%	0.010		0.080	1.5
Chloride (Water Soluble)	U	2220	g/l	0.010		0.071	0.077
Nitrate (Water Soluble)	N	2220	g/l	0.010		< 0.010	< 0.010
Ammonium (Water Soluble)	U	2120	g/l	0.01		< 0.01	< 0.01
Sulphate (Acid Soluble)	U	2430	%	0.010		0.21	1.4

Chemtest
The right chemistry to deliver results

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.co.uk

Richardson's Botanical Identifications

Root identification
Vegetation surveys
Tree/Building investigations
Plant taxonomy

Dr Ian B K Richardson
BSc, PhD, CBiol, MiBiol, MiHort, FLS
James Richardson
BSc (Hons. Biology)

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E-mail: richardsons@botanical.net
Web: www.botanical.net

Richard Jackson Partnership
York House
3 Station Court
GREAT SHELFORD
Cambridge CB22 5NE

Your ref: **JW-51659**

Our ref: 74/5206

30/09/2016

Dear Sirs

4 Keats Grove, Hampstead, London

The samples you sent in relation to the above on 15/09/2016 (received by us on 20/09/2016) have been examined. The structure was referable as follows:

TH1, 2.0m

1 root: could well be either ACER (Maples, Sycamores) - or - CARPINUS (Hornbeam). This sample was in POOR condition. 3 further samples, not examined in detail appeared similar under low magnification. Very decayed*.

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

* Based mainly on the Iodine test for starch. Starch is present in some cells of a living woody root, but is more or less rapidly broken down by soil micro-organisms on death of the root, sometimes before decay is evident. This result need not reflect the state of the parent tree.

Identified with no information on vegetation, on or off site.

RichardJackson
Engineering Consultants

Appendix D

Limitations of Investigation

Limitations of Investigation

This report is based on the results of the exploratory boreholes, the laboratory testing carried out on samples recovered from those boreholes and on details of the scheme provided by the Client.

This report has been prepared for the benefit of Mr Marcus Piggott, and its contents should not be relied upon by others without the written authority of Richard Jackson Ltd. If any unauthorised third party makes use of this report they do so at their own risk and Richard Jackson Ltd owes them no duty of care or skill.

All information provided by others is taken as being in good faith as being accurate, but Richard Jackson Ltd cannot, and does not, accept any liability for the detailed accuracy, errors or omissions in such information.

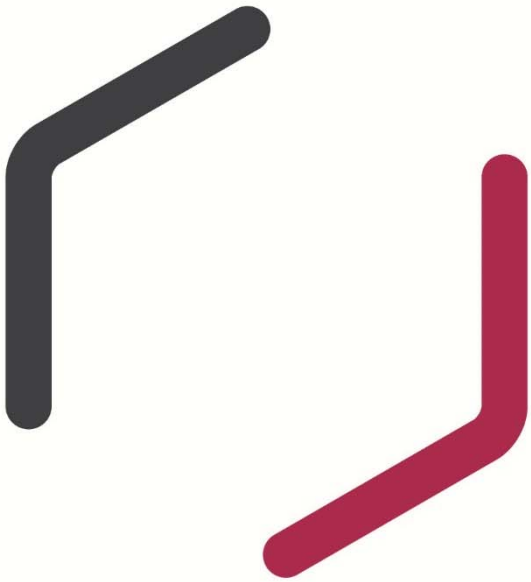
Subsoils are by their nature hidden from view and no investigation can be exhaustive to the extent that all soil conditions are revealed. Conditions may well be present beneath the site which was not evident from the investigations carried out.

Geological data, with the exception of geological maps held by Richard Jackson Ltd, Ordnance Survey maps and aerial photographs have not been inspected, nor has any other data relating to site conditions past or present, or any information regarding underground services, other than as indicated.

Groundwater levels can be subject to considerable seasonal variations, and the conditions encountered in the exploratory holes may not reflect long-term conditions.

There can be no guarantee that the samples analysed represent the highest concentrations of contamination present beneath the site. The chemical analysis results have been assessed to standards appropriate at the time of investigation.

Unless a greater period of retention of samples is agreed, it is our normal practice to discard all samples one month after submission of our final report.



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