



TEST REPORT

Client Earth Environmental & Geotechnical Ltd

Address Houldsworth Mills Business & Arts Centre
Houldsworth Street
Reddish
Stockport
SK5 6DA

Contract A2352 -
Ruabon Park

Job Number MRN 3240/6
Date of Issue 05 February 2018
Page 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

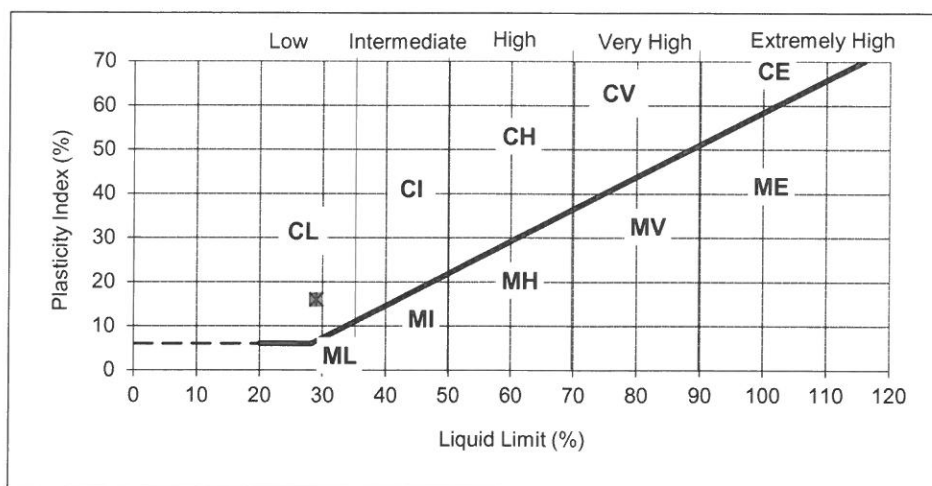
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS1 T 0.6m	DATE SAMPLED	19-Jan-18
SAMPLE No.	74817	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Stiff brown silty sandy CLAY with occasional gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16	29	13	16	80



REMARKS

Sample tested after wet sieving

SIGNED

NAME

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O.P. Davies

(Deputy Laboratory Manager)

DATE

05-Feb-18

MURRAY RIX

UNIT 33C, VAUXHALL IND. ESTATE, GREG STREET
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TEST CERTIFICATE

pH and Sulphate as SO₄
BS 1377: PART 3: 1990

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS1 T 0.6m	DATE SAMPLED	19 January 2018
LAB SAMPLE No	74817	DATE RECEIVED	25 January 2018
DATE TESTED	30 January 2018	SAMPLED BY	Client

ADVISED SOURCE	Site Investigation Sample
PRE TREATMENT	Air Dried

PH Value	7.1	g/l
Sulphate as SO ₄ (2:1 Water Extract)	0.29	

REMARKS

SIGNED



NAME O.P. Davies
(Deputy Laboratory Manager)

DATE 05 February 2018

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TEST CERTIFICATE

pH and Sulphate as SO₄
BS 1377: PART 3: 1990

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS2 T 1m	DATE SAMPLED	19 January 2018
LAB SAMPLE No	74825	DATE RECEIVED	25 January 2018
DATE TESTED	30 January 2018	SAMPLED BY	Client

ADVISED SOURCE	Site Investigation Sample
PRE TREATMENT	Air Dried

PH Value	6.8	g/l
Sulphate as SO ₄ (2:1 Water Extract)	0.38	

REMARKS

SIGNED



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(Deputy Laboratory Manager)

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TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

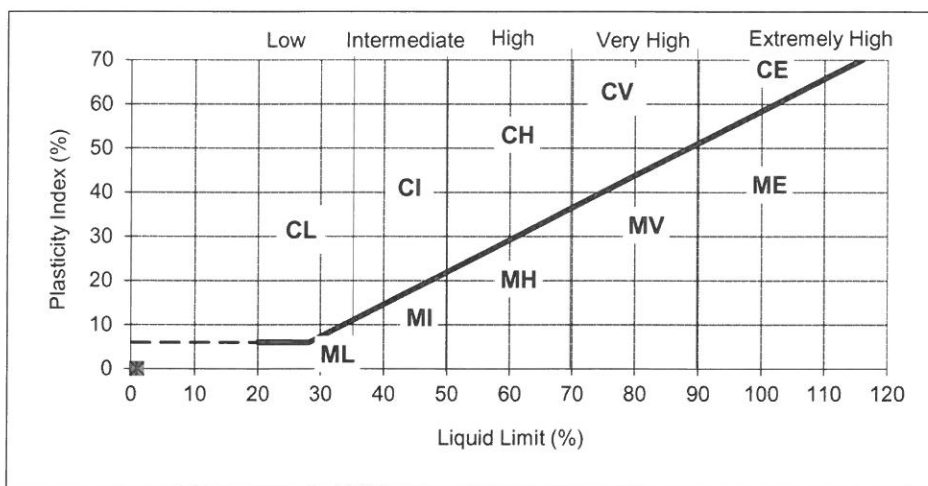
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS3 T 0.7m	DATE SAMPLED	19-Jan-18
SAMPLE No.	74818	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Brown silty SAND and GRAVEL
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
11	N/A	Non Plastic	N/A	27



REMARKS

Sample tested after wet sieving

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05-Feb-18

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TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

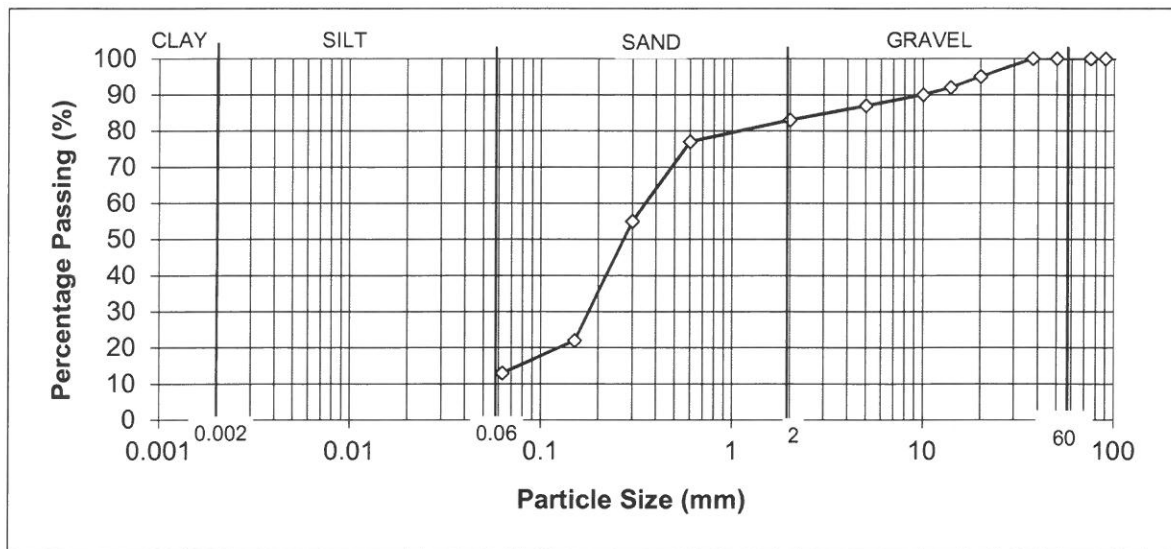
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS3 B 1-3m	DATE SAMPLED	19-Jan-18
LAB SAMPLE No	74819	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Brown silty fine to medium SAND with occasional gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		10	90	
90	100		5	87	
75	100		2	83	
50	100		0.6	77	
37.5	100		0.3	55	
20	95		0.15	22	
14	92		0.063	13	



REMARKS

As received moisture content = 14%

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

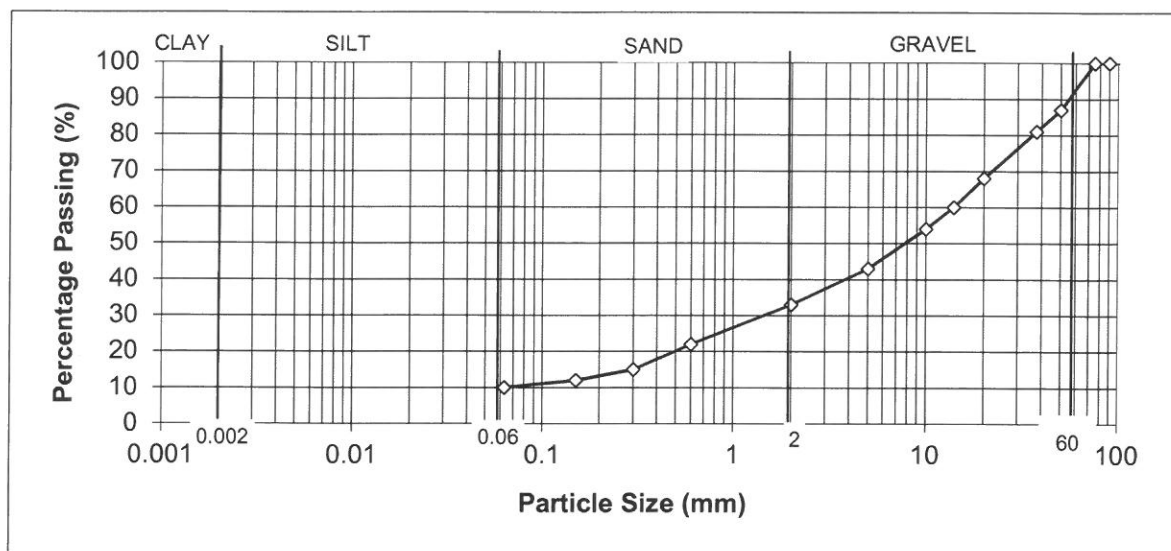
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS4 B 0.4-1.9m	DATE SAMPLED	19-Jan-18
LAB SAMPLE No	74820	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Brown silty sandy fine to coarse GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		10	54	
90	100		5	43	
75	100		2	33	
50	87		0.6	22	
37.5	81		0.3	15	
20	68		0.15	12	
14	60		0.063	10	



REMARKS

As received moisture content = 7.6%

SIGNED

NAME

O.P. Davies
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pH and Sulphate as SO₄
BS 1377: PART 3: 1990

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS4 B 0.4-1.9m	DATE SAMPLED	19 January 2018
LAB SAMPLE No	74820	DATE RECEIVED	25 January 2018
DATE TESTED	30 January 2018	SAMPLED BY	Client

ADVISED SOURCE	Site Investigation Sample
PRE TREATMENT	Air Dried

PH Value	7.0	g/l
Sulphate as SO ₄ (2:1 Water Extract)	0.30	

REMARKS

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

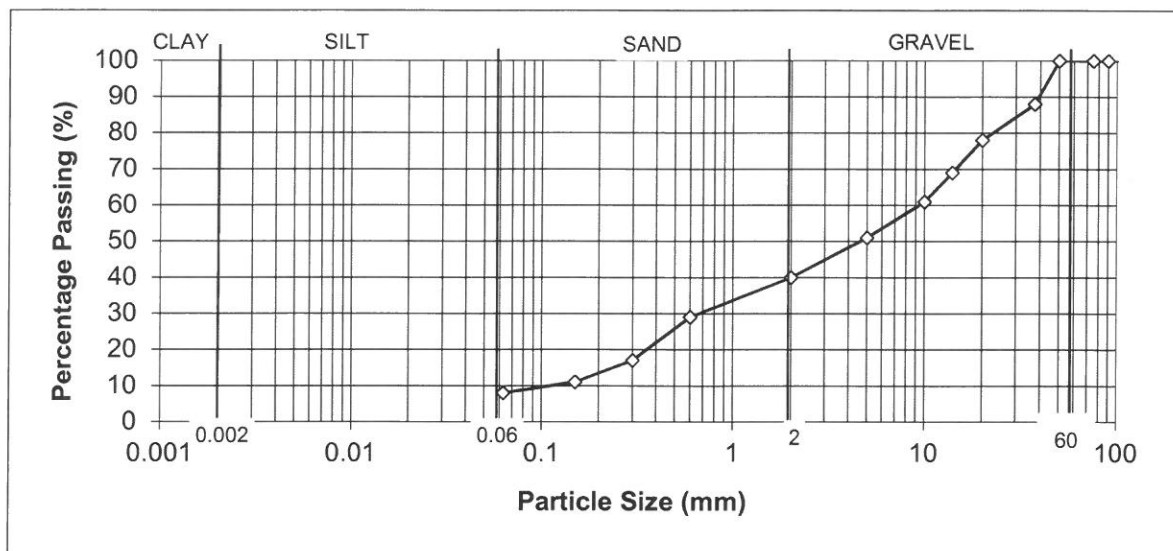
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS4 B 1.9-2.4m	DATE SAMPLED	19-Jan-18
LAB SAMPLE No	74844	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Brown silty sandy fine to coarse GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		10	61	
90	100		5	51	
75	100		2	40	
50	100		0.6	29	
37.5	88		0.3	17	
20	78		0.15	11	
14	69		0.063	8	



REMARKS

As received moisture content = 11%

SIGNED

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TEST CERTIFICATE

pH and Sulphate as SO₄
BS 1377: PART 3: 1990

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS5 T 0.5m	DATE SAMPLED	19 January 2018
LAB SAMPLE No	74821	DATE RECEIVED	25 January 2018
DATE TESTED	30 January 2018	SAMPLED BY	Client

ADVISED SOURCE	Site Investigation Sample
PRE TREATMENT	Air Dried

PH Value	7.2	g/l
Sulphate as SO ₄ (2:1 Water Extract)	0.24	

REMARKS

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

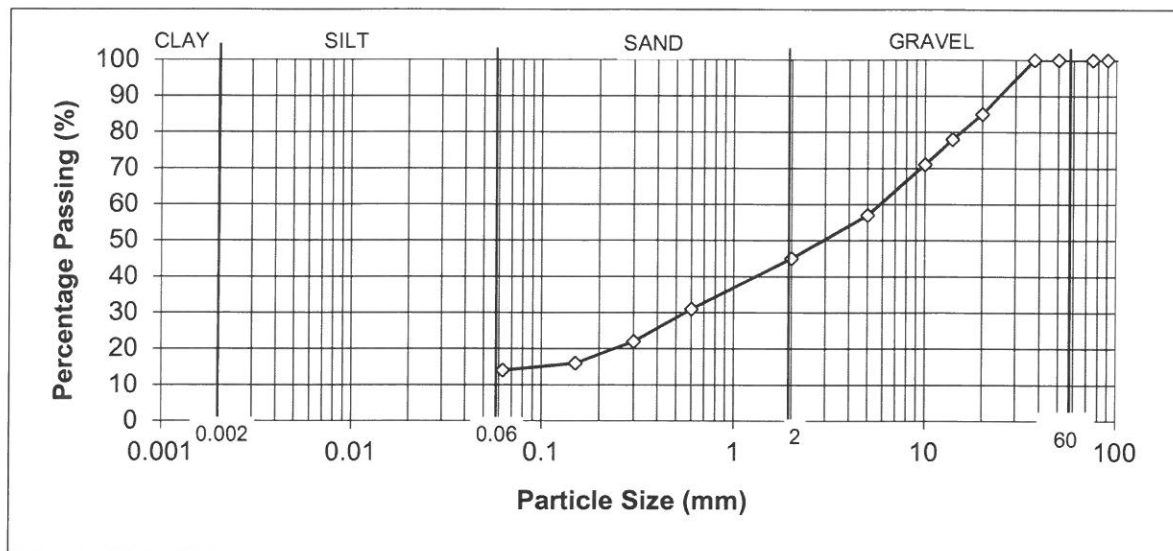
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	WS5 B 2-5m	DATE SAMPLED	19-Jan-18
LAB SAMPLE No	74822	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Brown silty sandy fine to medium GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		10	71	
90	100		5	57	
75	100		2	45	
50	100		0.6	31	
37.5	100		0.3	22	
20	85		0.15	16	
14	78		0.063	14	



REMARKS

As received moisture content = 11%

SIGNED

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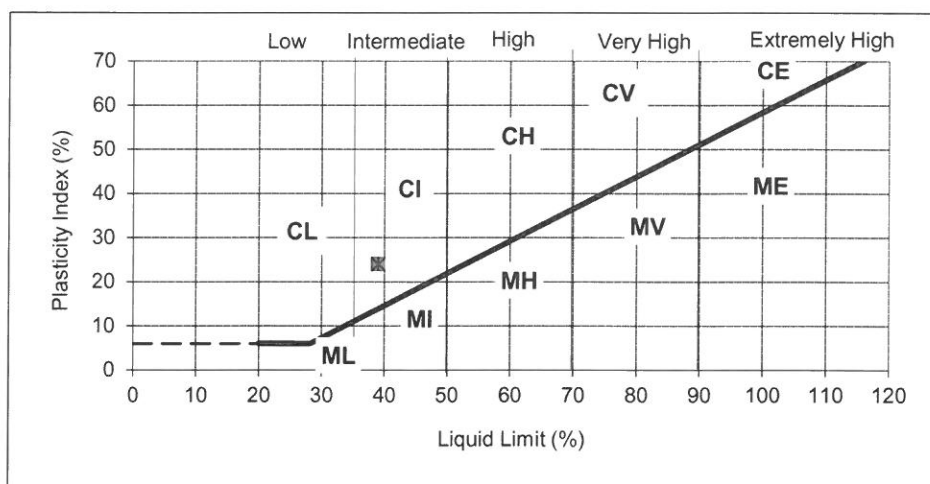
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	Ruabon Park		
JOB NUMBER	MRN 3240/6		

SAMPLE LABEL	TPA T 0.8m	DATE SAMPLED	15-Jan-18
SAMPLE No.	74823	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Stiff orange, grey, brown mottled silty sandy CLAY		
ADVISED SOURCE	Site Investigation Sample		

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16	39	15	24	99



REMARKS

Sample tested in natural condition

SIGNED

NAME

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(Deputy Laboratory Manager)

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LIQUID AND PLASTIC LIMIT

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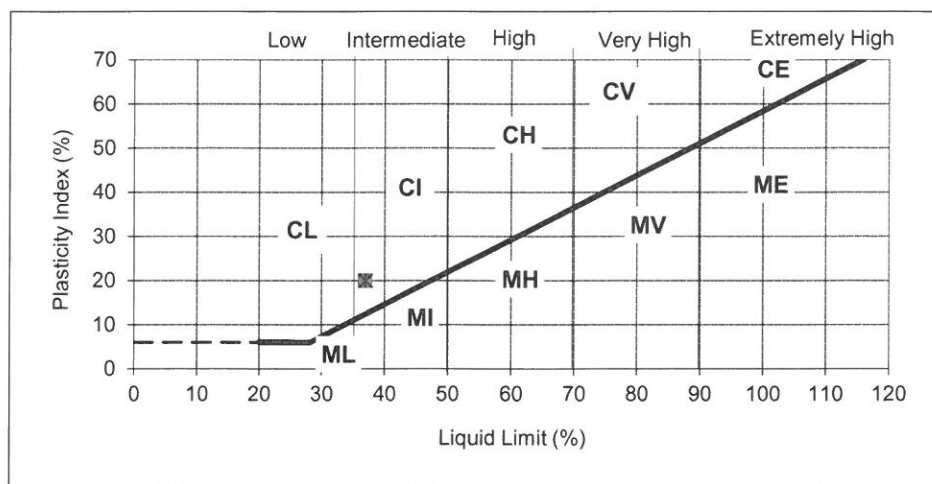
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	Ruabon Park
JOB NUMBER	MRN 3240/6

SAMPLE LABEL	TPV T 2m	DATE SAMPLED	15-Jan-18
SAMPLE No.	74824	DATE RECEIVED	25-Jan-18
DATE TESTED	29-Jan-18	SAMPLED BY	Client

MATERIAL	Stiff orange, grey, brown mottled silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21	37	17	20	96



REMARKS

Sample tested in natural condition

SIGNED

NAME

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05-Feb-18