

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

Address Houldsworth Mill Business & Arts Centre
Houldsworth Mill
Reddish
Stockport
SK5 6DA

Contract A4301 -
Waterfold Lane, Heywood

Job Number MRN 24055/29
Date of Issue 11 May 2024
Page 1 of 8

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.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

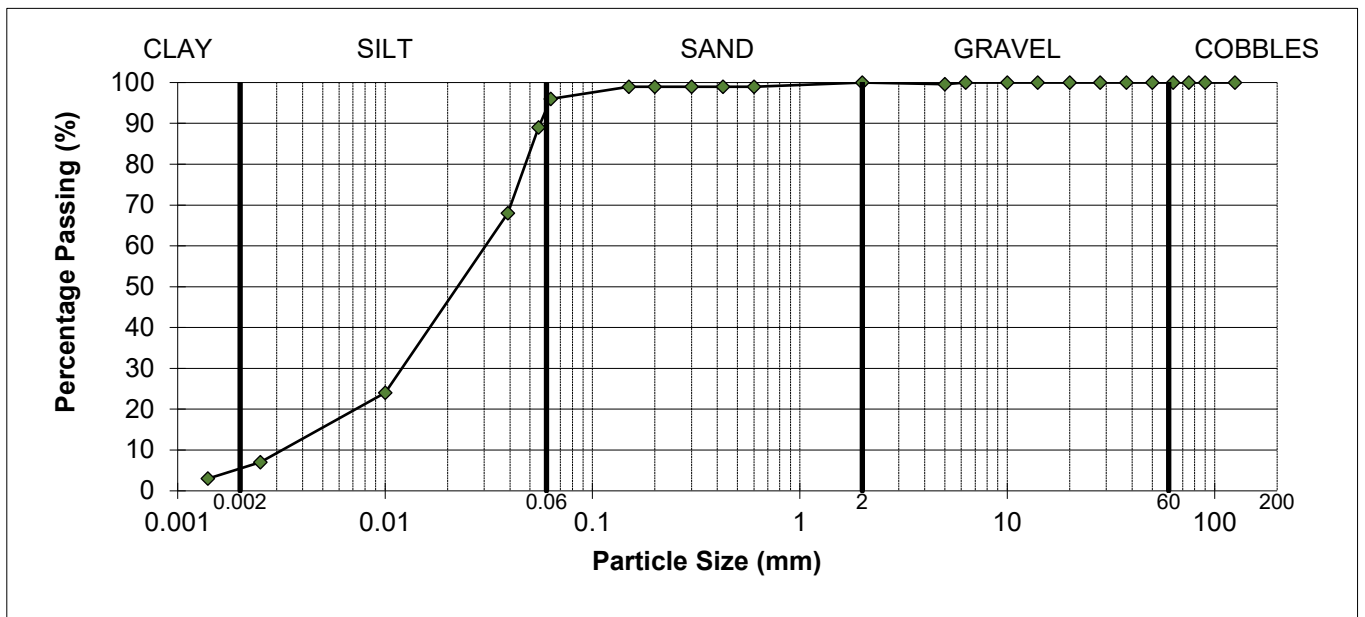
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/29		

SAMPLE LABEL	WS2 (3.60m)	DATE SAMPLED	21-Mar-24
LAB SAMPLE No	445802	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly sandy SILT
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	100	
90	100		0.6	99	
75	100		0.425	99	
63	100		0.3	99	
50	100		0.2	99	
37.5	100		0.15	99	
28	100		0.063	96	
20	100		0.055	89	
14	100		0.039	68	
10	100		0.01	24	
6.3	100		0.0025	7	
5	100		0.0014	3	



REMARKS

SIGNED

NAME

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

DATE

11-May-24

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

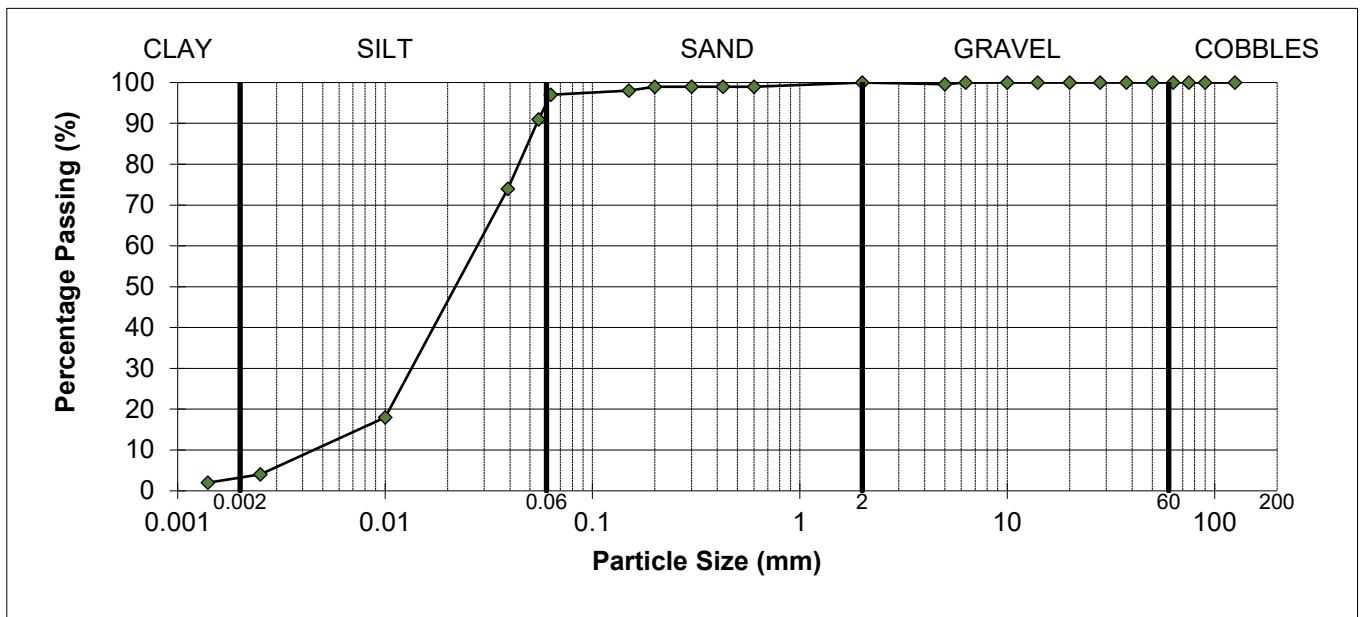
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A4301 - Waterfold Lane, Heywood
JOB NUMBER	MRN 24055/29

SAMPLE LABEL	WS4 (3.50m)	DATE SAMPLED	21-Mar-24
LAB SAMPLE No	445805	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly sandy SILT
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	100	
90	100		0.6	99	
75	100		0.425	99	
63	100		0.3	99	
50	100		0.2	99	
37.5	100		0.15	98	
28	100		0.063	97	
20	100		0.055	91	
14	100		0.039	74	
10	100		0.01	18	
6.3	100		0.0025	4	
5	100		0.0014	2	



REMARKS

SIGNED

NAME

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

DATE

11-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

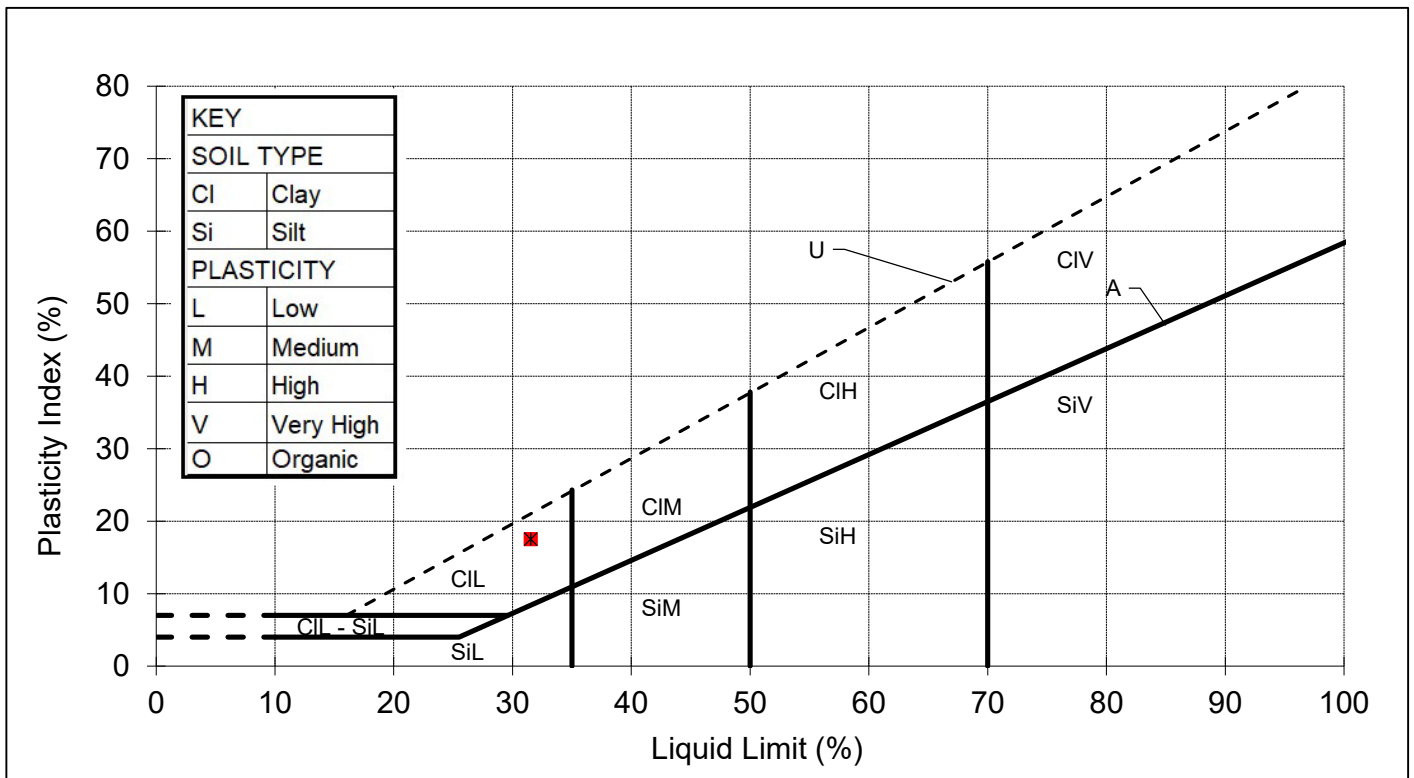
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/29		

SAMPLE LABEL	WS1 (2.95m)	DATE SAMPLED	21-Mar-24
SAMPLE No.	445801	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.8	33.0	0.963	
Determination 2 (avg)	22.8	32.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
28.2	32	14	18	100



REMARKS

SIGNED

NAME

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

DATE

11-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

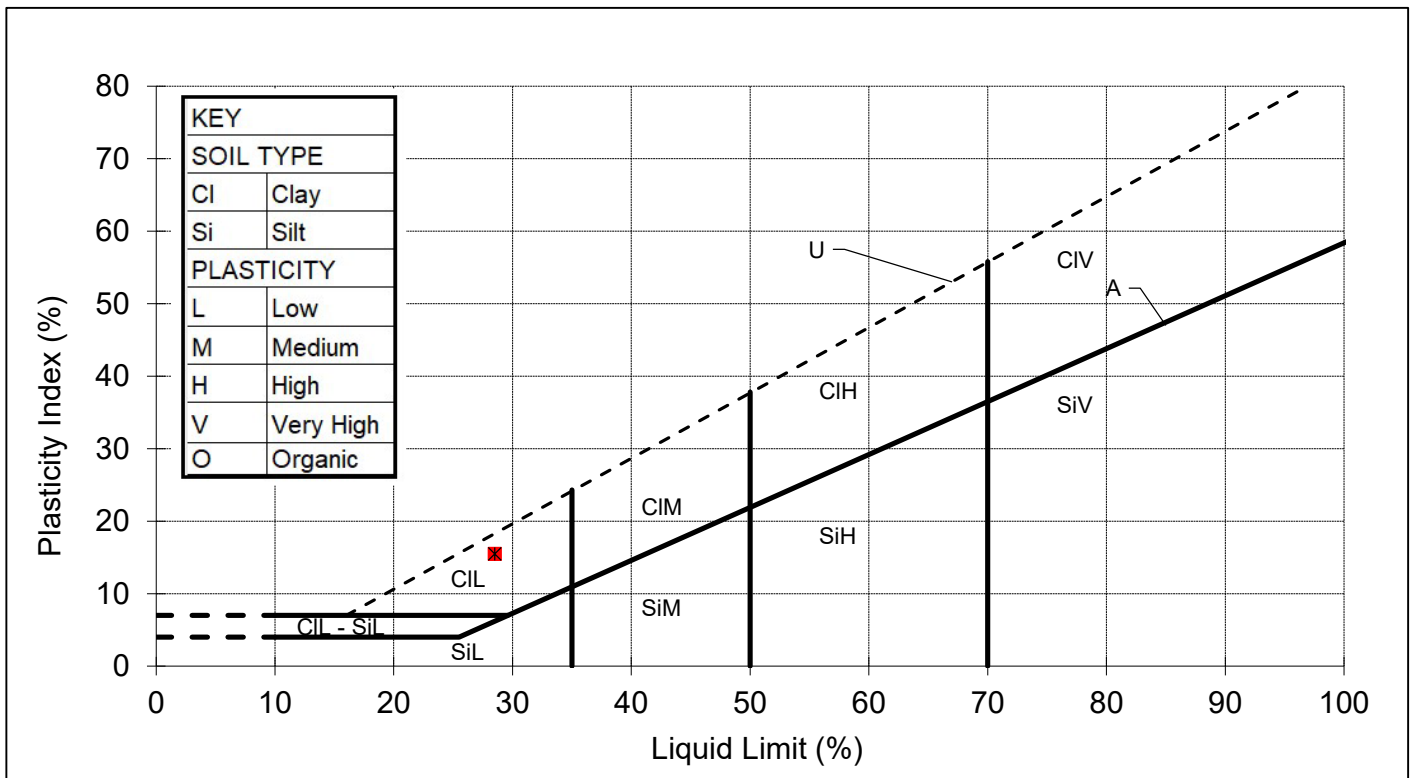
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/29		

SAMPLE LABEL	WS3 (2.70m)	DATE SAMPLED	21-Mar-24
SAMPLE No.	445803	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	21.0	28.9	0.988	
Determination 2 (avg)	20.5	28.8		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
13.5	29	13	16	67



REMARKS

SIGNED

NAME

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

DATE

11-May-24

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

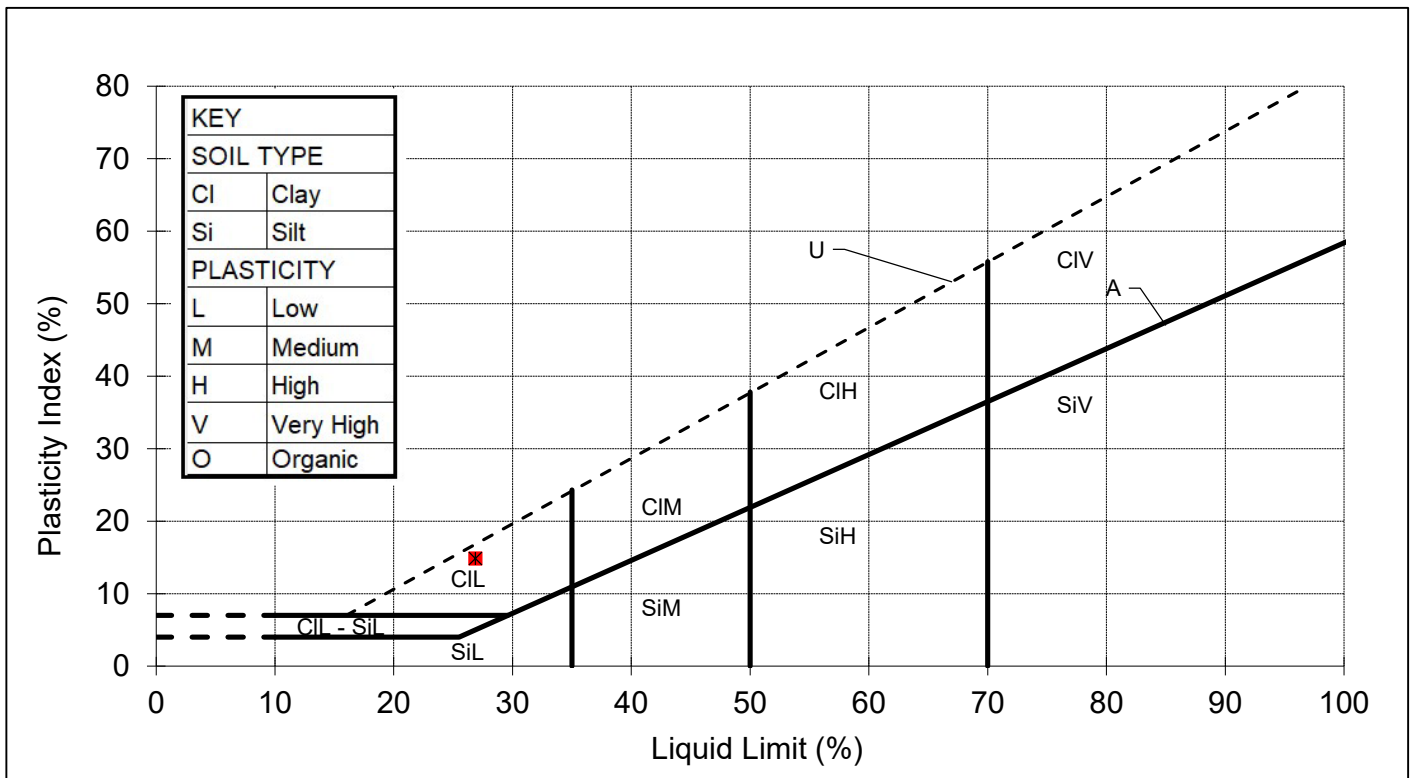
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A4301 - Waterfold Lane, Heywood
JOB NUMBER	MRN 24055/29

SAMPLE LABEL	WS4 (1.10m)	DATE SAMPLED	21-Mar-24
SAMPLE No.	445804	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	18.9	26.2	1.012	
Determination 2 (avg)	19.5	26.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
13.2	27	12	15	71



REMARKS

SIGNED

NAME


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

DATE _____

11-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

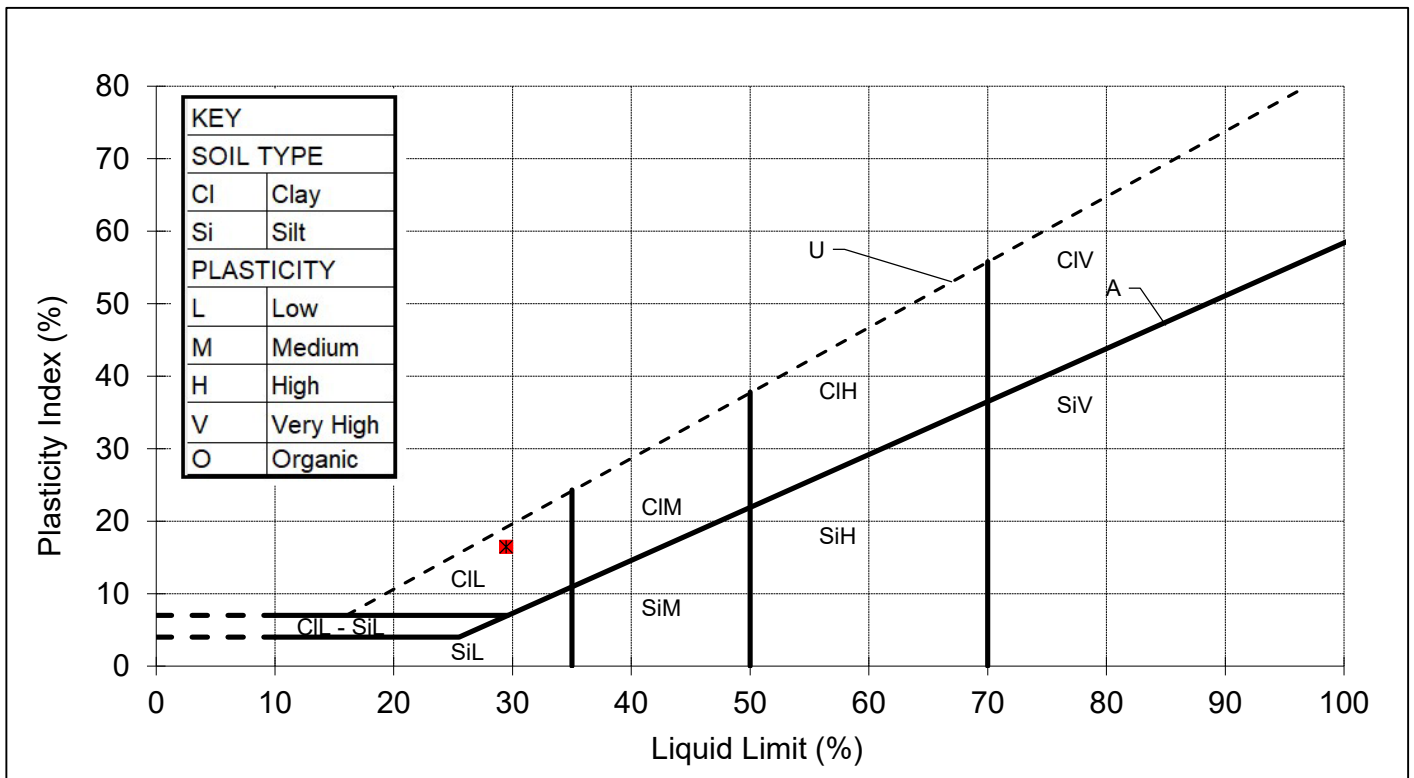
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/29		

SAMPLE LABEL	WS5 (1.30m)	DATE SAMPLED	21-Mar-24
SAMPLE No.	445806	DATE RECEIVED	26-Mar-24
DATE TESTED	27-Mar-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.0	29.5	0.998	
Determination 2 (avg)	20.2	29.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23.3	29	13	16	82



REMARKS

SIGNED

NAME

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

DATE

11-May-24

MURRAY RIX

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

TEST CERTIFICATE

DETERMINATION OF WATER-SOLUBLE SULPHATE IN SOIL
& DETERMINATION OF THE pH VALUE
BS 1377-3:2018+A1:2021, Cl. 7.3 & Cl. 12

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A4301 - Waterfold Lane, Heywood
JOB NUMBER	MRN 24055/29

DATE TESTED	04-Apr-24	DATE SAMPLED	21-Mar-24
SAMPLED BY	Client	DATE RECEIVED	26-Mar-24
PRE-TREATMENT	Air Dried	ADVISED SOURCE	Site Investigation Samples

Sample Number	Sample Label	Material	% Ret. 2mm	pH Value	Water Soluble Sulphate as SO ₄ (mg/l)
445801	WS1 (2.95m)	Brown silty slightly sandy CLAY	0	6.9	170
445803	WS3 (2.70m)	Brown silty slightly sandy gravelly CLAY	21	7.4	230
445804	WS4 (1.10m)	Brown silty slightly sandy gravelly CLAY	25	7.2	280
445806	WS5 (1.30m)	Brown silty slightly sandy slightly gravelly CLAY	10	7.4	110

REMARKS

SIGNED

NAME



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

DATE

11-May-24

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

Address Houldsworth Mill Business & Arts Centre
Houldsworth Mill
Reddish
Stockport
SK5 6DA

Contract A4301 -
Waterfold Lane, Heywood

Job Number MRN 24055/33
Date of Issue 18 May 2024
Page 1 of 6

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.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

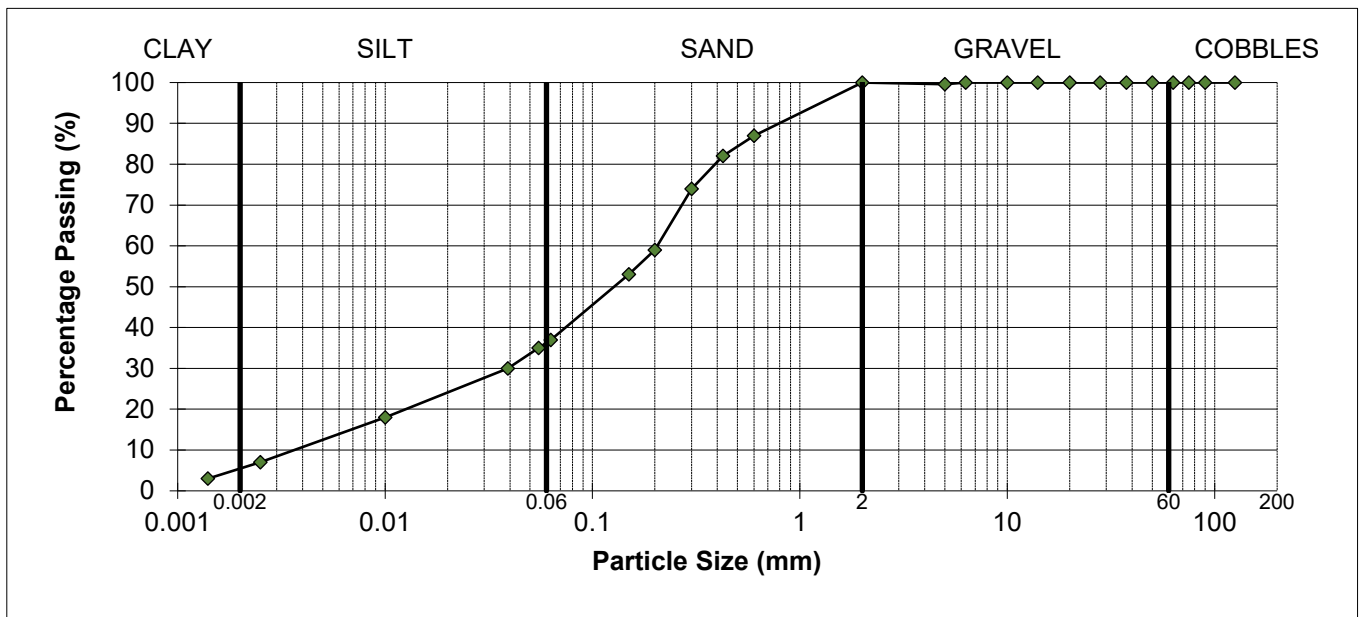
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/33		

SAMPLE LABEL	CP2 (2.00m)	DATE SAMPLED	19-Apr-24
LAB SAMPLE No	460102	DATE RECEIVED	23-Apr-24
DATE TESTED	24-Apr-24	SAMPLED BY	Client

MATERIAL	Brown slightly clayey silty SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	100	
90	100		0.6	87	
75	100		0.425	82	
63	100		0.3	74	
50	100		0.2	59	
37.5	100		0.15	53	
28	100		0.063	37	
20	100		0.055	35	
14	100		0.039	30	
10	100		0.01	18	
6.3	100		0.0025	7	
5	100		0.0014	3	



REMARKS

SIGNED

NAME

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

DATE

18-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

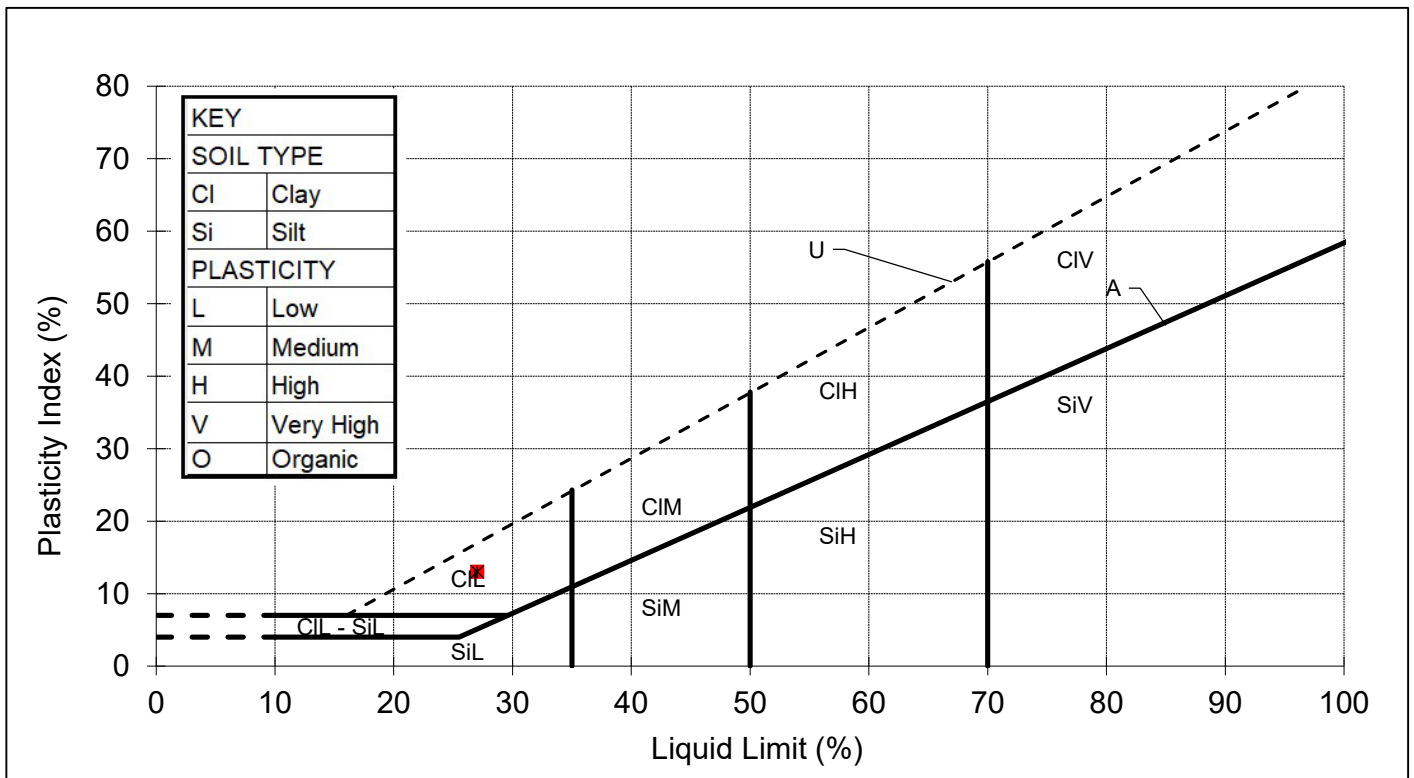
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/33		

SAMPLE LABEL	CP1 (4.00m)	DATE SAMPLED	19-Apr-24
SAMPLE No.	460101	DATE RECEIVED	23-Apr-24
DATE TESTED	24-Apr-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	17.2	26.0	1.040	
Determination 2 (avg)	17.2	26.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.6	27	14	13	71



REMARKS

SIGNED

NAME

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

DATE

18-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

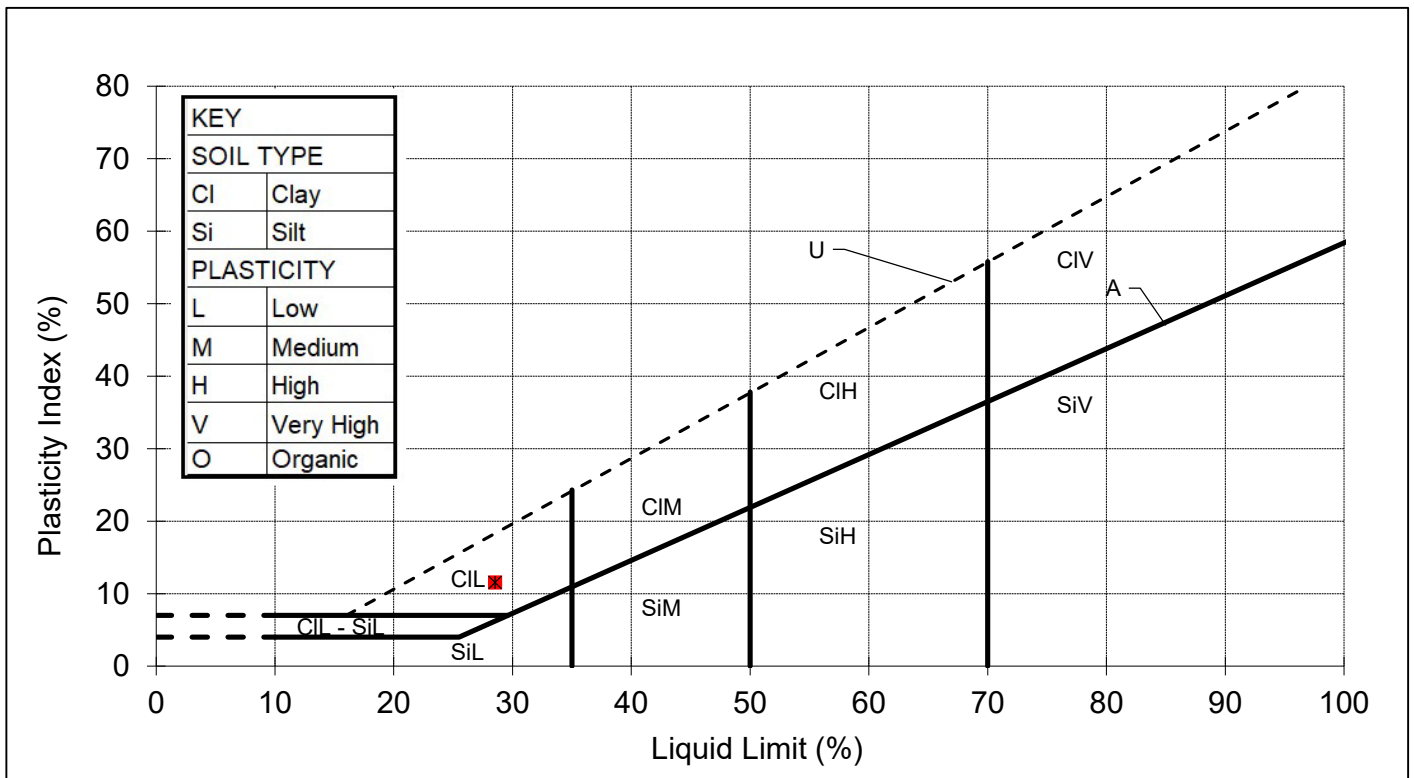
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/33		

SAMPLE LABEL	CP2 (2.70m)	DATE SAMPLED	19-Apr-24
SAMPLE No.	460103	DATE RECEIVED	23-Apr-24
DATE TESTED	24-Apr-24	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	15.5	27.1	1.055	
Determination 2 (avg)	15.3	27.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.3	29	17	12	71



REMARKS

SIGNED

NAME

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

DATE

18-May-24

MURRAY RIX

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



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

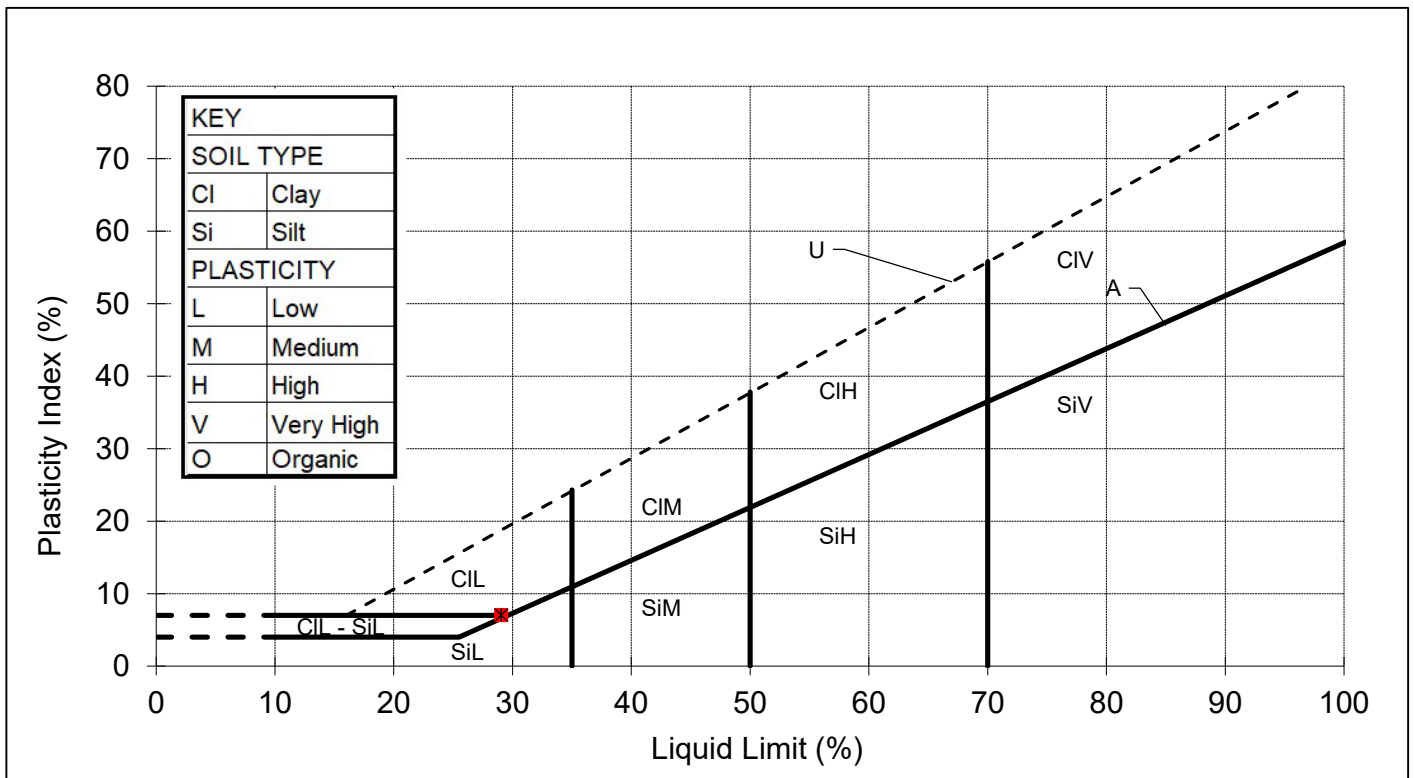
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A4301 - Waterfold Lane, Heywood		
JOB NUMBER	MRN 24055/33		

SAMPLE LABEL	CP2 (4.70m)	DATE SAMPLED	19-Apr-24
SAMPLE No.	460104	DATE RECEIVED	23-Apr-24
DATE TESTED	24-Apr-24	SAMPLED BY	Client

MATERIAL	Brown slightly sandy SILT		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Hand Picked

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	21.3	29.8	0.979	
Determination 2 (avg)	21.4	29.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
27.9	29	22	7	100



REMARKS

SIGNED

NAME

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

DATE

18-May-24

MURRAY RIX

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

TEST CERTIFICATE

DETERMINATION OF WATER-SOLUBLE SULPHATE IN SOIL
& DETERMINATION OF THE pH VALUE
BS 1377-3:2018+A1:2021, Cl. 7.3 & Cl. 12

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A4301 - Waterfold Lane, Heywood
JOB NUMBER	MRN 24055/33

DATE TESTED	02-May-24	DATE SAMPLED	19-Apr-24
SAMPLED BY	Client	DATE RECEIVED	23-Apr-24
PRE-TREATMENT	Air Dried	ADVISED SOURCE	Site Investigation Samples

Sample Number	Sample Label	Material	% Ret. 2mm	pH Value	Water Soluble Sulphate as SO ₄ (mg/l)
460101	CP1 (4.00m)	Brown silty slightly sandy slightly gravelly CLAY	17	7.2	200
460103	CP2 (2.70m)	Brown silty slightly sandy slightly gravelly CLAY	20	7.2	180
460104	CP2 (3.70m)	Brown slightly sandy SILT	0	7.0	70

REMARKS

SIGNED



NAME

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

DATE

18-May-24