



TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract A3341 -
Acrefair, Wrexham

Job Number MRN 3787/50
Date of Issue 17 July 2020
Page 1 of 26

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.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

Murray Rix is the trading name of Murray Rix (Northern) Limited. Registered in England 2878361

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

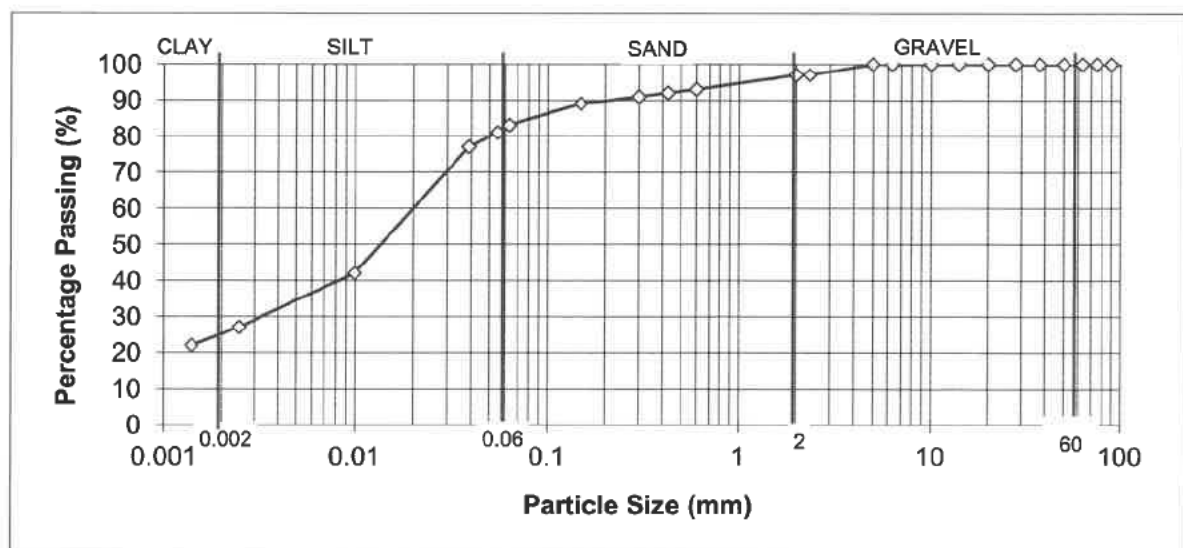
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP1 2.70	DATE SAMPLED	29-Jun-20
LAB SAMPLE No	90358	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	97	
75	100		0.6	93	
63	100		0.425	92	
50	100		0.3	91	
37.5	100		0.15	89	
28	100		0.063	83	
20	100		0.055	81	
14	100		0.039	77	
10	100		0.01	42	
6.3	100		0.0025	27	
5	100		0.0014	22	



REMARKS

SIGNEE

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

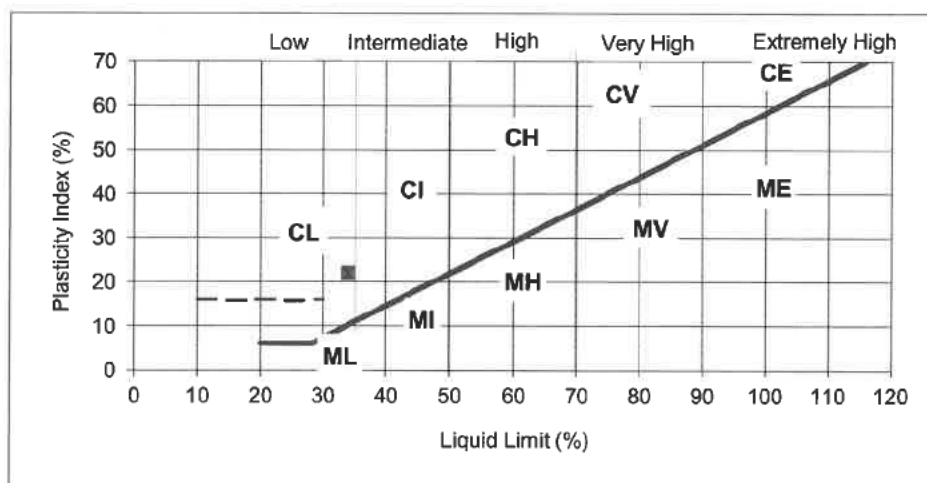
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP1 2.70	DATE SAMPLED	29-Jun-20
SAMPLE No.	90358	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14	34	12	22	92



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 3 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

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TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP1 2.70	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90358	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.14	

REMARKS

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NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

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TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

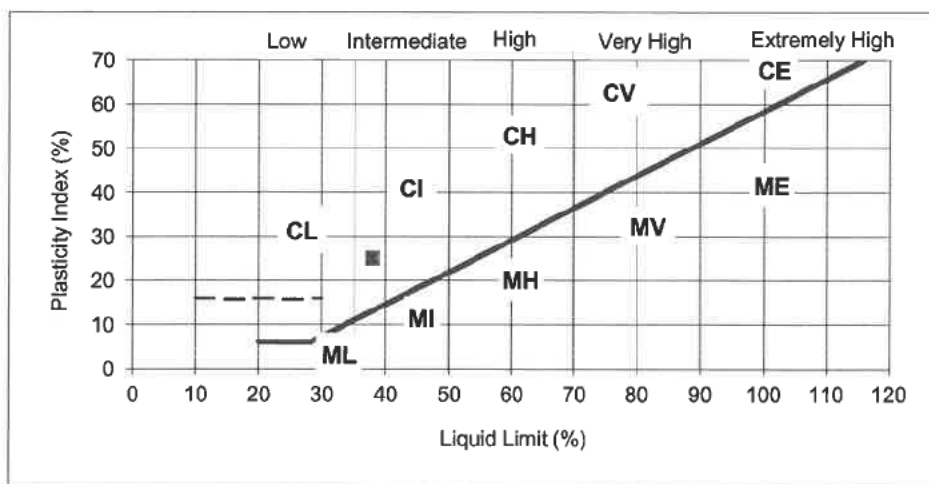
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP3 1.20	DATE SAMPLED	29-Jun-20
SAMPLE No.	90359	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17	38	13	25	94



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 5 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP3 1.20	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90359	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.13	

REMARKS

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NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

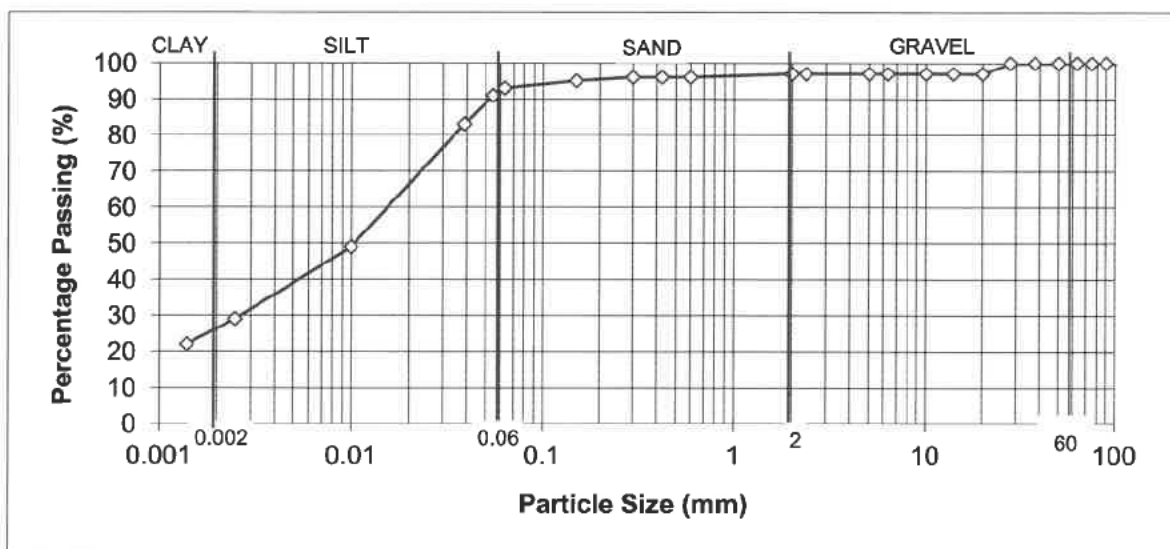
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP4 2.00	DATE SAMPLED	29-Jun-20
LAB SAMPLE No	90360	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	97	
75	100		0.6	96	
63	100		0.425	96	
50	100		0.3	96	
37.5	100		0.15	95	
28	100		0.063	93	
20	97		0.055	91	
14	97		0.039	83	
10	97		0.01	49	
6.3	97		0.0025	29	
5	97		0.0014	22	



REMARKS

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TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

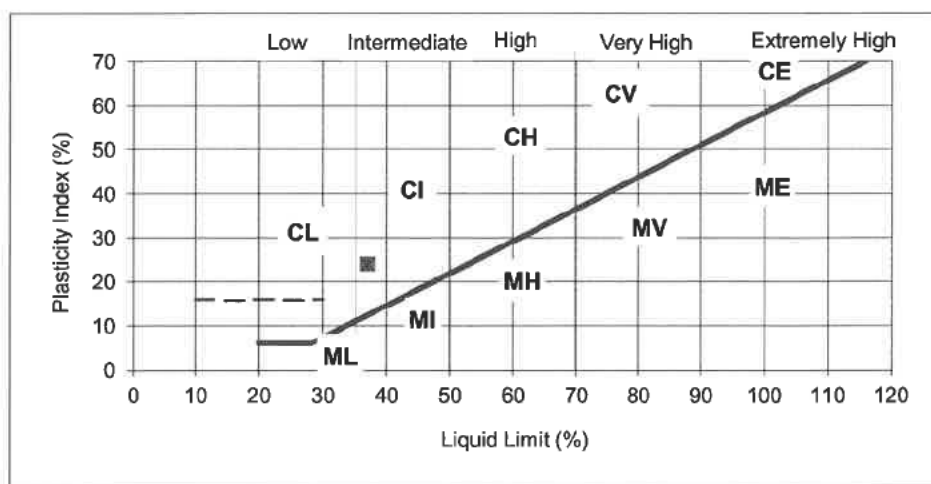
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP4 2.00	DATE SAMPLED	29-Jun-20
SAMPLE No.	90360	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16	37	13	24	96



REMARKS

Sample tested in natural condition

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O.P. Davies BA (Hons)
(Laboratory Manager)

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP4 2.00	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90360	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.19	

REMARKS

SIGNED

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(Laboratory Manager)

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

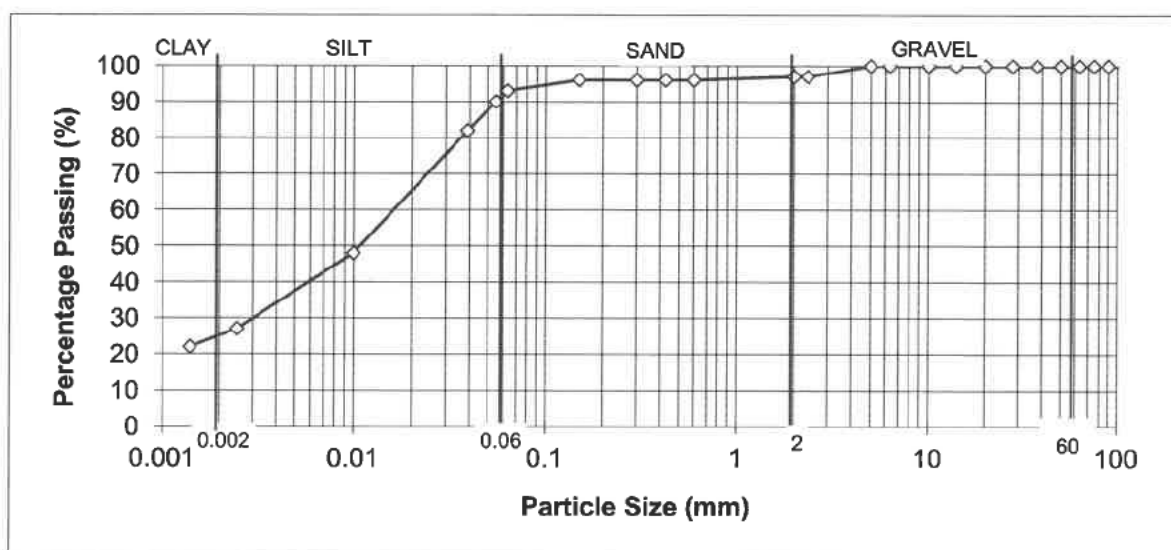
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP5 1.50	DATE SAMPLED	29-Jun-20
LAB SAMPLE No	90361	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	97	
75	100		0.6	96	
63	100		0.425	96	
50	100		0.3	96	
37.5	100		0.15	96	
28	100		0.063	93	
20	100		0.055	90	
14	100		0.039	82	
10	100		0.01	48	
6.3	100		0.0025	27	
5	100		0.0014	22	



REMARKS

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(Laboratory Manager)

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TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

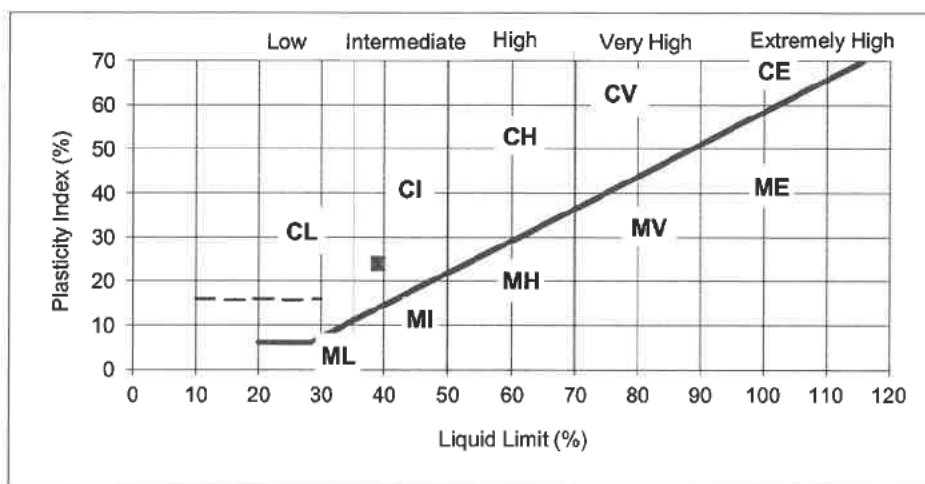
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP5 1.50	DATE SAMPLED	29-Jun-20
SAMPLE No.	90361	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20	39	15	24	96



REMARKS

Sample tested in natural condition

SIGNED

NAME
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O.P. Davies BA (Hons)
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BS 1377: PART 3: 1990

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP5 1.50	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90361	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.09	

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

MURRAY RIX

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TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

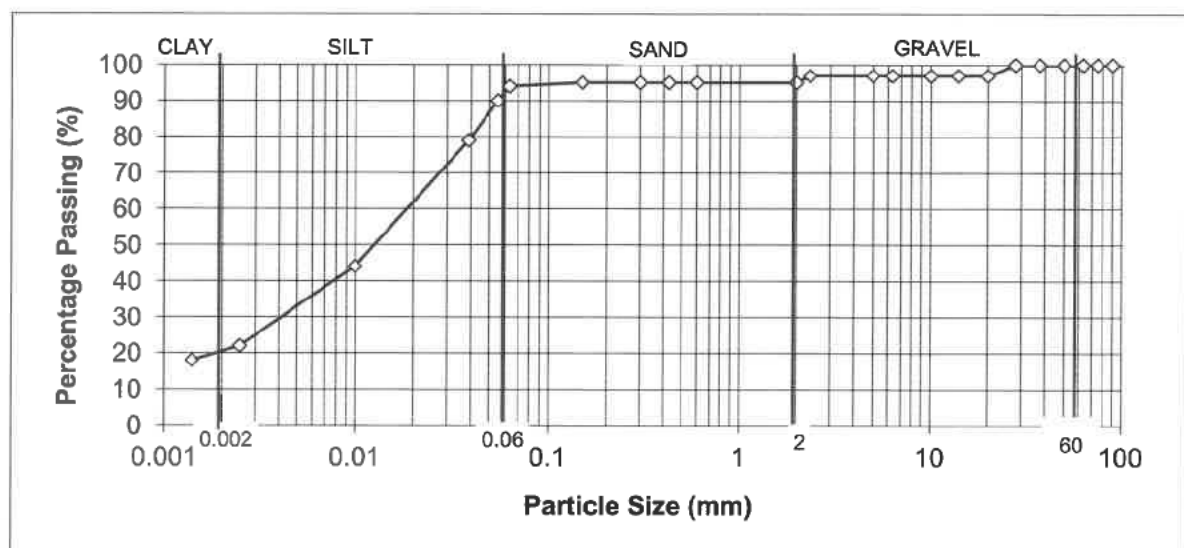
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP6 1.10	DATE SAMPLED	29-Jun-20
LAB SAMPLE No	90362	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	95	
75	100		0.6	95	
63	100		0.425	95	
50	100		0.3	95	
37.5	100		0.15	95	
28	100		0.063	94	
20	97		0.055	90	
14	97		0.039	79	
10	97		0.01	44	
6.3	97		0.0025	22	
5	97		0.0014	18	



REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

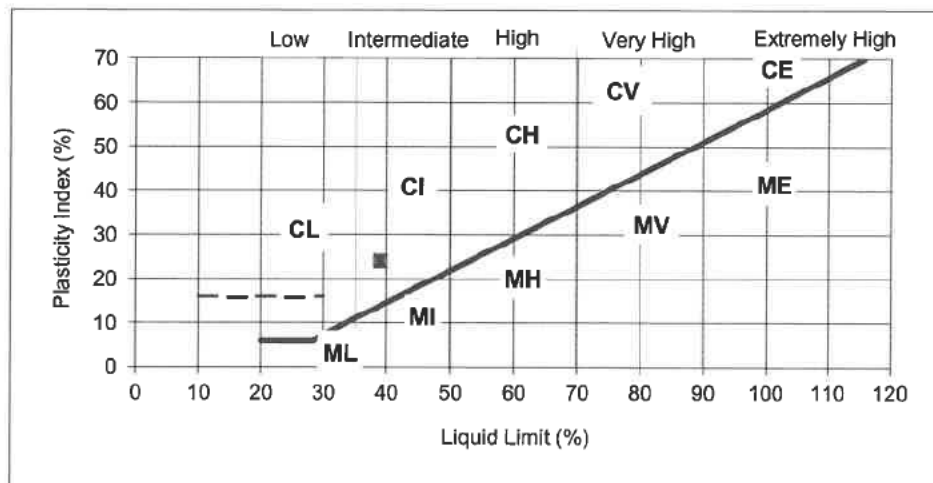
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP6 1.10	DATE SAMPLED	29-Jun-20
SAMPLE No.	90362	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18	39	15	24	95



REMARKS

Sample tested in natural condition

SIGNEI

NAME
Page 14 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP6 1.10	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90362	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.11	

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

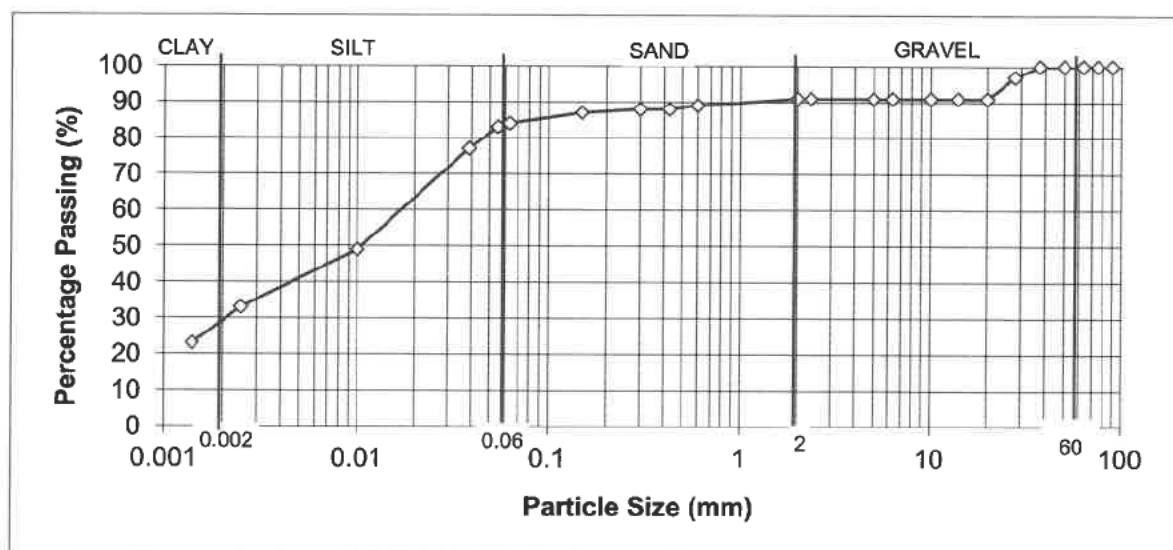
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP7 0.60	DATE SAMPLED	29-Jun-20
LAB SAMPLE No	90363	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	91	
90	100		2	91	
75	100		0.6	89	
63	100		0.425	88	
50	100		0.3	88	
37.5	100		0.15	87	
28	97		0.063	84	
20	91		0.055	83	
14	91		0.039	77	
10	91		0.01	49	
6.3	91		0.0025	33	
5	91		0.0014	23	



REMARKS

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(Laboratory Manager)

DATE 17-Jul-20

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TEST CERTIFICATE LIQUID AND PLASTIC LIMIT

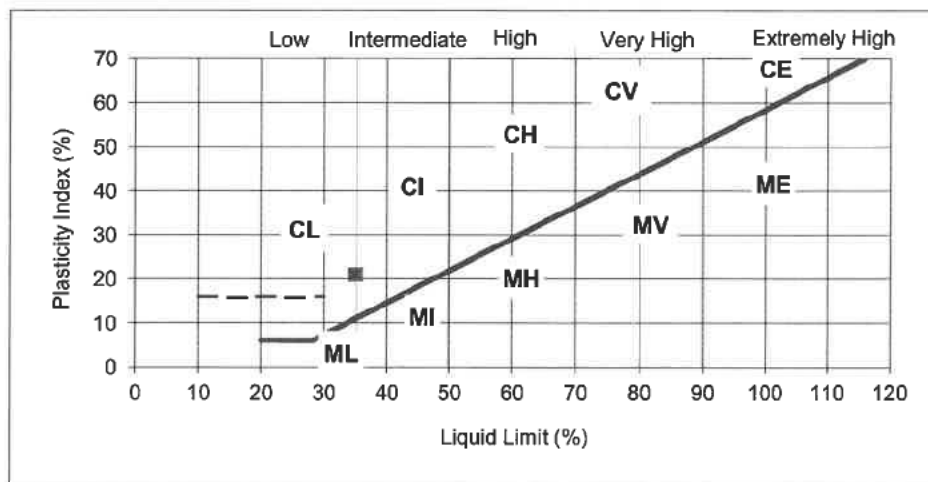
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP7 0.60	DATE SAMPLED	29-Jun-20
SAMPLE No.	90363	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

MATERIAL	Stiff orange grey brown silty slightly sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14	35	14	21	88



REMARKS

Sample tested in natural condition

SIGNEE

NAME O.P. Davies BA (Hons)
Page 17 of 26 (Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

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TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP7 0.60	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90363	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.11	

REMARKS

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LIQUID AND PLASTIC LIMIT

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

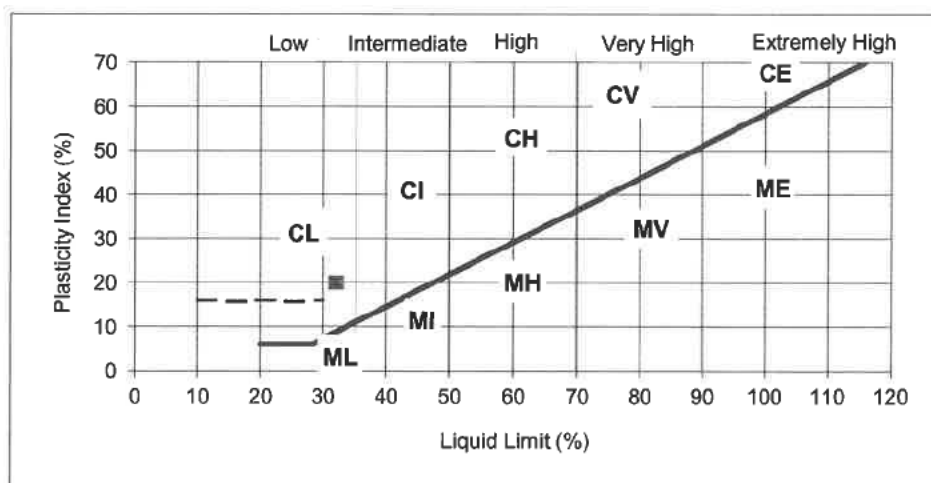
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A3341 - Acrefair, Wrexham		
JOB NUMBER	MRN 3787/50		

SAMPLE LABEL	TP8 1.40	DATE SAMPLED	29-Jun-20
SAMPLE No.	90364	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
13	32	12	20	90



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 19 of 26

O.P. Davies BA (Hons)
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CLIENT	Earth Environmental & Geotechnical Ltd
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SAMPLE LABEL	TP8 1.40	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90364	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.20	

REMARKS

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

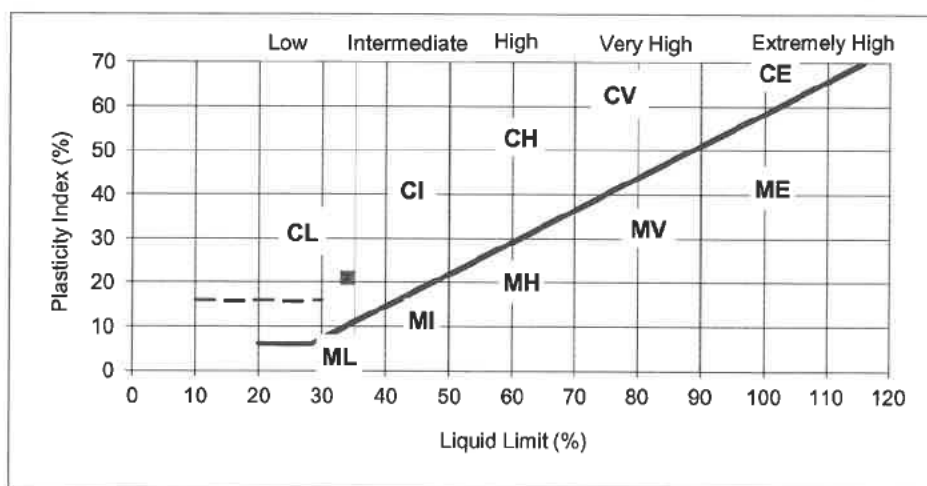
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP9 2.00	DATE SAMPLED	29-Jun-20
SAMPLE No.	90365	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18	34	13	21	92



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 21 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP9 2.00	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90365	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.17	

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

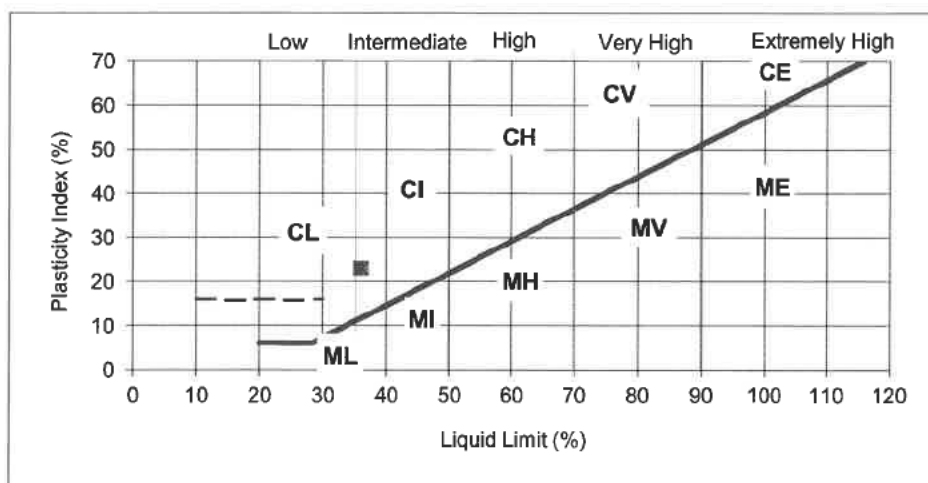
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A3341 - Acrefair, Wrexham		
JOB NUMBER	MRN 3787/50		

SAMPLE LABEL	TP11 1.50	DATE SAMPLED	29-Jun-20
SAMPLE No.	90366	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15	36	13	23	94



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 23 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP11 1.50	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90366	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.18	

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

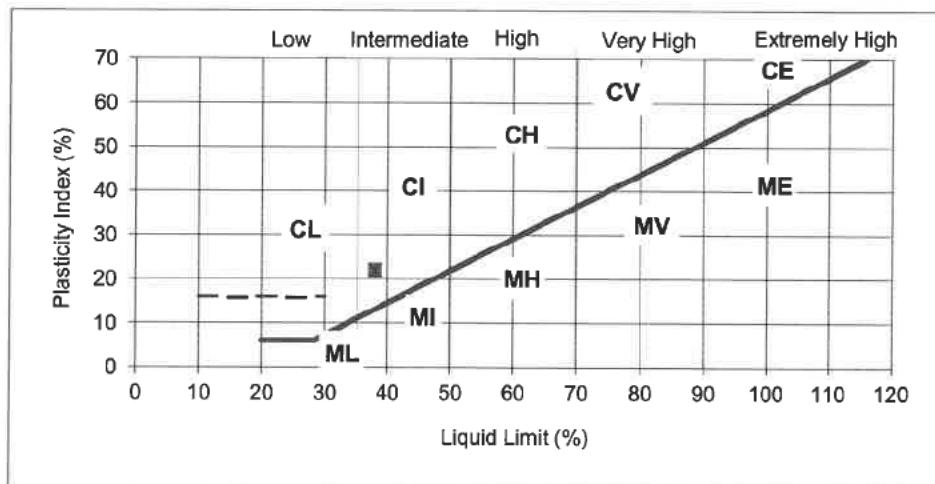
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 - Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP12 2.95	DATE SAMPLED	29-Jun-20
SAMPLE No.	90367	DATE RECEIVED	01-Jul-20
DATE TESTED	08-Jul-20	SAMPLED BY	Client

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

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16	38	16	22	98



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 25 of 26

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Jul-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

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

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A3341 – Acrefair, Wrexham
JOB NUMBER	MRN 3787/50

SAMPLE LABEL	TP12 2.95	DATE SAMPLED	29 June 2020
LAB SAMPLE No	90367	DATE RECEIVED	01 July 2020
DATE TESTED	09 July 2020	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)	0.08	

REMARKS

SIGNEE

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 July 2020